

## CREATING A FINANCIAL STAKE IN COLLEGE: REPORT I OF IV

# WHY POLICYMAKERS SHOULD CARE ABOUT CHILDREN'S SAVINGS

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JANUARY 2012

“Creating a Financial Stake in College” is a four-part series of reports that focuses on the relationship between children’s savings and improving college success. This series examines: (1) why policymakers should care about savings, (2) the relationship between inequality and bank account ownership, (3) the connections between savings and college attendance, and (4) recommendations to refine children’s savings account proposals. This series of reports presents evidence from a set of empirical studies conducted by Elliott and colleagues on children’s savings research, with an emphasis on low-income children, relevant to large-scale policy proposals. One such proposal, The ASPIRE Act, would encourage savings by opening an account for every newborn child, seeding the account with an initial deposit and progressively matching contributions, and designating accumulated resources to support post-secondary education or other targeted uses such as homeownership or retirement. Collectively, these reports build on the compelling observation that children with savings in their name are given a stake in their future. As such, they are more inclined to take control over their educational experience and feel more empowered to attend college and persist through graduation.

Report I presents a case for why policymakers should care about promoting savings, especially among children from lower income families. The report presents evidence on the relationship between children’s savings and college success and provides the context for a broader discussion of designing children’s savings policies and ensuring that they offer children a meaningful financial stake in college.

## Rising College Costs, Loans, and Debt

With states cutting back on funding for higher education, college costs are likely to continue rising in the coming

years. The average total cost of college attendance, which includes room and board, for an in-state student at a public four-year college for the 2010-11 school year was \$16,140, an increase of 6.1 percent from the prior school year (College Board, 2010a). Similarly, the cost of a four-year private college rose by 4.3 percent in 2010-11, up to \$36,993 (College Board, 2010a). Rising college costs negatively impact college enrollment decisions of low-income children, in particular (Heller, 1997; Leslie & Brinkman, 1988; McPherson & Schapiro, 1998). For example, findings suggest that a \$150 net cost increase (in 1993-1994 dollars)

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results in a 1.6 percentage point reduction in enrollment among low-income students (McPherson & Schapiro, 1998). Moreover, findings from a 2005 study indicate that only 11 percent of young adults with parents in the bottom income quintile attain a college degree, in comparison to 53 percent of young adults with parents in the top income quintile (Haskins, 2008).

Given the well-documented disparities in college attendance and completion rates by socio-economic class, and the growing role that education plays in employment and economic mobility, a pressing question for the 21st century is, “How do we create greater access to college and higher completion rates for more of America’s children?” Part of the answer focuses on the short-term problem of paying for college.

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## A shortage of college graduates is not only a loss to the U.S. economy but represents a real loss of earning power for individuals.

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Since the late 1970s, the federal government has attempted to solve the problem of prohibitive costs by adopting policies that make college loans more accessible through programs such as federal Stafford subsidized and unsubsidized loan programs. For example, the Middle Income Student Assistance Act (1978) brought college loans to the middle class by removing the income limit for participation in federal aid programs (Hansen, 1983). The Higher Education Act (1992) made unsubsidized loans available, and the Budget Reconciliation Act (1993) included provisions for the Federal Direct Loan Program. More recently, Congress raised the ceiling on the amount of individual federal Stafford loans students can borrow through the Ensuring Continued Access to Student Loans Act of 2008.

As loans have become more accessible, the proportion of federal grants to federal loans has plummeted. For

example, the proportion of federal grants to federal loans in 1976 was about even (Archibald, 2002). However, by 1985, the ratio had shifted to 27 percent grants and 70 percent loans, and by 1998 to 17 percent grants and 82 percent loans (Archibald, 2002; also see Heller & Rogers, 2006 for more information on how this shift has taken place).

The current student-based financial aid model, which relies heavily on loans, is consistent with a life-cycle hypothesis (LCH) of saving and consumption (Baum, 1996). LCH is the predominant model of saving in economics (Modigliani & Brumberg, 1954). LCH theorists suggest that over a lifetime, saving looks like an inverted U (Harrod, 1948). That is, when children 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 assumes that it is necessary for each generation to borrow to finance its own education because children are incapable of accumulating assets on their own. Accordingly, debt is the norm for young people.

## Balancing Individual and Collective Interests

Since the 1980s, the United States has failed to produce college graduates at a fast enough pace to keep up with demand for skilled workers (Carnevale & Rose, 2011). Researchers at the Center on Education and the Workforce at Georgetown University forecast that by 2018, 63 percent of all jobs will require at least some college and that there will be a shortfall of 300,000 college graduates per year through 2018 (Carnevale, Smith, & Strohl, 2010). America formerly led all developed countries in producing college graduates, but by 2008 it had dropped to seventh place (Carnevale & Rose, 2011). The percentage decline of college graduates as a portion of America’s working age population represents a loss of potential earning power for the country as a whole. At the macro level, education has been linked to increased tax revenues, greater productivity, increased consumption, increased workforce flexibility, and decreased

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reliance on government assistance (IHEP, 2005; also see Baum, Ma and Payea, 2010). However, a shortage of college graduates is not only a loss to the U.S. economy but represents a real loss of earning power for individuals. Individuals with a bachelor's degree earn 74 percent more on average than individuals with only a high school diploma (Carnevale & Rose, 2011).

Moreover, mounting student debt may weaken the belief in education as a path for achieving the American Dream (American Student Assistance, 2010). This dream of working hard to build a better life—a central driver in the history and life of our nation—is associated with the constitutional right of all citizens for the “pursuit of happiness.” In its simplest form, the American Dream is the belief that effort and ability explain why one person succeeds in life and another does not. The belief in the American Dream is important to maintaining a motivated work force, along with the support of citizens for the country as a whole. Few institutions have been more important in sustaining the American Dream than public educational institutions, including colleges and universities. Education in America has been called the “great equalizer,” evoking the widespread belief that disparities among groups of people can be narrowed through effort in school and the pursuit of higher education. As such, the entire nation has a stake in making sure that all citizens continue to view college attendance and graduation as a viable way to achieve the American Dream. Today, the opportunity to succeed in life is increasingly dependent on real access to college. Real access to a college degree depends on having enough money to prepare for college, enroll, and continue until graduation.

A financial aid system that is overly dependent on loans requires students and their families to bear a heavy burden to pay for college. This is because the majority of loans have to be paid back, plus interest, regardless of how low interest rates drop or how long repayment terms are extended. Placing most of the financial burden onto students may be

making it harder to realize the American Dream. From academic years 2007-08 to 2008-09, total education borrowing increased by 5 percent or \$4 billion (Steele & Baum, 2009).<sup>1</sup> Among students who received educational loans and graduated from a four-year public university in 2007-08, the median debt was \$17,700, which was up 5 percent from the educational debt of similar students in 2003-04 (Steele & Baum, 2009). Moreover, 10 percent of students who received educational loans and graduated in 2007-08 have more than \$40,000 worth of debt (Steele & Baum, 2009). At a four-year private college the median loan debt of those holding undergraduate college degrees was \$22,375 in 2007-08 which was up four percent from 2003-04. Among undergraduates who hold a degree at a four-year private college, 22 percent have more than \$40,000 worth of debt (Steele & Baum, 2009).

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While college debt affects all students, it may be particularly harmful to students in the helping industries (e.g., teaching, social work, and religious service). For example, a 2008 survey conducted of over 800 social workers in Oregon found that in 1980 the median student loan debt for social work graduates was \$15,432. At the time, their median income was \$37,654. However, by 2008 median student loan debt for social work graduates in Oregon had risen to \$38,000 while median income had fallen to \$33,000 (Schweitzer, 2008). Such trends make it nearly impossible for students in the helping professions to achieve the American Dream.

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<sup>1</sup> These figures only include federal loans. They do not include other types of borrowing for school such as credit cards or personal loans.

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Whether a doctor or a social worker, high debt lowers the return on investment in college, which in turn weakens the effectiveness of higher education as a means for achieving the American Dream. Given this, the federal government has a real stake in finding ways to balance the burden of paying for college by individual students and their families with the responsibility that should be taken by the nation as a whole.

## Assets as a Strategy for Balancing Individual and Collective Interests

The increasing reliance on college loans and mounting college debt has caused some policymakers and researchers to question whether funding college attendance and completion through debt accumulation is a wise policy decision (e.g., Baum, 1996). This, coupled with the current economic crisis and additional focus on debt, may make children's savings policies a more appealing alternative to expanding access to college loans or continuing to invest in them at such high rates. This report suggests that financial aid policies that promote asset accumulation among children and their families are a way for the federal government to help restore balance in the financial aid system. Unlike student loans, children's savings accounts (CSAs) leverage investments by individuals and their families with investments from the federal government (e.g., initial deposits, incentives, matches).

An example of such a policy is the concept of specially designed children's savings accounts offered at birth. The proposed ASPIRE Act (American Savings for Personal Investment, Retirement, and Education) would do this for every newborn, seeding the accounts with initial contributions of \$500 or more for the most disadvantaged, as well as providing opportunities for financial education and incentives for additional savings. When account holders turn 18, they would be permitted to make tax-free withdrawals for costs associated with post-secondary education, first-time home purchase, and retirement security.

Even though it is beyond the scope of this report to provide an in-depth cost analysis of CSAs, some research already exists on the topic. A recent New America Foundation report estimates that it would cost \$3.25 billion to fund the ASPIRE Act during its first year.<sup>2</sup> This is certainly a lot of money; however, it is far less than what is currently being spent on student loans—approximately \$65 billion in 2009–10 (College Board, 2010b). Further, estimates for what it would cost to start-up CSAs as described in the ASPIRE Act are significantly less than the \$4 billion increase in student loan borrowing that occurred from 2007–08 to 2008–09. If we think of CSAs as a way to reduce ever-rising investments in student loans, we may envision an innovative, easy-to-fund, national CSA program.

While the ASPIRE Act has not been passed into law, there are noteworthy efforts underway to create a more accessible savings infrastructure for children. State college savings (529) plans are tax-advantaged savings vehicles offered in 49 states and the District of Columbia. Savings in 529s grow free from federal taxation and state taxes in many cases. However, 529s offer limited benefits to low- and moderate-income families, though some states have implemented savings match programs and other benefits for those savers.<sup>3</sup> In November 2010, the U.S. Department of Education, Federal Deposit Insurance Corporation (FDIC), and National Credit Union Administration (NCUA) established a new federal partnership to encourage schools, financial institutions, federal grantees, and other stakeholders to work together to increase financial literacy, access to federally-insured bank accounts, and savings among students and families across the country.<sup>4</sup> Collaborative efforts like this one, along with knowledge gained by states through their collective 529 experience,

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<sup>2</sup> The report can be found at [http://assets.newamerica.net/sites/newamerica.net/files/program\\_pages/attachments/ASPIREActFAQs2-10.pdf](http://assets.newamerica.net/sites/newamerica.net/files/program_pages/attachments/ASPIREActFAQs2-10.pdf)

<sup>3</sup> See Lassar, Clancy, & McClure (2011).

<sup>4</sup> For more information go to <http://www.ed.gov/news/press-releases/fdic-and-ncua-chairs-join-education-secretary-announce-partnership-promote-finan>.

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will provide extensive opportunity to learn more about the relationship between savings and educational outcomes and eventually may pave the way toward adoption of a national CSA policy.

## Evidence of Short-Term Effects of CSAs

In addition to helping pay for college, CSAs have been designed to promote asset accumulation for homeownership, retirement, and capitalizing a business venture. However, there are important reasons for focusing CSAs on higher education. A survey of 801 registered voters indicates that 40 percent believe that making education more affordable should be the top priority of government. No other priority garnered favor from a larger proportion of study participants (Goldberg, Friedman, & Boshara, 2010). Further, when asked how CSAs could best be introduced to the US population, 58 percent of registered voters in the study thought that the most effective use for CSAs would be to help families save for college.

The benefits may be especially noticeable for lower-income children. Data from the Educational Longitudinal Study of 2002 (ELS: 2002) indicate that, among 2002 low-income 10th grade students who had attended college by 2006, only 32 percent paid for college using family contributions. In comparison, 44 percent of middle-income, 59 percent of upper middle-income and 74 percent of high-income children paid for college with family contributions. Low-income children are least likely to have family contributions to rely on and instead must procure their own resources to pay for college—by earning a scholarship, working, or taking out a loan.

In addition, low-income children often receive mixed signals about the certainty of household assets. Families, especially those with children, have numerous competing household savings goals (e.g., Christmas, vacation, emergency, home, and school), that are subject to negotiation within the family (Winnett & Lewis, 1995). Therefore, children may not be able to count on household

wealth in the same way they can count on money they have saved in their own accounts. For example, a low-income parent may plan to buy a child a computer for Christmas, but when Christmas arrives there may be no money to buy it because the money had to be used for emergency car repairs. Low-income children may experience this type of scenario frequently, where money designated for one purpose has to be used for another, thereby weakening children's confidence that money held by the family will be used for their own human capital development. Generally, however, children are given more control over their own savings than they are over funds in household accounts (Meeks, 1998). This latitude may result in an increased sense of perceived control, which is one of the most robust predictors of student resilience and academic success (Skinner, Wellborn, & Connell, 1990). Therefore, if one goal of children's savings programs is to reach low-income households, it is valuable to review research findings from studies of children who have savings of their own.

There is a growing body of work that may be particularly informative. Six studies identified below present data which can inform a national CSA program.<sup>5</sup> Each employs a longitudinal design with children's savings compared at two points in time (see Appendix A for more detailed information on each of the six studies).

The first study examines whether children (aged 17-23) who have already left high school are currently enrolled in or have already graduated from a two-year or four-year college (Elliott & Beverly, 2011a). Children who are currently

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<sup>5</sup> The idea of universal and progressive accounts at birth is being tested in a large randomized experiment called SEED for Oklahoma Kids (SEED OK). SEED OK aims to test whether institutions for saving and asset accumulation can be extended successfully to the full population, in a progressive rather than regressive manner, potentially over a lifetime, and whether this eventually increases savings, asset accumulation, attitudes and behaviors of parents, and attitudes, behaviors, and achievements of children (Nam, Kim, Clancy, Zager, & Sherraden, 2011). Such programs will provide a more direct test of CSA policies. However, because the accounts were opened in 2008 for newborns, it will be a number of years before researchers will be able to test this design as it relates to college outcomes.

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enrolled or who have graduated from college are defined as being “on course,” whereas, children who are not currently enrolled and have not graduated from college are defined as being “off course.” On average, 57 percent of children in the study are on course. However, 75 percent of children with their own savings are on course compared to 45 percent of children without savings of their own. Moreover, when factors such as race, family income, parent’s education, and children’s academic achievement are controlled for, children’s savings remains an important predictor of whether or not children are on course or not. In fact, findings indicate that 17-23 year-old children who have savings are approximately twice as likely to be on course as their peers without savings of their own. This finding implies that policies that promote large-scale children’s savings programs might be important to keeping children on course. Evidence from this study also indicates that children’s savings is connected with having a more positive college-bound identity, which, in turn, shapes children’s decisions about whether or not to remain on course. It may be that policies that promote children’s savings may reduce fears that financial barriers will prevent them from staying on course.

The second study asks the question whether the effects of children’s savings on children’s college progress differ between low- to moderate-income (below \$50,000) children and high-income (\$50,000 or above) children (Elliott, Monique-Constance, & Song, 2011). Findings indicate that only 35 percent of low- to moderate-income (LMI) children are on course compared to 72 percent of high-income (HI) children. Regarding children’s savings, 46 percent of LMI children with school savings of their own are on course; conversely, only 24 percent of LMI children without savings are on course. Further, when factors such as parents’ expectations and school involvement, family income, and children’s academic achievement are controlled for, children’s savings remains an important factor for explaining whether or not LMI children are on course. Children’s savings, however, is not an important factor for HI children, suggesting that HI children are confident in

their parents’ ability to pay for college. Whereas it might be that LMI children have everyday experiences with their families not being able to pay bills, buy a washer and dryer, or afford groceries, HI children have everyday experiences where they see their parents paying their bills, providing them with the basic needs in life, and much more. An important implication of this finding is that it might be a better use of public funds to design children’s savings policies that target LMI children and not HI children because they may benefit most from such policies.

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When factors such as parents’ expectations and school involvement, family income, and children’s academic achievement are controlled for, children’s savings remains an important factor for explaining whether or not low- to moderate-income children are on course.

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The third study examines whether there are differences in children’s savings effects by race (Elliott & Nam, 2011).<sup>6</sup> In particular, it examines whether or not black and white children are on course. Among black students, only 37 percent are on course compared to 62 percent of white students. Controlling for similar factors as the previous two studies, findings suggest that both black and white children who have savings are about twice as likely to be on course as their counterparts without savings of their own. This finding might be particularly important for black children since, on average, they experience higher amounts of debt upon graduating from college. Twenty-seven percent of black children who graduated from a 4-year college in

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<sup>6</sup> However, an important limitation of the PSID and CDS is that low-income families are disproportionately represented among black households; therefore, there are very few high-income black households in the sample. As a result, findings using samples of blacks only are probably more indicative of low-income blacks than all blacks.

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2007-08 finished with \$30,500 or more of debt in comparison to 15 percent of white young adults (Baum and Steele, 2010). Further, there is evidence that large levels of debt are particularly harmful to college dropout rates among black students (Somers & Cofer, 2000). However, if they have savings, it would likely mean that they would carry less debt.

Study four examines the effect that financial constraints have on actual college attendance by identifying children who expect to attend college, but do not do so soon after graduating from high school (ACSFA, 2006), a phenomenon Elliott and Beverly (2011b) term “wilt.” In this study, “wilt” is used to describe children who have not attended a four-year college by 2005 despite holding expectations in high school in 2002 that they would attend and graduate from a four-year college. Findings from this study indicate that a staggering 55 percent of children with no account of their own experience wilt, while 80 percent of children who expect to graduate from a four-year college prior to leaving high school and have an account do not experience wilt. Moreover, children who expect to graduate from a four-year college and have an account are about six times more likely to attend college than those who expect to graduate from a four-year college but do not have an account, controlling for a variety of factors including children’s academic achievement. Moreover, when children’s savings is added to the model, children’s academic achievement is no longer statistically significant. An important implication of these findings is that desire and ability alone may not be enough for children to attend college; having savings may also matter. In an earlier report to Congress, ACSFA (2001) draws a similar conclusion when they state, “Make no mistake, the pattern of educational decision making typical of low-income students today, which diminishes the likelihood of ever completing a bachelor’s degree, is not the result of free choice. Nor can it be blamed on academic preparation”(18).

The fifth study examines whether children’s savings lead to more positive expectations or whether more positive

expectations lead to children having savings (Elliott, Choi, Destin, & Kim, 2011). This is an important question related to the potential of CSAs to have indirect effects. While this study could not establish a causal link between children’s savings and their expectations for college, it does provide evidence that it is at least plausible that having children’s savings leads to more positive college expectations among children. However, the best interpretation of the results might be that two-way causation likely exists (i.e., children’s savings leads to more positive college expectations and more college expectations leads to children owning savings of their own).

The sixth study builds on the fifth study and asks whether a combined approach that promotes children’s savings as well as positive college expectations is more effective than if either strategy is pursued on its own (Elliott, Chowa, & Loke, 2011). To test this, the study creates four groups: (1) had no school savings and uncertain they would graduate from a four-year college prior to leaving high school; (2) had school savings and were uncertain they would graduate from a four-year college prior to leaving high school; (3) certain they would graduate from a four-year college and had no school savings prior to leaving high school; and (4) had school savings and were certain they would graduate from a four-year college prior to leaving high school. Findings support the hypothesis that having savings is more effective when children also expect to graduate from college. This suggests that children’s savings programs that attempt to build positive college-bound identities might be more effective than those that only promote savings and asset accumulation.

## Summary of Short-Term Effects

Overall, findings suggest that programs promoting children’s savings are likely to have a positive effect on children’s college progress. The evidence to date suggests that we might see these positive effects for low-and moderate-income children more than for high-income children. There appears to be a point at which household income is high enough that having children’s savings

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makes no statistical difference for whether children have graduated from college or are currently progressing toward graduation. This may be because, beyond a certain income threshold, it no longer makes sense for children to doubt that their families will be able to pay for college. Findings also suggest that having a stake in college (i.e., owning one's own savings) has a positive effect on black children's college progress.

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**Findings indicate that children with savings designated for school have significantly higher math scores than their peers without designated savings.**

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The effects of savings appear to be stronger when only children who expect to graduate from a four-year college are considered. However, the fact that children's savings still has an independent effect on college attendance among children who expect to graduate from a four-year college suggests that attitude may not be sufficient to explain differences in whether children attend college or not. There is also support in the research for the temporal ordering proposed by asset researchers; that is, children's savings lead to positive expectations. However, the best interpretation is that two-way causation likely exists—children's savings lead to more positive expectations, and more positive expectations lead to owning savings. Given these findings, it might be that CSAs would be even more effective if they were combined with programs that attempt to build children's expectations.

Conversely, there is little evidence to suggest that high student loan debt is positively related to college enrollment or persistence. For example, Leslie and Brinkman (1988) note that persistence is enhanced by larger amounts of aid and that grant and scholarship aid tends to have a more positive impact on persistence than do loans. Research suggests that grants are more effective than loans at

promoting persistence (Alon, 2007; Perna, 1998). Perna (1998) also reports that student financial aid in the form of grants has a positive effect on persistence, whereas loans, unless they are minimized or combined with other larger forms of aid, are less predictive of persistence. Along similar lines, Bresciani and Carson (2002) find evidence that students with large loans and little grant aid persist at lower rates than those with smaller loan burdens, no need, or 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).

### **Evidence of Long-Term Effects of CSAs**

While most of the focus of this report has been on the short-term problem of helping low- and moderate-income children pay for college, evidence suggests that CSAs also may help with the long-term problem of preparing students for college. A reason for focusing less on the long-term challenge of preparing for college in this series of reports is because there are fewer studies and all of the studies to date lack time order.<sup>7</sup> That is, both the variable of interest (i.e., children's savings) and the outcome variable (i.e., math or reading) are measured in the same year. Despite this limitation, the possibility that CSAs may also help children be better prepared for college may make CSAs all the more appealing to policy makers. Some researchers suggest that the long-term problem of being prepared for college is more important than the short-term problem of paying for college (e.g., Carneiro & Heckman, 2002). Studies seven through ten (See Appendix B) provide modest evidence of the potential of children's savings programs to help prepare children for college.

The seventh study examines the effects that children's savings has on math scores of children 12 to 18 (Elliott, 2009). Findings indicate that children with savings

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<sup>7</sup> Some longitudinal studies examine the relationships between assets and children's math and reading scores (see e.g., Huang, Guo, Kim, & Sherraden, 2010; Loke & Sacco, 2011; Yeung & Conley, 2008)

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designated for school have significantly higher math scores than their peers without designated savings. This study helps establish that there may be an association between having savings designated for school and children's math scores. Moreover, findings suggest that part of this relationship can be explained by the effects of children's savings on children's college expectations. That is, part of how children's savings influences children's math scores is through their relationship with children's college expectations.

Study eight also examines the effects that having a savings account has on children's math scores (Elliott, Jung, & Friedline, 2010). This study builds on findings from study one by examining interactions between family wealth and children's savings to ascertain whether the independent effects of children's savings are explained by family wealth. Findings from this study reveal a rather complicated relationship between children's savings and family net worth. First, having savings is positively associated with children's math scores. Moreover, savings is positively related to children who live in low-wealth, middle-wealth, and high-wealth families. However, children's savings effects on math scores are larger for children living in middle-wealth families than they are for low-wealth families, and the effects are larger for children living in high-wealth families than they are for children living in middle-wealth families. At least some of the effects that family net worth has on children's math scores, therefore, might be explained by children's savings. Overall, findings seem to indicate that children's savings makes an important independent contribution to children's math scores that cannot be explained solely by family wealth.

The ninth study examines whether children's savings designated for school is associated with children's math scores (Elliott, Jung, & Friedline, 2011). This study finds that having savings designated for school is associated with children's math scores. In contrast to study eight, study nine finds that the effect of having savings designated for school on children's math scores does not vary according to

level of family wealth. Given this, having savings designated for school may be a better policy solution than just have savings if increasing equity is a goal. This is because, in terms of math scores, low-wealth children benefit from having savings designated for school as much as high-wealth children do.

The tenth and final study discussed here examines the effects of savings on black and white children's math and reading scores separately (Elliott, Kim, Jung, & Zhan, 2010). Children's savings designated for school is significantly related to white children's math scores but is not significantly related to their reading scores. Conversely, savings is not directly related to black children's math scores but is directly related to their reading scores. In regards to children's preparation for college, an implication of this study is that children's savings findings may vary by race.

## Summary of Long-Term Effects

Despite the possible alternative explanations, overall findings suggest that children's savings may be an important part of a strategy to help children better prepare for college. However, children's savings is certainly not the only strategy for improving math or reading scores. Instead, children's savings for school may be one important component of college preparedness that has not been well understood to date. Importantly, there is no evidence that student loan programs are associated with children being academically prepared for college. Loans are almost exclusively thought of as being part of a solution to the short-term problem of paying for college rather than a part of college preparation.

## Conclusion

The question might be raised whether positive findings are the result of owning savings or because, for example, children who own savings are smarter and have more motivation than children who do not own savings? The studies discussed in this report attempt to address this question in several of ways. First, the studies control for a

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variety of factors that have been shown to be important predictors of children's educational outcomes. They control for such things as children's academic achievement, self-efficacy, parents' involvement, parents' college expectations, family income and parents' education level. Second, they examine whether findings differ among different groups. For example, by examining children's savings effects among a sample of low- to moderate-income children, we are better able to rule out the possibility that effects are driven by higher-income families and the kinds of conditions associated with living in higher-income families (e.g., better neighborhoods, better schools, more books, and so forth). Third, propensity score weighting is used in the combined effects study (Elliott, Chowa, & Loke, 2011). Propensity score weighting allows researchers to balance potential bias between those children, for example, who are exposed to having savings and those who are not based on known factors (Rosenbaum & Rubin, 1983). So, children who have savings are compared to children who have similar academic achievement, family income, parents' education level, and so forth. While these steps cannot fully rule out the possibility that the independent effects of children's savings are actually the result of other factors, they do raise our confidence in these findings.

Despite these findings, some individuals will undoubtedly argue that we cannot afford to make a large investment in children's education in this time of economic distress. However, given the highly technological nature of the global economy, it is clear that our children will need specialized, advanced training and higher education to succeed, and existing financial aid policies do not appear to be the solution. Finding alternatives to financial aid policies that continue to increase the amount of college debt children face after college is important for restoring education to the position of the "great equalizer" in society that it was meant to be. A national CSA policy like that proposed in the ASPIRE Act may be a good way to begin to reduce the inequality in a higher education system that costs more money than many children and families have to spend. It may also give children a stake in college that also gives them a sense of empowerment. In the meantime, collaborations like those that have been undertaken by the U.S. Department of Education, FDIC and NCUA are positive early steps toward eventually adopting a national universal, progressive CSA program like that proposed in the ASPIRE Act.

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**Author's Note**

This publication is part of the College Savings Initiative, a research and policy design collaboration between the Center for Social Development at Washington University (CSD) in St. Louis and the New America Foundation in Washington, D.C. I would like to thank CSD at Washington University's Brown School for all of its support in helping to develop this research over the last several years. I would like to give a special thanks to Michael Sherraden, Margaret Sherraden, Margaret Clancy, Lissa Johnson, Julia Stevens, Terry Lassar, and Carrie Freeman at CSD. I would also like to thank Reid Cramer, Justin King, Terri Friedline, and Mark Huelsman at the New America Foundation for all of their support in bringing this series of reports together. Lastly, I would like to thank Deb Adams at the University of Kansas for her extensive comments. Without all of their support this series of reports would not be possible.

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## Appendix A: Studies on Children's Savings and College Attendance/Progress

Study	Asset Variables	Methods	Outcome	Findings
1. Staying on Course: The Effects of Savings and Assets on the College Progress of Young Adults				
Elliott and Beverly (2011a)	Net worth; Children's school savings; Parents' school savings for young people	Methods: Logistic regressions  Longitudinal: Baseline measured at mean age of 17 in 2002; Outcome measured mean age of 20 in 2007; N = 1,003	Progress	Net worth is not significant; Parents' school savings is significant prior to controlling for educational expectations; Children's savings is significant
2. Reducing the College Progress Gap Between Low- to Moderate-Income (LMI) and High-Income Young Adults: Assets as an Understudied Form of Economic Capital				
Elliott, Constance-Huggins, & Song (2011)	Net worth; Parents' savings for young people; Children's school savings	Methods: Logistic regression  Longitudinal: Baseline variables measured in 2002 or earlier; Outcome measured at ages 17 to 23 in 2007; Sample divided between low-to-moderate income (LMI, < \$50,000) and high income (HI, ≥ \$50,000); N = 495 LMI; 508 HI	Progress	In the low-to moderate income sample, adolescent school savings is significant; Net worth is not significant  In the high-income adolescent sample, school savings is not significant; Net worth is significant
3. Direct Effects of Assets and Savings on the College Progress of Black Young Adults				
Elliott and Nam (in press)	Net worth; Parents' school savings; Children's school savings	Methods: SEM group analysis  Longitudinal: Baseline variables measured in 2002 or earlier; Ages 17 to 23 in 2007 when outcome measured; Sample restricted to black and white young people; N = 534 white; 469 black	Progress	In the sample of white children, children's school savings is significant; Net worth is significant ( $p < .10$ )  In the sample of black children, children's school savings is significant
4. The Role of Savings and Wealth in Reducing "Wilt" Between Expectations and College Attendance				
Elliott and Beverly (2011b)	Net worth; Categorical net worth: negative (< \$0 - household liquid assets are less than unsecured debt), modest (\$0 - \$10,000), and high (≥ \$10,000); Children's savings (Children's basic account; Children's school savings; no account); Parents' savings for young people	Methods: Logistic regression  Longitudinal: Baseline measured at mean age of 17 in 2002; Outcome measured mean age of 20 in 2005; Sample restricted to young people who expected to graduate from a four-year college; N = 336	Attendance	Net worth is negative and significant when home equity is excluded; Net worth is not significant when home equity is included; Negative net worth is positive and significant when compared to high net worth when home equity is excluded; There are no differences between categories of net worth when home equity is included; Young people with basic savings are 6 times more likely to attend a 4 year college than young people with no account; Young people with school savings are 3 times more likely to attend a 4 year college than young people with no account
5. The Age Old Question, Which Comes First? A Simultaneous Test of Children's Savings and Children's College-Bound Identity				
Elliott, Choi, Destin, &	Children's savings, young adults' savings	Methods: Path analysis using (SEM)	Young adult's savings;	Simultaneously tests whether savings leads to higher expectations or higher expectations lead to owning savings,

Study	Asset Variables	Methods	Outcome	Findings
Kim (2011)		Longitudinal: Baseline measured at ages 12 to 17 in 2002; Restricted to children who have graduated high school or received a GED and are not enrolled in a four-year college and who have not graduated from a four-year college; Outcomes measured at ages 17 to 23 in 2007; N = 592	Young adult's college expectations	Young people's savings has a modest effects on college expectations & vice versa
6. Toward a Children's Savings and College-Bound Identity Intervention for Raising College Attendance Rates: A Multilevel Propensity Score Analysis				
Elliott, Chowa, & Loke (2011)	Children's savings; Net worth	Methods: Multiple imputations; propensity score weighting; logistic regression; four different models are estimated: (1) no savings/uncertain; (2) savings only; (3) certain only; (4) combined (savings and certain)  Longitudinal: Baseline variables measured in 2002 or earlier; Ages 17 to 23 in 2007 when outcome measured; N = 1003	Attendance	Among the four doses (no savings/uncertain; savings only; certain only; combined (savings and certain) the combined treatment group is significant; net worth is significant in all models

**Notes.** All studies use data from the Panel Study of Income Dynamics (PSID) and its supplements, the Child Development Supplement (CDS) and the Transition to Adulthood (TA) supplement. College progress identifies young adults 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 graduate program. An important limitation of the PSID and CDS is that low-income families are disproportionately represented among black households; therefore, there are very few high-income black households in the sample. As a result, findings using samples of blacks only are probably more indicative of low-income blacks than all blacks.

## Appendix B: Studies on Children’s Savings and Academic Achievement (Math and Reading Scores)

Study	Asset Variables	Methods / Data	Outcome variable	Findings
<b>1. Children’s College Aspirations and Expectations: The Potential Role of College Development Accounts</b>				
Elliott (2009)	Net worth; Categorical net worth: (1) < \$4,564; (2) \$4,564 to \$47,742; (3) \$47,743 to \$153,700; and (4) > \$153,700; Young people’s school savings; Young people’s school savings amount	Methods: Logistic regression; Multiple regression  Cross sectional: Measured at ages 12 to 18 in 2002; N = 1,071	Math	Net worth is not significant; Young people’s school savings is significant; Young people’s school savings is associated with a 4.57 increase in math; Controlling for race, blacks score significantly lower compared to whites
<b>2. Math Achievement and Children’s Savings: Implications for Child Development Accounts</b>				
Elliott, Jung, & Friedline (2010)	Net worth; Young people’s savings account; Young people’s savings amount	Methods: Hierarchical linear modeling (HLM)  Cross sectional: Measured at ages 12 to 18 in 2002; N = 1,063	Math	Net worth is only significant when young people’s savings is excluded from the model; Young people’s savings is significant; There is a significant cross-level interaction between young people’s savings and net worth on math scores; Math scores of low-net worth young people increase by 2.13, middle-net worth young people’s increase by 4.36, while high-net worth young people’s increase by 6.59 points; Controlling for race, whites score significantly higher than blacks
<b>3. Raising Math Scores Among Children in Low-wealth Households: Potential Benefit of Children’s School Savings</b>				
Elliott, Jung, & Friedline (2011)	Net worth; Young people’s school savings and amount of school savings	Methods: Hierarchical linear model (HLM)  Cross-sectional: Measured at ages 12 to 18 in 2002; N = 1,071	Math	Net worth and young people’s school savings are significant
<b>4. Asset Holding and Educational Attainment among African American Youth</b>				
Elliott, Kim, Jung & Zhan (2010)	Net worth; Young people’s school savings	Methods: Path analytic technique using structural equation modeling (SEM). Separate path models are estimated for black and white young peoples  Cross sectional: Measured at ages 12 to 18 in 2002; N = 1,063	Math Reading	In regards to math, net worth is not significant for blacks or whites; Young people’s savings is significant with whites’ math scores; Young people’s savings is not significant with blacks’ math scores  In regards to reading, net worth is not significant for black or whites; Young people’s school savings are directly related to blacks’ reading scores but not whites’.

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**Note.** All studies use data from the Panel Study of Income Dynamics (PSID) and its supplements, the Child Development Supplement (CDS) and the Transition to Adulthood (TA) supplement. An important limitation of the PSID and CDS is that low-income families are disproportionately represented among black households; therefore, there are very few high-income black households in the sample. As a result, findings using samples of blacks only are probably more indicative of low-income blacks than all blacks.

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# Creating a Financial Stake in College, Report I

**Recommended citation:** Elliott, W. (2012). Why policy makers should care about children's savings. (Creating a Financial Stake in College, Report I). Washington, DC: New America Foundation; St. Louis, MO: Washington University, Center for Social Development.

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