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Child Development Accounts and College Success: Accounts, Assets, Expectations, and Achievements

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Child Development Accounts

Child Development Accounts (CDAs) are savings or investment accounts opened as early as birth (Goldberg, 2005; Sherraden, 1991). The goal of CDAs is to promote saving and asset building for lifelong development. Thus, CDA assets may be used for postsecondary education for youth and homeownership and enterprise development in adulthood. In many cases, public and private entities deposit funds into these accounts to supplement savings for the child.

Existing CDA programs differ in design and features. Desirable characteristics (Cramer & Newville, 2009; Sherraden, in press) may include the following:

- **Supported by public policy:** As the public now supports asset accumulation and saving in 401(k)s and many other types of accounts, the government should support asset accumulation and saving in CDAs, particularly for low- and moderate-income households. In this regard, CDAs may be seeded with an initial deposit of $500 to $1,000, and deposits made by children and their parents may be matched up to a certain annual or lifetime limit.
- **Universal:** Ideally, CDAs are universal—available to everyone—in the same way that public education is universal. Universality ensures that all children are included and may benefit. If CDAs are not universal, advantaged children are much more likely than disadvantaged children to have college savings accounts and college assets. CDAs are universal when accounts are opened automatically for all.
- **Progressive:** Because saving is difficult for low-income households, accounts for lower income children may be supplemented with additional financial assistance. This assistance may take the form of larger initial deposits, higher matches, additional deposits at milestones (e.g., entering first grade or graduating from high school), and other incentives and subsidies.
- **Restricted:** With few exceptions, savings accumulated in CDAs can be used only for approved purposes. These commonly include postsecondary education (e.g., college or vocational school), down payment on a first home, seed capital to start a small business, and retirement.
- **Opened early in a child's life:** CDAs may be opened as early as birth. For example, accounts in the US could be opened automatically when Social Security numbers are assigned. Opening accounts early allows savings to accumulate for a long period of time. Over time, small but regular deposits can result in significant savings amounts, which helps make asset accumulation a realistic goal for low- and moderate-income families.
- **Held in centralized savings programs:** Under the most efficient policy design, CDAs would be held in centralized savings plans. In the US, for example, CDAs might be held in 529 college savings plans. The use of centralized savings plan facilitates automatic opening, subsidies and incentives, restrictions on access and use of funds, inclusion of small-balance accounts, and efficiencies of scale (Clancy, Orszag, & Sherraden, 2004).

CDAs have been implemented around the world, most notably in Singapore, Canada, and the UK (Loke & Sherraden, 2009). In the US, CDAs have been proposed at the federal level several times through the America Saving for Personal Investment, Retirement, and Education (ASPIRE) Act.[1] Table 1 summarizes features of CDA policies in these four countries. Singapore has four programs for children that, along with Central Provident Fund accounts for adults, create a comprehensive, lifelong asset-building system for Singaporeans. The Baby Bonus cash gift and CDAs aim, in part, to increase fertility rates. The UK's CTF program was abolished in 2010, ostensibly to help reduce the deficit (Ben-Galim, 2011).

Table 1. Child Development Account (CDA) Policies in Singapore, Canada, the UK, and the US

Policy	Eligibility and enrollment	Withdrawal restrictions	Government contributions	Matching contributions
Singapore				
Baby Bonus (cash gift)	For every first, second, third, or fourth Singaporean child born to lawfully married parents who apply when they register the child's birth.	NA, cash gift	SGD 6,000 each for the first and second children; SGD 8,000 each for third and fourth children.	NA, cash gift
Baby Bonus (CDA)	For every Singaporean child born to lawfully married parents who apply when they register the child's birth.	Limited to childcare, preschool, early intervention, and medical or health insurance expenses for child (up to age 12) and siblings.	No	100% match up to cap of SGD 6,000 each for first and second children, SGD 12,000 each for third and fourth children, and SGD 18,000 for each subsequent child.
Edusave	Accounts opened automatically for all Singaporean primary and secondary students.	Limited to educational enrichment activities.	SGD 200 per year for primary students; SGD 240 per year for secondary students.	No
Post-Secondary Education Account (PSEA)	Accounts opened automatically for all Singaporean children 7 to 20 years old.	Limited to postsecondary education expenses of account holder and siblings.	Yes. Amount depends on child's age and household financial situation. (In 2010, contributions ranged from SGD 100 to SGD 500.)	100% match up to combined cap for CDA and PSEA contributions of SGD 6,000 each for first and second children, SGD 12,000 each for third and fourth children, and SGD 18,000 for each subsequent child.
Canada				
Canada Education Savings Program (CESP)	Individuals may open a Registered Education Savings Plan (RESP) for any Canadian (some RESP providers charge service fees). Individuals must apply for CESP funds, usually with the help of a RESP provider.	Limited to postsecondary education expenses for account beneficiary and siblings.	For low- and moderate-income children, the Canada Learning Bond program contributes CAD 525 when a RESP is opened and CAD 100 each year for up to 15 years.	Canada Education Savings Grant provides a 20% match on the first CAD 2,500 deposited each year. Low- and moderate-income families receive an additional 10% or 20% match on the first CAD 500 deposited. The maximum lifetime match is CAD 7,200 per child.
UK				
Child Trust Fund (CTF) (2005–2010)	Parents of all children born on or after September 1, 2002, received a voucher that could have been invested in a private CTF account. Accounts were opened automatically after one year if parents did not open one.	No withdrawals allowed until the child is 18 years old. No restrictions on the use of funds.	GBP 250 at account opening and GBP 250 at age 7. Low-income children received a supplemental GBP 250 at account opening and GBP 250 at age 7.	No
US				
Lifetime Savings Accounts (proposed)	Accounts opened automatically for every child with a valid Social Security number.	Limited to postsecondary education expenses when the account holder is 18 to 25 years old. May be used for postsecondary education, home purchase, or retirement after age 25.	USD 500 at account opening. Low-income children receive a one-time supplemental deposit of up to USD 500.	For low- and moderate-income children, up to 100% match on deposits of up to USD 500 per year.

NA, not applicable; *SGD*, Singapore dollar; *CAD*, Canada dollar; *USD*, U.S. dollar; *GBP*, British pound.

CDAs for Postsecondary Education

As described above, CDAs are envisioned as a tool for lifelong development. For many account holders, the first withdrawals are likely to be for postsecondary education and training. Somewhat later, young and middle-aged adults might use CDA assets to purchase a first home. When account holders reach retirement age, they might withdraw funds for retirement security. Thus, CDAs provide a universal platform for investing in productive uses throughout the life course.

In this perspective, we explore CDAs' potential effects on college success (i.e., any progress toward a postsecondary credential) for several reasons. First, for almost every youth, educational decisions are the first major milestone in the transition to young adulthood, and early CDA withdrawals are likely to be for education or training. Second, education is a desirable use of CDA funds because both individuals and society benefit when young adults pursue postsecondary education and training, and postsecondary education is a common focus of existing CDA policies (see Table 1). Third, a growing body of scholarly research examines the effects of account holding and asset accumulation on college enrollment and completion, so the propositions we offer below are grounded in theory or empirical research. Fourth, in the US, CDAs have recently been recognized as a potential financial aid strategy, to supplement grants and scholarships and to reduce reliance on student loans (Assets and Education Initiative, 2013; College Board Advocacy and Policy Center, 2013; U.S. Department of Education, 2012).

CDAs opened at birth with an initial deposit can accumulate meaningful levels of college assets with modest personal saving. For example, if a family receives a $500 initial deposit, saves $25 per month, receives a 1:1 match, and earns an average annual return of 5%, the child will have over $15,000 at age 18 (Cramer, 2010). A recent report suggests that this level of asset accumulation approaches the amount needed to bridge the gap between average outstanding student loan debt ($26,683) and the level of debt above which negative consequences of debt have been observed ($10,000) (Assets and Education Initiative, 2013).[2]

CDAs and College Success

Research suggests that children whose families own assets have better educational outcomes than children whose families have no assets, even when differences in income and education are taken into account (Williams Shanks, Kim, Loke, & Destin, 2010). Some studies show only that assets at one point in time are associated with educational outcomes at a later point in time and do not attempt to *explain* the relationship. Other research suggests that assets affect educational outcomes, in part, by raising parental expectations.

There is also evidence that children with savings accounts have better educational outcomes than children without accounts (Assets and Education Initiative, 2013), and some studies suggest that parents (Sherraden, Peters, Wagner, Guo, & Clancy, 2013) and children (Elliott & Beverly, 2011) with savings accounts have higher educational expectations than those without accounts.

This body of evidence is consistent with our overall proposition that by providing accounts and assets, CDAs encourage students to see themselves as college bound. However, these studies do not identify the mechanisms by which accounts and assets change attitudes. In this paper, we suggest a number of ways that accounts and assets may change educational expectations and so increase the likelihood of college success (Figure 1). We also propose that CDAs can contribute to college success by increasing financial preparation.

An essential concept in Figure 1 is college-bound identity, a specific form of educational expectations and an extension of identity-based motivation theory.[3] Children with college-bound identities expect to go to college. According to Elliott, Choi, Destin, and Kim (2011), children are more likely to expect to go to college if they believe that they will benefit from attending college and that the costs will be manageable. Often, a child's beliefs about future educational achievements are shaped and reinforced by influential adults (e.g., parents, grandparents, and teachers). Children's attitudes also may shape the attitudes of adults. Therefore, having a college-bound identity often involves the beliefs of both children and adults.

We expect that having a college-bound identity increases the likelihood that a young person will make progress toward a postsecondary certificate or degree. One way this may occur is by increasing academic preparation. Children who have college-bound identities and know that others expect them to attend college presumably are more engaged in education, which is likely to lead to better academic preparation and higher achievement (Oyserman, 2013). Likewise, parents who see their children as college bound are more likely to support their children's education in the precollege years, thus contributing to academic preparation. Research consistently shows that higher educational expectations are associated with greater academic effort and achievement (Beal & Crocket, 2010; Elliott, Destin, & Friedline, 2011; Mau, 1995; Ou & Reynolds, 2008).

As shown in Figure 1, most of the pathways linking CDAs to college success involve college-bound identity. CDAs may encourage the development of a college-bound identity and thus increase the likelihood of college success. And, we propose that CDAs increase financial preparation for college, which contributes to college-bound identity and thus college success. (Children who are prepared financially for college have the resources to finance some type of postsecondary education in a desired field. These resources include savings and the ability to access financial aid.) Finally, we suggest that CDAs can contribute to college success simply by increasing financial preparation because children with the resources to finance college are more likely to enroll in college and less likely to withdraw for financial reasons.

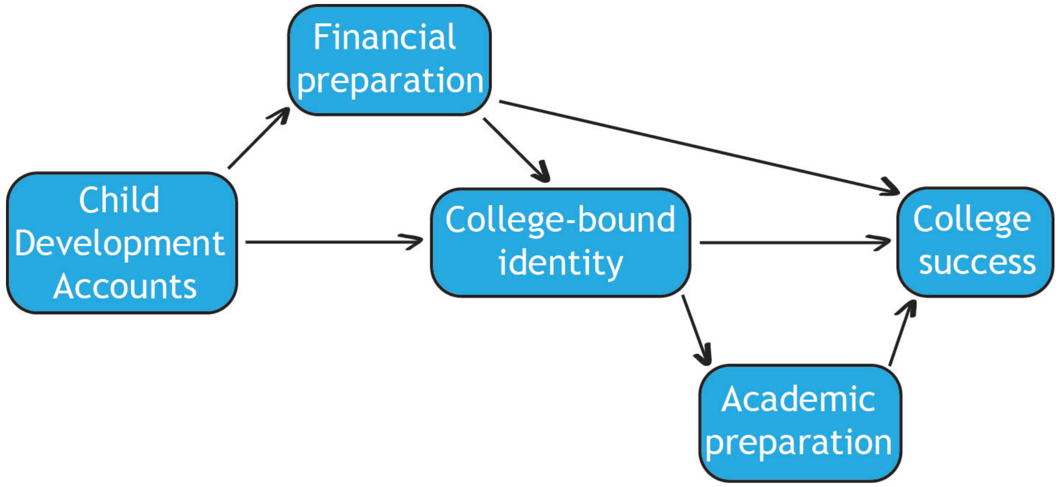
How CDAs May Contribute to College-Bound Identity and Financial Preparation

Below, we suggest and explain five specific ways CDAs may contribute to the development of a college-bound identity and financial preparation for college. Each of these statements has some support from theory, evidence, or both, but more research that examines the short-term and long-term impacts of CDAs is needed.

CDAs may communicate to parents and children that college is important and expected. Restricted and labeled accounts focus attention on specific saving motives. The very existence of a program that provides accounts and resources for postsecondary education, home purchase, and small business development could convey that these are important future investments. The message might be especially effective if the federal government automatically opened a CDA for every child born in the United States. If people view postsecondary education as a recommended use of CDA funds, then CDAs are likely to send the message that college is important and expected.[4] This message encourages the development of college-bound identity.

CDAs may communicate to parents and children that planning and saving for college are important. It is one thing to believe that college and other future investments are important. It is another to believe that advance planning and saving for these investments are important. The fact that CDA programs encourage parents and children to make deposits conveys the importance of planning and saving (Elliott, 2013; Gray, Clancy, Sherraden, Wagner, & Miller-Cribbs, 2012; Oyserman, 2013). It may also encourage children to form a "college saver identity," which involves adopting saving as a strategy for paying for college (Elliott, 2013). Having a strategy helps children view college enrollment as attainable. In contrast, children who expect to attend college but have not identified the strategy of saving might not know how they will finance college. These students may see college as an important but unattainable goal.

Figure 1. Likely pathways from Child Development Accounts to College Success



Account statements also may serve as regular reminders about the importance of saving for future investments, including college (Gray et al., 2012; Karlan, McConnell, Mullainathan, & Zinman, 2010). Even families who are unable to save much for college may become aware of the need to plan for college expenses. They may therefore be more likely to learn about financial aid options. Also, if accounts are opened early in a child's life, families may recognize the value of *early* planning and saving. In these ways, CDAs likely contribute to financial preparation in some families.

CDAs provide parents and children with a place to deposit money when they are motivated and able to save for college.

Accounts provide the "plumbing" for a lifetime of saving. When motivated to save, families without accounts must decide where to save and take action to open a savings or investment account. Because people tend to procrastinate and to become overwhelmed by choices (Madrian & Shea, 2001; Choi, Laibson, Madrian, & Metrick, 2004; Tversky & Shafir, 1992), they may not follow through on their desire to save. However, an easily accessible savings vehicle facilitates saving whenever people are able and motivated to do so. In the words of behavioral economists, having an account creates a "channel" (Bertrand, Mullainathan, & Shafir, 2004) that makes saving more likely.

This is probably true for children and extended family members, as well as parents: Once there is a designated savings vehicle, children may consider saving for college when they receive gifts of money or other cash windfalls, and other family members may deposit money into the account as a gift for the child. By providing a designated vehicle for college savings, CDAs likely contribute to financial preparation in some families.

CDAs provide assets for college.

In most proposals, CDAs would be opened with an initial deposit of $500 to $1,000, and deposits by low-income individuals would be matched. In these ways, CDAs provide assets, as well as accounts. These assets increase children's financial preparation for college. They also may make parents and children more hopeful and thoughtful about the future,[5] which may encourage the development of college-bound identity.

CDAs may increase the financial capability of parents and children.

Financial capability is a combination of ability *and* opportunity to act. Financially capable people have financial knowledge and skills and access to financial products and services that allow them to act in their best financial interest (Johnson & Sherraden, 2007; Sherraden, 2013). CDAs may increase financial capability among parents and children for at least two reasons. First and most fundamentally, CDAs give families accounts that are appropriate, accessible, affordable, and secure—many of the inclusive features identified by Sherraden (2013). These accounts provide opportunities for parents and children to learn and practice financial management skills. For example, CDAs allow families to make deposits, review account statements, and learn about investment risk and return. These experiences are especially valuable for those who otherwise would have no account.

CDAs may encourage the development of a college-bound identity and thus increase the likelihood of college success.

Second, CDAs encourage and incentivize saving. Although saving is difficult for low-income families, evidence suggests that CDAs encourage parents to save—or at least think about saving—for college (Beverly, Kim, Sherraden, Nam, & Clancy, 2012; Gray et al., 2012; Nam, Kim, Clancy, Zager, & Sherraden, 2013). For most people, saving requires planning, budgeting, and making choices. Thus, the process of saving may educate and shape the values of children. Saving by families, even small amounts, might have as much influence on children as institutional deposits have. If CDAs increase financial capability, they probably increase the likelihood that families are financially prepared for college.

Discussion

We have proposed five ways that CDAs may increase the likelihood of college success. Some work through financial preparation. For multiple reasons, CDAs may increase financial preparation, and so make college more affordable. And, by making college seem more affordable, CDAs likely encourage the development of college-bound identity. In addition, CDAs may contribute to the development of a college-bound identity in ways that are not triggered by financial preparation. If research confirms that these pathways exist, the following observations may have merit.

CDAs may have substantial cumulative effects. CDAs may affect children over a number of years. Especially if CDAs are opened early in a child's life, they may shape parent behavior and attitudes in ways that have cumulative effects on outcomes. For example, if CDAs help parents see college as a possibility, parents may actively support their children's early educational experiences. This engagement may improve early academic development of children and result in positive relationships between parents and teachers and schools. These early effects may affect education-related attitudes and children's academic development throughout the childhood years, cumulative impacts over the course of time.

When children are older, CDAs may have direct effects on their attitudes and behaviors in addition to the indirect effects through parents' expectations. This two-generational impact is another means of cumulative impact. Finally, because postsecondary education has a powerful effect on life trajectories, if CDAs do increase college enrollment and ultimately college completion, then the cumulative effect of CDAs on a variety of outcomes may be extremely powerful.

Initial deposits may... "jump start" some of the pathways...triggering changes in attitudes and behaviors from the beginning in ways that have lasting effects.

CDAs do not operate entirely through asset accumulation, but assets do matter. We believe that most of the pathways proposed above are likely to exist regardless of the amount of money in an account. Still, the pathways are likely to be more robust when children have more CDA assets. In particular, we expect CDAs to have a more powerful impact on attitudes about college if children have a material level of assets (i.e., an amount that parents and children perceive as enough to make college attendance more likely).[6] Initial deposits may be a particularly important form of assets. These deposits may "jump start" some of the pathways proposed above, triggering changes in attitudes and behaviors from the beginning in ways that have lasting effects.

CDAs do not operate entirely, or even primarily, through individual behavior. We expect that all of the pathways exist even if accounts are opened automatically, and even if assets are deposited automatically, as long as parents and children are aware of the account and assets. In other words, CDAs may have positive effects regardless of the source of accounts and assets and regardless of individual motivation or ability to save.

Automatic opening and automatic deposits can bring the potential benefits of CDAs to all families. Without automatic opening, advantaged families are much more likely than disadvantaged families to have college savings accounts. Without automatic deposits, advantaged families are much more likely than disadvantaged families to have college assets (Beverly, Kim, Sherraden, Nam, & Clancy, 2012). If all families are to have access to CDAs and college assets, evidence clearly shows the need for automatic opening and automatic deposits.

Automatically opened CDAs with automatic deposits may have particularly strong impacts on low-income families. In middle- and upper income families, college attendance may be taken for granted. Parents may expect their children to go to college, and children may internalize this expectation whether or not they have CDAs. In contrast, low-income parents may perceive college as unaffordable, which could influence children's educational expectations. CDAs may change this dynamic in low-income families, allowing parents and children to see college as a possibility. This impact seems likely only if CDAs subsidize asset accumulation (through automatic deposits and perhaps savings matches) because many low-income families will have trouble setting aside and leaving untouched large sums of money.

CDAs may have positive effects regardless of the source of accounts and assets and regardless of individual motivation or ability to save.

Regular account statements might reinforce pathways. Regular account statements might make parents and children more cognizant of accounts and the level of assets accumulated. Statements may remind families about the importance of college, the importance of planning and saving for college, and the availability of a savings vehicle when families are able to save for college. When children have a meaningful level of assets or when families are making noticeable progress toward accumulating some personal savings for college, account statements may trigger or reinforce the belief that children are college bound.

Pathways are likely to be more robust the longer children have CDAs. Parents and children who do not take college attendance for granted are unlikely to change their expectations overnight. It takes time to absorb the message that college is important and that college is possible. With time, however, the pathways may contribute to financial preparation and a college-bound identity.

In this regard, the difference between CDAs and traditional mechanisms of financial aid is noteworthy. Youth may expect to qualify for scholarships, grants, and student loans, but these typically become available just before college attendance. If CDA assets begin to accumulate early in a child's life, then CDAs may have a more powerful impact on education-related attitudes and behaviors than traditional forms of financial aid (Assets and Education Initiative, 2013).

If CDA assets begin to accumulate early in a child's life, then CDAs may have a more powerful impact on education-related attitudes and behaviors than traditional forms of financial aid.

Increases in financial capability seem most likely if CDAs are opened and seeded automatically. Without automatic opening, many of the families who most need financial learning opportunities will not have accounts. Without automatic initial deposits, many of these families will not have assets, and "inactive" accounts present fewer learning opportunities and perhaps less inspiration than accounts with assets and activity. Automatically opening and seeding CDAs provides learning opportunities to those who otherwise would have no account.

Increases in financial capability also seem most likely if CDAs are incorporated into financial education. One promising strategy would be to use CDAs as hands-on learning tools in financial education provided through public schools. For example, with modest private financial support, children could make small deposits into their CDAs and then learn to read account statements. They could review examples of how funds in CDAs can accumulate over time with modest personal savings. Again, if CDAs are universal, then every student can have these opportunities, not just children with parents who teach and model good financial practices.

CDAs also could be incorporated into financial education classes provided to adults by social service organizations. For example, classes could teach adults how to read CDA account statements, show how college assets could accumulate over time if they saved $25 a month in a CDA, suggest ways to come up with monthly contributions, and explain the value of arranging for direct deposit into a CDA.

Conclusion

Several countries have implemented or are proposing CDA policies to build assets for children, particularly assets for investments in education. CDAs can contribute to financial preparation for college and the development of a college-bound identity in multiple ways and so increase the likelihood of college success. The pathways from CDAs to college success proposed in this paper are grounded in theory and evidence, but more research on the impact of CDAs is needed, especially research that examines the long-term impact of CDAs. If research confirms that CDAs shape educational expectations and help families financially prepare for college, there is a strong rationale for automatically opened CDAs with progressive subsidies. Without these features, advantaged families are much more likely than disadvantaged families to have college savings accounts and college assets. Automatic opening and progressive subsidies help make CDAs inclusive and so give *all* children the opportunity to benefit.

Endnotes

1. See New America Foundation (2013). CDA programs also have been established in states and cities in the US. For example, the Harold Alfond Challenge Program offers $500 to every newborn in Maine enrolled in the state's 529 college savings plan. Currently, families must enroll by completing the state's 529 plan application before the child's first birthday, but the program may begin automatically enrolling newborns (Harold Alfond Foundation, 2013). In 2013, the Nevada College Kick Start Program provided 529 accounts with an initial deposit of $50 to kindergartners in selected counties and schools (http://collegekickstart.nv.gov/families/FAQ/). Since 2012, every public kindergarten student in San Francisco schools automatically receives a 529 account with an initial deposit of $50. Children enrolled in the National School Lunch Program receive an additional $50 deposit (Phillips and Stuhldreher, 2011).
2. Figures on student debt are from Fry (2012), and figures on consequences of debt come from Dwyer, McCloud, & Hodson (2012).
3. Identity-based motivation theory is described in detail in Oyserman, Bybee, and Terry (2006) and Oyserman & Destin (2010). Oyserman (2013) discusses college-bound identity in the context of saving and assets. Elliott, Choi, Destin, & Kim (2011) and Elliott & Sherraden (2013) discuss college-bound identity in the context of CDAs.
4. Some early research on automatically opened CDAs supports this statement (Gray, Clancy, Sherraden, Wagner, & Miller-Cribbs, 2012; Kim, Sherraden, Huang, & Clancy, in press). Also see Elliott (2013) and Elliott, Destin, & Friedline (2011).
5. Research suggests that people with assets tend to be more hopeful and more future oriented. Elliott, Choi, Destin, & Kim (2011) and Yadama & Sherraden (1996) find evidence that assets *predict* future attitudes, not simply that assets and attitudes are correlated. The link between assets and attitudes also is discussed in Sherraden (1991) and Shobe & Page-Adams (2001).
6. The effect of asset levels on outcomes may not be linear. Instead, there may be thresholds (i.e., certain levels of asset accumulation that are especially meaningful to parents and children).

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