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Direct Effects of Assets and Savings on the College Progress of Black Young Adults

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Direct Effects of Assets and Savings on the College Progress of Black Young Adults

Large disparities in attendance and graduation rates exist between White and Black young adults. We find that 63% of White young adults between the ages of 17 to 23 are on course (i.e., either in college or have graduated from college) in 2007 compared to only 35% of Black young adults. Moreover, research suggests that Black young adults who manage to stay on course and graduate are facing ever increasing amounts of college debt. Debt can lessen the return on education, making college appear less desirable for future generations. Thus, finding novel and promising ways to promote college progress that do not rely on debt accumulation is a growing concern for policymakers. Child Development Accounts (CDAs) have been proposed as a potentially novel and promising policy mechanism for financing college. This study provides an advance test of CDAs. Using separate samples of White and Black young adults, multivariate analyses reveal that young adults who have school savings as adolescents are approximately two time more likely to be on course (enrolled in college or have already graduated from college) regardless of race. Moreover, net worth has a positive association with whether White young adults are on course but not Black young adults. We conclude that policies such as universal CDAs that can help parents and adolescents accumulate savings—especially savings for college—may be a simple and effective strategy for helping to keep both White and Black young adults "on course" in their college education and out of debt.

Key words: *Wealth, assets, college attendance, college graduation, savings, Child Development Accounts (CDAs), college expectations, PSID, college progress, race*

In the minds of many Americans, college remains a key vehicle for achieving the American Dream. For example, using a nationally representative sample of 801 adults 18 or older, John Immerwahr (2004), who studies public attitudes about higher education, asked Americans, "If you had to choose one thing that can most help a young person succeed in the world today," what would it be? Having a college education (35%) is selected more than any other option, even over having a good work ethic (26%). More Blacks (47%) than Whites (33%) view receiving a college education as the most important factor in helping young people succeed.

Accordingly, the 2009 Status on Minorities in Higher Education report indicates that the Black college enrollment rate from 1988 to 2006 showed a modest increase from 22% to 33% (Ryu, 2009), but White children experienced the highest rate of enrollment in higher education over this period (31% to 45%) (Ryu, 2009). Therefore, a sizeable gap (12%) between White children and Black children remains. Even larger disparities exist in regard to graduation from a four-year college. For example, in 2006, 33% of White children attained a bachelor's degree compared to only 17% of Black children – a gap of 16% (Ryu, 2009).

Given existing disparities in college attendance and completion and the growing role that education is playing in gaining employment and economic mobility, policymakers are increasingly looking for ways to create greater access and higher completion rates for more of America's youth. A well-recognized barrier to college access and completion is high college costs. This may be particularly true for Black children. For example, Immerwahr (2004) finds that 57% of American adults say that many qualified high school graduates are unable to attend college due to cost. An overwhelming

76% of Black adults in Immerwahr's (2004) study believe lack of financial resources limits college access. Further, in a study investigating Black high school students' perceptions of barriers to attending college, Black high school students identify financial concerns as a key barrier to attending college in addition to psychological barriers (Freeman, 1997). The perception that college is for those who have money may have real consequences for how Black children, who are disproportionately poor, invest effort and ability.[1] Research suggests that low expectations for financing college lead to fewer Black children taking qualifying exams (such as the SAT or ACT) to attend college and ultimately enrolling in college (see e.g., Perna, 2000).

The fear of not being able to finance college expressed by Black children and their parents is, at least in part, due to the high cost of college. For example, the total cost of college attendance, which includes room and board, for an in-state student at a public four-year college for the 2007-08 school year is $13,589 (College Board, 2007). This is an increase of 5.9% from the prior school year (College Board, 2007). The cost of a four-year private college also rose by 5.9% in 2007-08, up to $32,307 (College Board, 2007). High college costs lead to high unmet need. Unmet need is "the portion of college expense not covered by the expected family contribution and student aid, including work-study and loans" (ACSFA, 2002, p. 5). Choy and Carroll (2003) find that, during the 1999-2000 school year, the average unmet need for low-income students was between $4,000 and $9,300, depending on the type of college.

Not only do Black young adults face barriers to college attendance and completion due to high costs and unmet need, after they leave college many are burdened by heavy loan debts. Increasing reliance on loans to finance college is a result of the belief in America that students are the primary beneficiaries of higher education and therefore should take personal responsibility for financing college—a student-based financial aid model (Baum, 1996; Heller and Rogers, 2006). The student-based financial aid model is consistent with the life-cycle hypothesis (LCH) of savings and consumption (Baum, 1996). LCH is the predominant model of savings in economics (Modigliani & Brumberg, 1954), that suggests that saving over a lifetime looks like an inverted U-shape (e.g., Harrod, 1948). That is, when people are young, they have little money to save and end up borrowing more; when they are middle-aged, they have higher incomes which enable them to save more; and when they are old and their incomes decline, they spend their savings. Given this, the LCH perspective suggests that each generation has to borrow to finance its own education. This is increasingly becoming the case in America.

In the 2008-09 school year, 45% of all financial aid received came from federal loans (College Board, 2009). Moreover, from 2007-08 to 2008-09, total education borrowing increased by 5% or $4 billion.[2] Due to the current financial aid system's emphasis on loans as a socially acceptable way to finance college, students are incurring higher levels of debt upon leaving college. For example, Baum and Steele (2010) find that 17% of all young adults in the 2007-08 school year graduated with more than $30,500 in education debt. These figures are even more staggering for Black young adults. Twenty-seven percent of Black young adults in the 2007-08 school year who graduated from a four-year college finished with $30,500 or more worth of debt in comparison, to 15% of White young

[1] For example, using U.S. Census data, Mischel, Bernstein, and Shierholz (2009) find that 24.5% of Black households compared to only 10.5% of White household live in poverty in 2007.

[2] These figures only include federal loans. They do not include other types of borrowing for school such as credit cards or personal loans.

adults. Compounding the problem of high college debt is the fact that Black young adults earn less on average than their White peers upon graduating and are more likely to be laid off in times of economic unrest. For example, the U.S. Census reports that earnings for college-educated workers aged 25 and older is $47,904 for Whites and $41,972 for Blacks in 2007 (Crissey, 2009). Further, Black college-educated workers are more likely to lose their jobs in times of economic unrest, further driving down the return on college for them. For example, as a result of the economic unrest that began in 2007, college-educated White workers in March of 2009 have an unemployment rate of 3.8%; in contrast, the unemployment rate among Black college-educated workers is 7.2%, up 4.5% from 2007 (Austin, 2009).

Because college-educated Blacks are more likely to borrow money to pay for college, borrow larger sums of money on average, and are more likely to earn less and to be laid off during periods of economic unrest upon graduating than their White counterparts, the return on college may be perceived as being less for them (Price, 2004). Equally important, high debt may negatively affect the subjective calculation young adults make about attending college and completing college when they see and hear the stories of family and friends strapped with high amounts of college debt while barely earning enough to pay for that debt (i.e., their educational debt burden is often high). The educational debt burden is measured by the ratio of monthly student loan payments to gross monthly income (Price, 2004). According to Price (2004), students who exceed an 8% threshold of educational debt to monthly income are at a greater risk of student loan default and other economic hardships. Twenty-four percent of Black young adults in 2001 exceeded the 8% threshold (Price, 2004). In this sense, high college costs have both direct effects on Black young adults' college progress—reducing access to college and the ability to complete college among college age young adults—and indirect effects—dampening expectations of young adults not yet college age. In addition to grants, according to asset researchers and policymakers, policies that promote asset accumulation among young adults and their parents may be an alternative to the current policy of debt accumulation (Boshara, 2003; Goldberg & Cohen, 2000; Sherraden, 1991).

Child Development Accounts (CDAs) have been proposed as a potentially novel and promising alternative mechanism to debt accumulation for financing college (Boshara, 2003; Goldberg & Cohen, 2000; Sherraden, 1991). An example of a CDA policy in America is the America Saving for Personal Investment, Retirement, and Education (ASPIRE) Act. ASPIRE would create "KIDS Accounts," or a savings account for every newborn, with an initial $500 deposit, along with opportunities for financial education.[3] Other examples of youth asset-building policies in America are Young Saver's Accounts, 401Kids, Baby Bonds, and Plus Accounts.[4] At the state level, College Savings (529) Plans are becoming more inclusive and are a promising platform for CDAs (Lassar, Clancy, & McClure, 2010).

In addition to proposed policies in America, a number of countries (such as, the United Kingdom, Singapore, Canada, and South Korea) have already initiated some form of national CDA policy (see, Loke & Sherraden, 2009). The United Kingdom's Child Trust Fund (CTF), which is currently on hold, was initiated in April 2005 to provide a long-term savings and investment account for every child born on or after September 1st, 2002. Children received an initial deposit and a subsequent

[3] At this writing, the ASPIRE Act remains on the Congressional agenda (http://www.newamerica.net/publications/policy/aspire_act_bill_summary).
[4] For more information on these policies, see Loke and Sherraden (2009).

deposit in their accounts by the government when they reached age seven. Parents, families, and friends could also make deposits in the accounts and receive tax protection up to a specified amount per year (Loke & Sherraden, 2009). Money could not be withdrawn from the accounts until children turned 18.

These policies were developed, in part, on the basis of research on the asset/college relationship, which is reviewed in the next section.

Review of Research on the Asset/College Relationship by Race

Research on Assets and College Attendance

We find nine studies that examine the relationship between household assets and college attendance (Charles, Roscigno, & Torres, 2007; Conley, 2001; Destin, 2009; Elliott & Beverly, 2010; Haveman & Wolff, 2005; Huang, Guo, Kim, & Sherraden, 2010; Jez, 2008; Nam & Huang, 2009; Williams Shanks & Destin, 2009). All but two (Charles et al., 2007; Jez, 2008) of the nine studies use data from the Panel Study of Income Dynamics (PSID) and its supplements. Charles et al. (2007) use data from the National Educational Longitudinal Survey (NELS:88) and Jez (2008) uses data from the National Longitudinal Study of Youth (NLSY) 1997. Most of the research (eight of nine studies) on assets and college attendance include net worth. Most researchers define net worth as total family assets minus debt, but some include home equity in the measurement as well (Elliott & Beverly, 2010; Huang, Guo, Kim, & Sherraden, 2010; Nam & Huang, 2009), and others do not (Conley, 2001; Destin, 2009; Haveman & Wolff, 2005; Jez, 2008; Williams Shanks & Destin, 2009). A reason researchers may exclude home equity is because homes cannot be easily turned into cash and, when refinanced to pay for school, create debt (Shapiro, Oliver, & Meschede, 2009).

Conley (2001), Destin (2009), Williams Shanks and Destin (2009), and Haveman and Wilson (2007) find that net worth is positively related to college attendance. However, Jez (2008), Nam and Huang (2009), and Elliott and Beverly (2010) find that net worth is not significantly related to college attendance. It appears that findings are sensitive to the inclusion of a youth's academic achievement or cognitive ability. Studies that find that net worth is significant typically do not control for academic achievement or ability. Elliott and Beverly (2010) add net worth to the model after academic achievement, and thus the independent effects of academic achievement cannot be determined. Jez (2008) finds that net worth is significant in the basic model but is not significant once academic achievement is added to the model. Similarly, Nam and Huang (2009) find that net worth is significant until cognitive ability is added (i.e., whether adolescents are ever in a gifted program or ever repeated a grade).

Two of the studies include parental savings (Charles et al., 2007; Elliott & Beverly, 2010). Charles et al. (2007) find that whether or not parents have savings for youth's college expenses is positively related to attendance at both two-year and four-year colleges, while the amount of school savings is positively related only to four-year college attendance. This study does not control for academic achievement or cognitive ability. Elliott and Beverly (2010) also include parents' savings for adolescents and control for academic achievement. They find that parents' savings for adolescents does not have a significant association with college attendance when controlling for academic achievement.

In regard to college attendance, findings on income are mixed when controlling for assets. Among the nine identified studies that examine the assets/college attendance relationship, five find income is not significant (Conley, 2001; Elliott & Beverly, 2010; Jez, 2008; Williams Shanks & Destin, 2009; Zhan & Sherraden, 2010); four studies find that income is significant when controlling for assets (Charles et al., 2007; Destin, 2009; Haveman & Wilson, 2007; Nam & Huang, 2009). Mixed results, coupled with the fact that all of the studies use a continuous form of income, make it difficult to determine if asset effects may vary by income level.

Among the nine studies, two use separate samples of Black and White young adults (Jez, 2008; Williams Shanks & Destin, 2009). When examining a separate sample of Black young adults, Jez (2008) finds net worth is not significantly related to attendance at a four-year college while controlling for young adults' academic achievement. In contrast, Williams Shanks and Destin (2009) find that net worth is significantly related to college attendance among a sample of all Black young adults. However, Williams Shanks and Destin (2009) do not control for academic achievement nor do they include adolescents' school savings in their analysis.

Research on Assets and College Graduation

Six studies examine the association between assets and college graduation (Conley, 1999, 2001; Haveman & Wilson, 2007; Nam & Huang, 2009; Zhan & Sherraden, 2009, 2010). All but one finds that assets are significantly related to college graduation. Four of the six studies use the PSID (Conley, 1999, 2001; Haveman & Wilson, 2007; Nam & Huang, 2009), and two use the NLYS79.

Among young adults aged 18-20, Conley (1999) finds that net worth is positively related to college graduation but income is not. In a later study of young adults aged 22-30, Conley (2001) finds that the relationship between net worth and college graduation is significant but at $p < .1$, and that income is significant. Haveman and Wilson (2007) find that net worth is significantly related to college graduation for youth aged 25-29. Further, they find a significant association between income and college graduation. Zhan and Sherraden (2009) examine the effects of assets on college graduation for young adults aged 23 to 26. They find that both liquid assets (such as savings, stocks, and bonds) and non-liquid assets (such as a home or business) are significantly related to college graduation, although income is not. In contrast, Nam and Huang's (2009) study finds that income is significant. In addition, Nam and Huang (2009) is the only study to find that neither net worth nor liquid assets are significantly associated with college graduation. This may be because theirs is the only study testing college graduation to include proxies for young adult's cognitive ability (i.e., whether ever in a gifted class or ever repeated a grade).

In the only study on college graduation and assets to examine separate samples of Black and White young adults, Zhan and Sherraden (2010) find that liquid assets (i.e., savings accounts, CDs, IRAs or Keoghs, and tax-deferred plans, plus the market value of stocks, bonds, and mutual funds) are positively related to college graduation for Whites, while non-liquid assets (i.e., vehicle equity, equity in residential, and nonresidential property, businesses, and farms) are positively related to college graduation among Black young adults ages 23 to 26. Income is not significant for either group.

Summary of Existing Research

In sum, a growing body of research examines the relationship between different forms of assets and college attendance and/or graduation. Most of the research focuses on household assets, especially net worth. Findings appear to be sensitive to the inclusion of youth's academic achievement or cognitive ability. Studies that control for achievement or ability have consistently found that net worth is not related to attendance. Most of the research on college completion finds that assets are positively related to completion. However, the one study that controls for ability finds that net worth is not significant. Moreover, few studies have used separate samples of Black and White young adults.

This study builds on previous research in several important ways. First, we use longitudinal data to examine whether savings and assets promote college progress. By using longitudinal data we are able to provide some evidence of time precedence (i.e., assets and savings come prior to college progress), an important step toward establishing causation. Second, although much is known about the factors that affect college attendance, it is only recently that researchers have begun to examine variations in college attendance by race (Freeman, 1997; Hurtado, Inkelas, Briggs, & Rhee, 1997; Perna, 2000). This study helps to further our understanding of racial differences by using separate samples of Black and White young adults. Independent samples of Black and White young adults can enable researchers to draw inferences that may be lost in aggregate data (for example, savings are related to one group's college progress but not the other). Third, in addition to different forms of household assets (i.e., parents' savings and net worth), this study also includes adolescents' school savings. There is a growing body of evidence that suggests adolescents' savings may be a particularly powerful form of assets (see e.g., Elliott & Beverly, 2010). Finally, this study includes academic achievement as a control. Findings suggest that academic achievement may account for some of the effect of net worth on college progress (see e.g., Jez, 2008).

Conceptual Framework and Hypotheses

Conceptual Framework

Researchers have identified a number of factors, including social capital (Porfeli, Wang, Audette, McColl, & Algozzine, 2009), cultural capital (Lareau, 2003), economic capital (Coleman, 1988), and human capital (Paulsen, 2001) as being key predictors of college attendance. The different types of capital are believed to augment young people's use of effort and ability, allowing them to accomplish more than they would be able to otherwise. From this perspective, if there are two young people with similar capacities for effort and ability but one of them has capital at their disposal, the young person with capital will be able to achieve a higher level of functioning (i.e., success) in school than the young person without capital.

Among the types of capital, this study focuses specifically on economic capital. While education research has given considerable attention to income (Axinn, Duncan, & Thornton, 1997; Brooks-Gunn & Duncan, 1997; Duncan, Yeung, Brooks-Gunn, & Smith, 1998), assets have largely been overlooked as a type of economic capital. One reason why assets have been largely ignored may be because income and assets have traditionally been viewed as one concept (Sherraden, 1991). According to Sherraden (1991), assets represents an accumulated stock of resources kept through time, whereas income is a flow of resources used for current consumption. There is a growing body

of evidence that supports the contention that assets and income are distinct concepts (e.g., Lerman & Mikesell, 1988; Oliver & Shapiro, 2006; Schreiner & Sherraden, 2007; Sherraden, 1991; Zajonc, 1980). For example, Lerman and Mikesell (1988) find that when income stemming from net worth (i.e., total household wealth minus debts) is removed from total income, the correlation between income and net worth is .26. In addition, researchers find that asset inequality is more skewed than income inequality in America (Mishel, Bernstein, & Allegretto, 2006-2007; Oliver & Shapiro, 2006; Sherraden, 1991). For example, according to Mischel, Bernstein, and Allegretto (2006-2007), the top 10% of Americans received less than half (42.5%) of all reported income in 2004. In contrast, the top 10% of Americans in 2004 held 71.2% of all assets (Mishel et al., 2006-2007). Further, wealth is very unequally distributed by race. Median net worth for Black households in 2004 was $11,800; for White households it was $118,300. Moreover, 29.4% of Black households in 2004 had negative net worth, while only 13.0% of White households had negative net worth (Mishel et al., 2006-2007).[5]

Although evidence is mixed, the majority of evidence suggests that assets may help promote college attendance and graduation (see e.g., Elliott & Beverly, 2010; Zhan & Sherraden, 2010). Based on this evidence, we ask whether net worth, parents' savings, and adolescents' savings have a significant association with Black children being on course. Adolescents' school savings in the Child Development Supplement (CDS) of the PSID is the portion of money in a traditional savings account (e.g., an interest-bearing savings account at Bank of America) that adolescents mentally designate for school. Adolescents can easily withdraw money from these accounts and use that money without penalty. It is important to point out that the liquid nature of adolescents' school savings in the CDS distinguishes it from other more popular educational accounts such as Coverdell Education Savings Accounts, Uniform Gifts to Minors Act (UGMAs), 529 College Savings plans run by states, Roth Individual Retirement Arrangements (IRAs), or CDAs.[6] These increasingly popular educational accounts offer their owners protection from taxation. In order not to be taxed, however, savings in these accounts typically cannot be withdrawn without penalty until children reach college age, and savings must be spent on college-related expenses. As a result, these accounts can more aptly be defined as being non-liquid in nature.

Moreover, we ask whether there may be additional benefits to adolescents having school savings in their own name in contrast to having it in the name of a parent as is the case in popular school savings accounts. This question is built on evidence from behavioral economics. Evidence in behavioral economics suggests people use mental and physical accounting techniques to think about different pots of money in ways that affect when and how they use the money (Kahneman & Tversky, 1979; Lea, Tarpy, & Webley, 1987; Thaler, 1985; Winnett & Lewis, 1995; Xiao & Anderson, 1997). In other words, money is not entirely fungible, with different accounts holding different purposes and meanings. These meanings may affect how people deposit money into accounts and how they use the money (Winnett & Lewis, 1995). Families, especially those with children, may have numerous household accounts that are designated for certain purposes and are subject to negotiation within the family (Winnett & Lewis, 1995). Some examples of these different accounts are Christmas accounts, vacation accounts, home repair accounts, school expense accounts for such things as clothing and books, college tuition accounts, new home purchase accounts, and so

[5] Net worth here includes home equity.
[6] An example of a proposed CDA policy is the America Saving for Personal Investment, Retirement, and Education (ASPIRE) Act.

on. Further, parents are typically designated as the primary decision makers over these family accounts and thus maintain primary power over how they are used.

Hypotheses

Specifically, there are three main hypotheses in this study: (1) White young adults are more likely to be on course than Black young adults; (2) liquid assets (i.e., parents' savings for their children and adolescents' school savings) are more likely to promote being on course among young adults than net worth when controlling for academic achievement regardless of race, and (3) Black young adults who have school savings as adolescents are more likely to be on course than those living in higher net worth households or who have parents who have savings for them as adolescents.

Methods

Data

This study uses longitudinal data from the PSID and its supplements, the Child Development Supplement (CDS) and the Transition into Adulthood supplement (TA). The PSID is a nationally representative longitudinal survey of U.S. individuals and families that began in 1968. The PSID collects data on such things as employment, income, and assets. Our independent variables related to households and parents are taken from 1999, 2001, and 2002 PSID data.

The CDS was administered to 3,563 PSID respondents in 1997 to collect a wide range of data on parents and their children, aged birth to 12 years. Specifically, it focused on a broad range of developmental outcomes across the domains of health, psychological well-being, social relationships, cognitive development, achievement motivation, and education. Follow-up surveys were administered in 2002 and 2007. Our independent variables for young adults are taken from the 2002 CDS because this was the first year data were collected on youth savings and parents' savings for youth. The TA supplement, administered in 2005 and 2007, measured outcomes for young adults who participated in earlier waves of the CDS and were no longer in high school. Our outcome variables are taken from the 2007 TA.

The three data sets are linked using PSID, CDS, and TA map files containing family and personal ID numbers. The linked data sets provide a rich opportunity for analyses in which data collected at an earlier point in time (2002 or earlier) can be used to predict outcomes at a later point in time (2007), and stable background characteristics can be used as covariates. Because the PSID initially oversampled low-income families, both the descriptive and multivariate analyses are weighted using the last observed weight variable as recommended by the PSID manual (Gouskova, 2001).

Variables

Assets. Three different types of assets are examined: net worth, parents' savings for youth, and youth savings. We should note that there are several differences between the accounts examined in this study and CDA accounts like those that have been proposed in the ASPIRE act and other popular education accounts such as Coverdell Education Savings Accounts, Uniform Gifts to Minors Act (UGMAs), 529 College Savings plans run by States, and Roth Individual Retirement Arrangements (IRAs). These increasingly popular educational accounts offer their owners protection from taxation. In order not to be taxed, however, savings in these accounts typically cannot be

withdrawn without penalty until youth reach college age, and the savings must be spent on college related expenses. As a result, these accounts can more aptly be defined as being non-liquid in nature.

The accounts examined in this study differ from these popular education accounts, in that adolescents can easily withdraw money from these accounts and use that money without penalty. A reason for focusing on liquid school savings in this study is because they are the type of account currently found in the PSID/CDS. Another, more important reason, is that liquid forms of assets have been more predictive of young adults' college progress than illiquid forms of assets, particularly when researchers control for youth cognitive ability (see e.g., Elliott & Beverly, 2010; Nam & Huang, 2009).

Net worth. Net worth in the PSID is a continuous variable that sums separate household values for a business, checking or savings account, real estate, stocks, and other assets, and subtracts out credit card and other debt. In this analysis, net worth does not include home equity. Shapiro, Oliver, and Meschede (2009) suggest that homes cannot be easily turned into cash, and ,when refinanced to pay for school, create debt. They go on to say that "homes have use value, and thus including home equity gives a false sense of security" (p. 2). Therefore, they suggest that home equity should not be included when measuring net worth. Net worth is averaged for 1994, 1999, and 2001. Net worth is inflated to 2002 price levels. Because net worth is skewed, the log form of net worth is used for regression analyses. Since some individuals have a negative value on the net worth variable, it is necessary to make adjustments to these numbers so that the natural log of net worth could be calculated. All net worth values that are less than or equal to zero are re-coded as one so that the natural log could be ascertained (e.g., Henretta & Campbell, 1978; Orr, 2003). Approximately 10% of the sample is affected. In addition, data are top-coded at $1,000,000, which affects about 1% of the aggregate sample. A categorical net worth variable is used in descriptive analyses. The trichotomous variable has the following categories: negative net worth (< $0), modest net worth ($0~$10,000), and high net worth (>$10,000).[7]

Parents' savings for adolescents. Heads of households were asked in 2002 whether they (or another caregiver) had any money put aside for their youth in a bank account that is separate from other types of savings. They were also asked whether they (or another caregiver) had any money put aside specifically for their youth's college or future schooling, separate from other types of savings they may have had for him or her. Responses to these two questions are combined to create a dichotomous variable indicating whether parents had any money put aside separately for their child.

Adolescents' school savings. Adolescents were asked in 2002 whether they had a savings or bank account in their name. If they had an account, they are also asked whether they had designated a portion of this savings for future school, like college. The school savings variable divides adolescents into two categories: (1) those who in 2002 had an account and designated a portion of the savings in the account for school, and (2) those who had an account but did not designate a portion of the savings in the account for school and those with no account.

Outcome Variable. The outcome variable used in this study is college progress. College progress indicates whether youth are "on course" for achieving the American Dream via the education path in 2007. Youth who were currently enrolled in or had graduated from a two-year or four-year college

[7] These categories are based on work done by Nam and Huang (2009).

are described as on track. Those who are not currently enrolled and do not have college degrees are described as off course.[8]

Control Variables. Controls are broken down by demographic, adolescent, head, and household characteristics.

Age in 2002. Adolescents' age is a continuous variable collected in 2002 from the CDS.

Race. Adolescents' race is a dichotomous variable from the CDS (Black, White).

Self-efficacy. Adolescents' self-efficacy was measured in the 2002 CDS using Pearlin's self-efficacy scale (for more information, see Pearlin, Menaghan, Lieberman, & Mullan, 1981). According to Mainieri (2006), the children's self-efficacy scale measured the amount of control children perceive they have over their life in the CDS. Data are downloaded for 2002, ages 12 to 18 (data for children as young as eight are available in the CDS). For descriptive purposes, the variable is collapsed into a dichotomous variable using the mean score. In all regressions, it is used in its continuous form.

Self-concept. Adolescents' self-concept was measured in the 2002 CDS using Rosenberg's self-esteem scale (for more information see, Rosenberg, 1986). According to Mainieri (2006), children's self-concept measured the degree of satisfaction one has with him or herself in the CDS. Data are downloaded for 2002, ages 12 to 18 (data for children as young as eight are available in the CDS). For descriptive purposes, the data are collapsed into a dichotomous variable above and below the mean score. In all regressions, it is used in its continuous form.

Academic achievement. Academic achievement is a combined math and reading score from 2002. The Woodcock Johnson (WJ-R), a well-respected measure, is used in CDS to assess youth math and reading ability (Mainieri, 2006).

Special education. Special education is measured in 2002 from the CDS by asking children whether they have ever been classified as needing special education by the school. It is coded as a yes-or-no question.

Heads' education. Head's education is a continuous variable (1 to 16) collected in 2003 from the PSID, with each number representing a year of completed schooling. A categorical variable is also used, dividing heads into three groups: those who had a high school degree or less, those who had some college, and those who had a four-year degree or more.

Family income. Family income is calculated by averaging income measured in the PSID in 1992, 1996, and 2002 (income data in the PSID is for the previous tax year). The 1992 and 1996 income is inflated to 2002 price levels using the Consumer Price Index. Because family income is highly skewed, the log of family income is used in regression analyses. In descriptive analyses, we use a

[8] The former category includes youth who have a graduate degree or are currently attending a graduate program. The latter category includes those who have not graduated from high school, those with a high school diploma or GED who have not attended college, and those who have attended college but are not currently enrolled. Very few youth have graduated from college: 15 have a two-year college degree, 31 have a four-year college degree, two have a graduate degree, and four are currently in a graduate program.

trichotomous variable with the following categories: low-income (< $33,377), modest-income ($33,377 to $84, 015), and high-income ($84,016 or more).[9]

Study Sample

The 2007 TA sample consists of 1,118 participants. The aggregate sample in this study is restricted to Black and White young adults who either graduated high school, received a General Equivalency Diploma (G.E.D.) or are no longer in high school (N=1,003). The aggregate sample of young adults is split into a White sample (N=534) and a Black (N=469) sample. The aggregate sample, the White sample, and the Black sample are similar in mean age (see Table 1). Young adults range in age from 16 to 19 in 2002, and 17 to 23 in 2007. Ages overlap because young adults start and leave school at different times. Other sample characteristics are summarized in Table 1.

Analysis Plan

There are two stages to this analysis plan. The first stage uses descriptive methods to compare aggregate, White, and Black samples in regards to adolescent, head, and household characteristics. Stage two uses multivariate techniques to test whether savings and assets predict college progress while controlling for multiple factors.

Stage one. In the case of survey data, common SAS syntax for analyzing descriptive data may not be appropriate (SAS Institute Inc., 2008). To account for the survey design of the PSID, SURVEYFREQ is used to determine the percentage of youth who ever attended college and the percentage of youth on track (SAS Institute Inc., 2008). In addition to analyzing basic descriptive statistics for the samples, we also analyze the percentage of young adults on course for each of the factors included in the study. Next we use two sample t-tests for proportions to determine if the proportion of White young adults on course is significantly different from the proportion of Black young adults on course.

Stage two. Multivariate analyses are run using PROC SURVEYLOGISTIC (SAS Institute Inc., 2008). Because a small portion of households have more than one young adult living in them, standard errors are adjusted by clustering them into the same family unit with the CLUSTER statement (SAS Institute Inc., 2008). More specifically, three logistic regressions are estimated in this study. Model 1 estimates the effect of assets on college progress using the aggregate sample (both White and Black young adults included) (N=1003).[10] Model 2 estimates the effect of assets on college progress among a sample of only White young adults (N=534). Model 3 estimates the effects of assets on college progress among a sample of only Black young adults (N=469).

[9] Category amounts are based on those used in the U.S. Census Bureau's Current Population Report *Income in the United States: 2002* (Shefrin & Thaler, 1988). De-Navas-Walt et al. (2002) used five income categories; we recoded into three categories to increase the sample size within each group.

[10] We also estimate a model using aggregate data without assets and academic achievement to determine if race is significantly related to college progress. Further we estimate a model with assets but not academic achievement to determine the effects of assets on reducing the Black/White gap separate from academic achievement. However, due to space constraints, we only show estimates for race at the bottom of Table 3 for these models. The full models are available upon request.

Moreover, we provide a measure of effect size through the maximum rescaled R^2 (not equivalent to the variance explained in multiple regression model, but closer to 1 is also positive) and a measure of predictive accuracy through the classification tables. Classification tables are used in logistic regressions to show how well the two categories of college progress (on course=event, off course=nonevent) are correctly predicted. There are three ways that the classification table provides predictive accuracy. One way is the percentage of correct classifications. The second is sensitivity—the percentage of events correctly predicted. The third is specificity—the percentage of nonevents correctly predicted. The cutoff for the classification tables is 0.5.

Missing Variables

Prior to running logistic regressions, school savings are analyzed to determine if missing data are missing completely at random (MCAR). According to Little and Rubin (1987), data are MCAR when, given the observed data, the missingness mechanism does not depend on the unobserved data. To test for differences between excluded cases and cases included, all missing variables are transformed to a miss variable, and chi square and t-tests are run. There are no statistically significant differences between the cases excluded and the remaining sample of cases in regards to college progress for the aggregate (approximately 35% excluded), White (approximately 34% excluded), and Black (approximately 36% excluded) samples. Listwise deletion is used to eliminate cases with missing data.

Results

Stage One: Descriptive Analyses and Percentage Increase in College Progress

Descriptive Results

Columns one and two of Table 1 provide descriptive statistics for demographic, head, and household characteristics as well as assets for the aggregate sample, as well as White and Black young adults. Generally, the aggregate sample more closely mirrors the White sample on demographic, head, household, and asset characteristics than the Black sample because White young adults (79%) make up a larger percentage of the overall sample (see Table 1). While the White sample has more young adults who are 16 or below (59%) in 2002, the Black sample has more young adults (61%) who are 16 or above in 2002. White young adults are more likely than Black young adults to live in households as adolescents with heads who have a four-year degree or more (32% vs. 8%, respectively). However, both the White and Black samples are similar in having been in special education (11% vs. 12%, respectively), whether they have average or above average academic achievement (39% vs. 35%, respectively), average or above average self-efficacy (36% vs. 34%, respectively), and average or above average self-concept (51% vs. 47%, respectively).

Turning to economic factors, the median White household earns nearly three times more income ($65,308) than the median Black household ($28,961). Similarly, the median White household holds just over nine times more in net worth ($38,739) than the median Black household ($4,242). Further, White parents (60%) are far more likely to have savings for their child than Black parents (39%), and White adolescents are far more likely to have savings of their own than Black adolescents (51% versus 27%, respectively). In regards to college progress, young adults who live in White households

are more likely to be on course. Specifically, they are about two times as likely to be on course as Black young adults (63% vs. 35%, respectively).

The College Progress Gap between HI and LMI Young Adults

Columns two and three of Table 2 provide descriptive statistics on the percent of White and Black young adults on course by demographic, head, household and asset characteristics. Column four provides the Black-White college progress gap (i.e., difference between percent White and Black young adults on course). Aggregate data indicates that there is a 28% gap in college progress between White and Black young adults ($t = 2.38$, $df = 986$, $p = .02$). The largest gap is in regards to whether heads have a four-year degree or more. The Black-White gap is 50% for young adults who live with heads who have a four-year degree or more ($t = 3.91$, $df = 920$, $p = .00$). The smallest gap (8%) is between White and Black young adults who live in modest net worth households as adolescents ($t = 0.38$, $df = 985$, $p = .70$).

With respect to economic factors, the gap (26%) between White and Black young adults who live with parents who do not have savings for them is statistically significant ($t = 2.51$, $df = 846$, $p = .01$). The Black-White college progress gap of 29% among young adults who live with parents who have high net worth is statistically significant ($t = 2.21$, $df = 990$, $p = .03$). In addition, the gap (28%) between White and Black young adults who have school savings of their own is also statistically significant ($t = 2.18$, $df = 761$, $p = .03$).

Table 1: Descriptive statistics for the aggregate (N=1003), White (N=534), and Black (N=469) young adults

Categorical Variables	[a] Aggregate	White	Black
		%	%
Age 16 or above in 2002	41	41	61
Below age 16 in 2002	59	59	39
Have never been in special education	89	89	88
Have been in special education	11	11	12
Have average or above average academic achievement	36	39	35
Have below average academic achievement	64	61	65
Have average or above average self-efficacy	36	36	34
Have below average self-efficacy	64	64	65
Have average or above average self-concept	51	51	47
Have below average self-concept	49	49	53
Head and Household Controls			
Heads have four-year degree or more	28	32	08
Heads have some college	23	24	18
Heads have high school degree or less	49	43	74
Four or more live in household	67	76	63
Less than four live in household	33	24	37
High-income (>$84,016)	25	30	06
Moderate-income ($33,377~$84,016)	47	52	28
Low-income (< $33,377)	28	18	66
Assets[a]			
Parents have savings for youth	56	60	39
Parents do not have savings for youth	44	40	61
High net worth (>$10,000)	63	72	29
Modest net worth ($0 - $10,000)	19	15	33
Negative net worth (<0)	18	13	38
Adolescents have savings for school	46	51	27
Adolescents do not have savings for school	54	49	73
College progress			
On course	57	63	35
Not on course	43	37	65

		Aggregate			White			Black		
Continuous Variables		Mean	SD	Median	Mean	SD	Median	Mean	SD	Median
Age 2002		16	1.54	16	16	1.53	16	16	1.59	16
Age 2007		20	1.63	20	20	1.62	20	20	1.69	20
Parent education level		13	2.45	13	14	2.24	13	12	2.63	12
Household size		4.16	1.15	4.16	4.12	1.03	4.00	4.29	1.51	4.00
Self-efficacy		3.08	0.59	3.08	3.10	0.55	3.00	3.01	0.07	3.00
Self-concept		3.40	0.45	3.40	3.39	0.46	3.40	3.44	0.41	3.50
Academic achievement		213	32.98	209	219	31.59	215	190	28.36	187
Family income	($)	71,068	72,958	59,163	79,535	78,010	65,308	36,243	28,046	28,961
	Log	10.13	2.90	10.94	10.44	2.64	11.07	8.92	3.46	10.17
Net worth	($)	168,893	1,008,686	27,565	201,798	1,121,111	38,739	30,511	16,700	4,242
	Log	8.63	4.35	9.97	9.41	-1.77	10.42	5.66	4.63	7.71

Source: Data from the Panel Study of Income Dynamics and its supplements.

Notes. College progress identifies young people who are "on course", i.e., those who are currently enrolled in, or who have a degree from, a two-year college, a four-year college, or a graduate program. SD=standard deviation.

[a] In the aggregate weighted sample Whites make up 79% of the sample and Blacks make up 21%.

* p <.10; ** p < .05; *** p < .01; **** p < .001

Table 2: Percent on course for the aggregate (N=1003), White (N=534) and Black (N=469) young adults

Categorical Variables	Aggregate On Course	White On Course	Black On Course	Black/White College Progress Gap	
	%	%	%	%	(t, df)
Age 16 or above in 2002	58	63	39	24	(1.88, 991)
Below age 16 in 2002	57	64	32	32*	(2.86, 976)
Have never been in special education	64	70	41	29*	(2.31,785)
Have been in special education	30	36	10	26*	(3.67, 683)
Have average or above average academic achievement	69	81	58	23	(1.34, 991)
Have below average academic achievement	39	52	22	30*	(3.16, 950)
Have average or above average self-efficacy	68	75	37	38*	(3.19, 976)
Have below average self-efficacy	51	56	34	22	(1.85, 990)
Have average or above average self-concept	63	69	35	34*	(2.92, 978)
Have below average self-concept	53	57	34	23	(1.94, 990)
Head and Household Controls					
Heads have four-year degree or more	84	87	37	50*	(3.91, 920)
Heads have some college	58	62	36	26	(1.90, 931)
Heads have high school degree or less	41	46	30	16	(0.72,921)
Four or more live in household	62	67	40	27*	(2.12, 990)
Less than four live in household	44	51	26	25*	(2.45, 976)
High-income (>$84,016)	89	90	72	18	(0.70, 986)
Moderate-income ($33,377~$84,016)	54	56	39	17	(1.22, 92)
Low-income (< $33,377)	35	40	29	11	(0.85, 992)
Assets[a]					
Parents have savings for youth	68	71	48	23	(1.61, 859)
Parents do not have savings for youth	47	54	28	26*	(2.51, 846)
High net worth (>$10,000)	69	72	43	29*	(2.21, 990)
Modest net worth ($0 - $10,000)	35	39	27	12	(1.02, 992)
Negative net worth (<0)	40	43	35	8	(0.38, 985)
Adolescents have savings for school	75	78	50	28*	(2.18, 761)
Adolescents do not have savings for school	45	50	32	18	(1.70, 760)
College progress					
[a] On course	---	---	---	28*	(2.38, 986)
Not on course	---	---	---	28*	(-3.55, 848)

Source: Data from the Panel Study of Income Dynamics and its supplements.

Notes. College progress identifies young people who are "on course", i.e., those who are currently enrolled in, or who have a degree from, a two-year college, a four-year college, or a graduate program. SD=standard deviation.

[a] To calculate the college progress Black/White gap percents from Table 1 are used. 63% of White young adults are on course; 35% of Black young adults are on course. 37% of White young adults are off course; 65% of Black young adults are off course.

* $p < .05$

Stage Two: Multivariate Analysis

Multivariate Results for Aggregate Young Adults

Appendix A, B, and C contain correlation matrices for all independent variables for each of the samples. Model 1 estimates the independent effects of assets on college progress for young adults after controlling for demographic, head, household, and asset characteristics (Table 3). Approximately 41% of the variance in college progress is explained. With a cutoff of 0.5, the classification table indicates that the model correctly predicts 73% of the cases. The accuracy of the prediction for young adults being on course (sensitivity = 75.3%) is slightly greater than the prediction of young adults being off course (specificity = 69.7%).

Young adults' academic achievement, heads' education, and household size are statistically associated with young adults being on course. For each one-point increase in young adults' academic achievement scores, their odds of being on course increase by 3% *(odds ratio = 1.03, p = .0009).* For each one year increase in head's education level, the odds of young adults being on course increases by 19% *(odds ratio = 1.19, p = .04).* For each one person increase in household size, the odds of young adults being on course increases by 33% *(odds ratio = 1.33, p = .01).*

Among the variables of interest, having school savings as adolescents is a statistically significant indicator of young adults' college progress. Young adults who have an account and designate a portion for school are almost twice as likely to be on course than those who do not have an account or who have an account but do not designate some savings for school *(odds ratio = 2.12, p = .003).* Moreover, net worth approaches statistical significance at $p < .1$. For each one-point increase in log of net worth, the odds of young adults being on course increases by 7% (*odds ratio = 1.07, p = .059*).

It also should be noted that we estimate a model using aggregate data without assets and academic achievement to determine if race is significantly related to college progress. We find that race is statistically significant (B = -.90, p = .0008, *O.R.* = 0.94). Further, we estimate a model with assets but not academic achievement to determine the effects of assets on reducing the Black/White gap separate from academic achievement. Race remains statistically significant but the effect size is reduced (B = -.58, p = .046, *O.R.* = 0.56). However, due to space constraints, we only show estimates for race.

Multivariate Results for White Young Adults

Model 2 estimates the independent effects of assets on college progress for White young adults after controlling for demographic, head, household, and asset characteristics (see Table 3). Approximately 43% of the variance in college progress is explained. With a cutoff of 0.5, the classification table indicates that the model correctly predicts 73% of the cases. The accuracy of the prediction for young adults being on course (sensitivity = 87.9%) is greater than the prediction of young adults being off course (specificity = 58.5).

White adolescents' age, academic achievement, head's education and household size are significantly associated with whether young adults are on course. For each one year increase in White adolescents' age in 2002, the odds of being on course decrease by 20% *(odds ratio = 0.80, p = .03).* For each one-point increase in White young adults' academic achievement score, the odds of being

on course increase by 4% *(odds ratio = 1.04, p = .02)*. For each one year increase in head's education level, the odds of White young adults being on course increase by 44% *(odds ratio = 1.44, p < .0001)*. For each one person increase in household size, the odds of White young adults being on course increases by 44% *(odds ratio = 1.44, p = .03)*. Additionally, self-efficacy approaches statistical significance at $p < .1$. For each one-point increase in White young adults' self-efficacy scores, they are nearly two times as likely to be on course *(odds ratio = 1.84, p = .09)*.

Among the variables of interest, having school savings as adolescents is statistically significant among White young adults. White young adults who have an account and designate a portion for school are over two times as likely to be on course than White young adults who do not have accounts or who have accounts but do not designate some savings for school *(odds ratio = 2.24, p = .01)*. Moreover, net worth approaches statistical significance at $p < .1$.For each one-point increase in log of net worth, the odds of White young adults being on course increases by 8% (*odds ratio = 1.08, p = .07*).

Multivariate Results for Black Young Adults

Model 3 estimates the independent effects of assets on college progress for Black young adults after controlling for demographic, head, household, and asset characteristics (Table 3). Approximately 38% of the variance in college progress is explained. With a cutoff of 0.5, the classification table indicates that the model correctly predicts 67.5% of the cases. The accuracy of the prediction for young adults being on course (sensitivity = 45.0%) is not as good as the prediction of young adults being off course (specificity = 82.4).

Black young adults' special education status, academic achievement, and heads' education are statistically associated with Black young adults being on course. Black young adults who report having never been in special education are approximately five times more likely to be on course as young adults who have been in special education *(odds ratio = 4.93, p = .03)*. For each one-point increase in Black young adults' academic achievement scores, their odds of being on course increase by 4% *(odds ratio = 1.04, p < .0001)*. For each one year increase in head's education level, the odds of Black young adults being on course decreases by 15% *(odds ratio = 0.85, p = .009)*.

Among the variables of interest, having school savings as adolescents is statistically significant among Black young adults. Black young adults who have an account and designate a portion for school are almost twice as likely to be on course than those who do not have an account or who have an account but do not designate some savings for school *(odds ratio = 2.05, p = .049)*.

Table 3: Predictors of being on course among the aggregate, White, and Black samples

Items	Model 1: Aggregate (N=1003)			Model 2: White (N=534)			Model 3: Black (N=469)		
	B	*S.E.*	*O.R.*	*B*	*S.E.*	*O.R.*	*B*	*S.E.*	*O.R.*
Adolescent Controls									
Adolescents are Black	-0.029	0.312	---	---	---	---	---	---	---
Age (2002)	-0.058	0.084	---	-0.229**	0.102	0.80	0.188	0.141	---
Have never been in special education	0.589	0.381	---	0.552	0.491	---	1.596**	0.718	4.93
Academic achievement	0.026****	0.008	1.03	0.021**	0.009	1.02	0.040****	0.010	1.04
Self-efficacy	0.384	0.247	---	0.612*	0.362	1.84	-0.204	0.287	---
Self-concept	-0.060	0.358	---	-0.235	0.455	---	0.333	0.535	---
Head and household controls									
Heads' education	0.176**	0.085	1.19	0.366****	0.078	1.44	-0.168****	0.064	0.85
Household size	0.287**	0.114	1.33	0.367**	0.165	1.44	0.032	0.140	---
Log of family income	0.020	0.040	---	0.029	0.047	---	0.018	0.054	---
Assets									
Parents' savings for youth	0.257	0.247	---	0.186	0.305	---	0.422	0.397	---
Log of net worth	0.063*	0.033	1.07	0.076*	0.042	1.08	0.071	0.051	---
Adolescents' school savings	0.750***	0.249	2.12	0.805**	0.321	2.24	0.717**	0.365	2.05
Maxed-rescaled R^2			.41			.43			.38
N			652			351			302

Source: Data from the Panel Study of Income Dynamics and its supplements.

Notes: College progress identifies young people who are "on course," that is, those who are currently enrolled in, or who have a degree from, a two-year college, a four-year college, or a graduate program. S.E. = robust standard error. O.R. = odds ratio.

[a] When estimated without assets and academic achievement, race is statistically significant (B = -.90, p = .0008, *O.R.* = 0.94). When estimated with assets and without academic achievement, race effects are reduced but remain statistically significant (B = -.58, p = .046, *O.R.* = 0.56).

*p < .10; **p < .05; ***p < .01; ****p<.001.

Summary

Consistent with our first hypothesis, overall, White young adults are more likely to be on course than Black young adults. Results are mixed in regards to our second hypothesis. Consistent with the second hypothesis, adolescents' school savings, a liquid asset, is significantly related to both White and Black young adults' college progress and net worth is not. However, parents' savings for their child is not significantly related to college progress among White or Black young adults. Moreover, among White young adults, net worth approaches significance at $p < .1$. Consistent with our third hypothesis, only adolescents' school savings is statistically significant at $p < .05$ in the aggregate, White, and Black samples.

Discussion

Persistent disparities in the rate that White and Black young adults attend and graduate from college place a premium on finding new and innovative ways to promote college attendance and graduation rates among Black young adults. Increasingly, researchers and policymakers are exploring the potential role that savings and assets may play in helping to increase college attendance and graduation rates. However, little is known about how these effects may vary across different races. This study uses observations in a national data set to examine whether savings and assets promote college progress among separate samples of Black and White young adults while controlling for a number of factors to include academic achievement.

Findings support our first hypothesis that White young adults are more likely to be on course than Black young adults regardless of demographic, head, household, or asset characteristics. Findings suggest that 63% of White young adults, almost double the percentage (35%) of Black young adults between the ages of 17 to 23, are on course in 2007. This is a statistically significant college progress gap of 28%. This finding is consistent with previous descriptive research. For example, Ryu (2009) finds that there is a 12% gap in college attendance and a 16% gap in college graduation rates between White and Black young adults in 2006. Moreover, descriptive analyses suggest that having parents with a college education benefits White young adults more than it benefits Black young adults. There is a Black-White college progress gap of 50%, the largest gap by demographic, head, household, and asset characteristics.

The second hypothesis states that liquid assets (i.e., parents' savings for their children and adolescents' school savings) are more likely to promote being on course among young adults than net worth when controlling for academic achievement regardless of race. Consistent with our hypothesis, we find liquid assets, specifically adolescents' school savings, are significantly associated with White and Black young adults' college progress at $p < .05$, while net worth is only significant with White young adults' college progress but at $p < .1$. The finding that net worth is not significant while controlling for academic achievement is consistent with previous research (Jez, 2008; Nam & Huang, 2009). Inconsistent with our second hypothesis, parents' savings (a liquid form of assets) for their child is not significantly related to either White or Black young adult savings.

Our third hypothesis states that Black young adults who have school savings as adolescents are more likely to be on course than those living in higher net worth households or who have parents who have savings for them as adolescents. We find that neither net worth nor parents' savings are significantly related to Black young adults' college progress, while having school savings as an

adolescent is. This finding contradicts findings by Williams Shanks and Destin (2010). They find that net worth is significantly related to Black young adults' college attendance. However, they do not include a measure of young adults' academic achievement nor adolescents' school savings. Jez (2008), who includes young adults' academic achievement, finds that net worth is significant when academic achievement is not included but is not significant when controlling for young adults' academic achievement. It appears that differences in net worth findings among Black young adults are explained, at least in part, by their academic achievement.

It should also be noted that parents' education has a positive significant relationship with White young adults' college progress; however, surprisingly, it has a negative significant relationship with Black young adults' college progress. This may be because of the small percentage of Black parents with a four-year college degree (8%) compared to those who have a high school degree or less (74%). Moreover, there is little difference in the percentage on course between Black young adults with parents who have a four-year degree or more (37%), some college (36%), and a high school degree or less (30%) in the data. Perhaps the answer has to do with the types of messages Black parents convey to their children (Ogbu, 1983). Ogbu (1983) suggests that Black children form negative perceptions about the possible return on education due to the job ceiling their parents face in the labor market. Negative perceptions about labor market opportunities, according to Ogbu (1983), lead Black children to disengage from school and under-perform academically. Moreover, the increased debt burden Black young adults and their parents are facing may help to further foster negative perceptions about the return on college for them.

Limitations

A limitation of this study is the uncertainty of omitted variable bias. Young adults who have savings as adolescents may have differed from other young adults in other ways that affect college progress (e.g., motivation or self-discipline). Thus, it could be that the significant effect of assets is spurious. This is dealt with, in part, by controlling for various factors that are commonly associated with college attendance and completion, including economic, cultural, social, and human capital, but alternative explanations cannot be fully ruled out. It is also impossible in this study to measure whether young adults *grow up* with knowledge that they have financial resources to help pay for current and future schooling. In this study, savings is only measured at a single point in time.

Another limitation is the mean age of young adults of 20. Although age 20 is old enough for young adults to attend college, some will take longer. Moreover, some may start college at a younger age but stop and then start again later. The percentage of young adults "on course," therefore, may increase over time. However, more 18-21 year olds are enrolled in college than any other age group. Approximately 50% of young adults aged 18-21 are enrolled in college. In comparison, only about 30% of 22-24 year olds are enrolled, and just over 10% of 25-29 year olds are enrolled (Baum & Ma, 2009). In addition, research consistently shows that older students are less likely than younger students to graduate from college (Choy, 2002). Overall, if youth do not attend college shortly after high school, the likelihood of ever attending or completing college is greatly reduced.

Finally, there is also potential measurement error in the school savings variable. Since there is a fairly large difference in age of youth in 2002 (12 to 19), it could be that younger youth did not report designating their savings for school at similar rates as older youth. If this is true, findings related to youth school savings may be driven by older youth. Younger youth may not be able to grasp the

relationship between savings and future opportunity such as attending college. Age 12 is the first year that the CDS asks youth if they have savings of their own. This is unlikely, however. Evidence from behavioral economics suggests that youth may benefit from saving as early as age 12, and that somewhere between the ages of six and twelve, they begin to grasp the relationship between saving and future opportunity (see e.g., Elliott, Sherraden, Johnson, & Guo, 2010; Sonuga-Barke & Webley, 1993). Moreover, we find that savings rates among youth below age 16 and youth age 16 or older are roughly equal in the aggregate sample (23% vs. 23%, respectively), the White sample (26% vs. 25%, respectively), and the Black sample (13% vs. 14%, respectively).

Finally, we do not claim that assets are the most important factor for understanding college progress. Assets appear to matter and are an understudied factor. More research is needed to determine the importance of assets for educational outcomes.

Implications

The belief in personal responsibility and students as the primary beneficiaries of higher education has led to a student-based financial aid model in America that emphasizes loans over saving (Baum, 1996; Heller & Rogers, 2006). The student-based financial aid model is consistent with a life-cycle hypothesis (LCH) of savings and consumption (Baum, 1996). From a LCH perspective, it makes little sense to pay attention to whether youth save. This is because LCH proposes that youth have little money to save and therefore must rely on credit to finance such things as college or a home. However, findings suggest that even if adolescents may not be able to save large sums of money, they may still benefit from having school savings. So, whereas a model of financing college that relies on loans may negatively influence future generations of college goers' perceptions about the costs and benefits of college (Baum, 1996), a model of financing college through youth savings may positively influence their perceptions about the costs and benefits.

In line with our second and third hypothesis, we find some evidence to support the contention that liquid assets, particularly in the form of adolescents' school savings, are more likely to promote being on course among Black young adults than net worth when controlling for academic achievement. An implication of this finding for designing CDAs is that CDAs have been developed to solve the short-term problem of financing college; however, a better design might allow youth to access a portion of their savings on a more regular basis to help resolve long-term problems associated with attending college (for e.g., solving school-related problems such as buying books or a computer or paying fees related to school activities). Adding a liquid component to CDA policies also addresses the fact that Black young adults face multiple risk factors. In addition to direct effects (helping to pay for day-to-day expenses), liquid assets in a Black adolescent's name may help to build a sense of perceived control.

Further, existing education research identifies parents' SES (i.e., family income and parents' education level) as one of the most important predictors of young adult's college progress. However, up until now, this research has largely ignored youth's school savings. A reason for this may be because few data sets include adolescents' savings variables along with data on adolescents' educational outcomes. The PSID and its supplements, while imperfectly, provide one of the few opportunities to investigate this relationship. In this study, controlling for academic achievement, we find that adolescents' school savings has a significant association with college progress but income does not. Therefore, we suggest in addition to education policies that build parents' SES, policies

(such as CDA policies) that build adolescents' school savings may have independent effects on the percentage of young adults who attend and complete college.

Conclusion

In the minds of many Americans, college remains a key vehicle for achieving the American Dream. However, many Black parents and their children see financing college as a barrier to attending and graduating from college. This has helped to lead to large disparities in attendance and graduation rates between White and Black young adults. Finding novel and promising ways to promote college progress among Black young adults is critical to their future economic well-being, as well as to the well-being of the country as a whole. Increasingly, researchers and policymakers are exploring the potential role that savings and assets may play in helping to promote college attendance and graduation rates. CDAs have been proposed as a potentially novel and promising alternative to traditional savings accounts for financing college (Boshara, 2003; Goldberg & Cohen, 2000; Sherraden, 1991). However, an advance test of CDA policies is desirable. The PSID and its supplements provide a rich opportunity to test the effects of assets on young adults' college progress among different racial groups.

Traditional forms of assets (such as net worth, parents' and adolescents' savings in traditional interest-earning bank accounts as measured in the PSID and its supplements), however, are likely insufficient for eliminating inequality in college attendance and attainment that is due to high costs. One reason why traditional savings accounts are likely inadequate is because of the disparity in access to these accounts; White youth are far more likely to have school savings in a traditional savings account than Black youth. Moreover, unlike traditional savings accounts that are built on neoclassical theories of asset accumulation, CDAs are built on an institutional theory of savings. An institutional perspective holds that institutions promote and subsidize asset accumulation by reducing the cost of saving and the cognitive processing involved in saving. Mainstream savings institutions do this inequitably, favoring middle- and upper-income households and individuals. As a result, savings mechanisms, such as CDAs, are needed to provide low-income and minority children with the same types of benefits that policies like 401ks provide to middle-class households. Institutional theorists have identified seven constructs that are believed to be important aspects of institutions that promote saving and asset accumulation: access, information, incentives, facilitation, expectations, restrictions, and security (Sherraden & Barr, 2005).[11]

However, more research is needed. Future research may want to examine different racial groups other than White and Black young adults. Small numbers of Hispanic, Asian, and American Indian young adults in the PSID/TA made it impossible for this study to determine effects on these groups. Future research may also want to examine whether academic achievement mediates the relationship between net worth and college progress. There is also a need to implement causal designs to determine whether adolescents' school savings impact college progress. CDAs that are in the state's name with the youth as the beneficiary are being tested in a large experiment in Oklahoma

[11] Access refers to eligibility and practicality; information includes both general financial information and information that is specific to a particular financial product or program; incentives include subsidies and rates of return; facilitation refers to any form of assistance in saving, especially making saving "automatic"; expectations are implicit or explicit suggestions about desirable saving, investment, or asset accumulation; and restrictions are rules that restrict access to or use of assets (Sherraden & Barr, 2005).

called SEED for Oklahoma Kids (SEED OK).[12] However, because the accounts are issued at birth in 2004, it will be a number of years before researchers will be able to test this design as it relates to college progress. Until then, finding other data sets and ways of testing causal relationships is an important next step. Most of the research conducted thus far on assets and college attendance has been done using either the PSID and its supplements or the NLYS, but only the PSID and its supplements provide a measure of adolescents' school savings. Finding additional data sets that include adolescents' school savings is another important next step.

In conclusion, policies such as universal CDAs that can help parents and adolescents accumulate savings—especially savings for college—may be a simple and effective strategy for helping to keep both White and Black young adults "on course" in their college education and out of debt.

[12] For more information on SEED OK, see http://csd.wustl.edu/AssetBuilding/SEEDOK/ .

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Appendix A: Pearson correlation matrix of the independent variables used in model 1 – Aggregate young adults

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Black	1.00											
Age (2002)	0.01	1.00										
Special education	-0.02	0.03	1.00									
Academic achievement	-0.36***	-0.08*	0.34***	1.00								
Self-efficacy	-0.06	-0.03	0.07*	0.14***	1.00							
Self-concept	0.04	-0.04	0.05	0.06	0.61***	1.00						
Heads' education	-0.30***	0.05	0.15***	0.31***	0.15***	0.12**	1.00					
Household size	0.06	0.01	-0.03	-0.08*	0.00	0.03	-0.02	1.00				
Log of family income	-0.21***	0.04	0.13***	0.13***	0.05	0.05	0.20***	0.09**	1.00			
Parents' savings for youth	-0.17***	-0.09*	0.10**	0.19***	0.10**	0.04	0.26***	-0.05	0.09*	1.00		
Log of net worth	-0.35***	0.11**	0.11**	0.21***	0.17***	0.13**	0.45***	-0.03	0.32***	0.22***	1.00	
Adolescents' school savings	-0.20***	0.01	0.15***	0.25***	0.08*	0.03	0.23***	0.01	0.07	0.21***	0.27***	1.00

Source: Weighted data from the Panel Study of Income Dynamics and its supplements.
* $p < .05$; ** $p < .01$; *** $p < .001$

Appendix B: Pearson correlation matrix of the independent variables used in model 1 – White young adults

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Age (2002)	1.00										
Special education	0.03	1.00									
Academic achievement	-0.12*	0.35***	1.00								
Self-efficacy	-0.05	0.10*	0.09	1.00							
Self-concept	-0.05	0.07	0.06	0.66***	1.00						
Heads' education	0.10*	0.20***	0.28***	0.17***	0.10*	1.00					
Household size	-0.01	-0.05	-0.08	0.01	0.05	0.07	1.00				
Log of family income	0.03	0.14**	0.06	0.07	0.08	0.16***	0.08	1.00			
Parents' savings for youth	-0.08	0.10*	0.11*	0.04	0.01	0.21***	0.00	0.10*	1.00		
Log of net worth	0.14**	0.12*	0.11*	0.18***	0.16***	0.36***	0.01	0.27***	0.12**	1.00	
Adolescents' school savings	-0.01	0.20***	0.21***	0.06	0.01	0.17***	0.03	0.06	0.20***	0.27***	1.00

Source: Weighted data from the Panel Study of Income Dynamics and its supplements.
* $p < .05$; ** $p < .01$; *** $p < .001$