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Assets and Child Well-Being in Developed Countries

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Assets and Child Well-Being in Developed Countries

Although there is no universal approach to offering Child Development Accounts (CDAs), this paper introduces a framework for an age-based conceptual model that describes how such accounts might influence indicators of child well-being. With a focus on optimal age-appropriate development beginning at birth and ranging through young adulthood, the model incorporates research from multiple disciplines to include direct effects, indirect effects and critical milestones. We review empirical evidence from national datasets (primarily from the United States, but including research from other developed countries) to provide a context for this framework. This conceptual and empirical backdrop provides a starting point from which to critique key dimensions of CDA policy and consider potential implications of such an approach. Suggestions for future research are offered.

Key words: *assets, asset effects, Child Development Accounts, child well-being, developed countries*

It is almost a truism to note that children growing up with more economic resources are better off than those with fewer economic resources. Economically advantaged children tend to have more options and to be more successful as adults, at least as measured by educational attainment, health, employment, income, and wealth. Yet, there are many ways to conceptualize how the economic resources of families influence child well-being. As one example, the relationship between household income and indicators of child well-being has been well established. However, the relationship between financial assets (often defined as household net worth) and child well-being is just beginning to be explored. This paper will contribute to the conversation in several ways. First, it will examine theoretical perspectives that outline direct effects, indirect effects, and success in traversing critical milestones associated with economic resources. Then, after looking broadly at economic resources to include a wide range of relevant theory, it will summarize existing empirical evidence of how assets specifically influence child well-being. And lastly, it will hypothesize what effects could be anticipated from asset building interventions, ending with implications and suggestions for future research.

Theoretical Perspectives of how Economic Resources Influence Child Well-Being

Direct Effects

Focusing on direct effects, the income and wealth (or assets) of a household are themselves key factors in shaping a child's outcomes and overall well-being. In this view, parents or caregivers purchase or have access to the things that make it easier for their child to develop optimally and maximize human capital. This approach typically focuses on how much parents 'invest' in their

child, often expressing a trade-off between time and money as well as the ‘quantity’ and ‘quality’ of children (Leibowitz, 1974; Chiswick, 1988). It builds upon the work of Gary Becker who has tried to model how natural ability, parental investment, market luck, and income interact to determine child outcomes, particularly human capital (Becker, 1991, 2002; Becker & Tomes, 1979, 1986).

This approach also emphasizes the fact that it takes economic resources to purchase essential necessities such as appropriate food, housing, clothing, health care, etc. (Loury, 1981, Jencks & Mayer, 1990). It highlights the reality that low SES (socio-economic status) households are often unable to provide the resources and environment essential for their children to develop age-appropriate abilities and maximize their potential (Haveman & Wolfe, 1994). Although there is the possibility of direct inter-vivo transfers through bequests or inheritance, the direct effects argument is most connected with investment in the child’s human capital which then translates into better overall outcomes and financial well-being.

A relevant question is to what extent socio-economic resources directly influence child outcomes across multiple domains. From what we know, income is a better predictor of academic and cognitive achievement than other indicators of child well-being (Duncan & Brooks-Gunn, 1997; Haveman & Wolfe, 1994). Specifically, family income has been demonstrated to have significant and sometimes large effects on children’s academic ability and achievement, but only small or insignificant effects on child behavior, mental health and physical health (Duncan & Brooks-Gunn, 1997). Thus, in the empirical review of assets, the paper will attempt to differentiate across several domains.

Indirect Effects

Although economic resources are important, they are typically correlated with non-economic resources which are also key factors in shaping child outcomes and overall well-being. Additionally, these non-economic factors may better explain the pathway or process by which economic status influences child outcomes through factors such as socialization, parental involvement, behaviors, and expectations.

From this perspective, the socio-economic status of households reflect certain underlying processes or conditions which affect the cognitive and emotional development of children as well as the role models parents provide for their children (Hill & Duncan, 1987). This view is similar to earlier work on social learning (Bandura, 1977). But parents with higher SES and educational attainment not only serve as a model for children to emulate, but they also actively define their children’s educational expectations in two ways: transmitting their own aspirations and expectations (Davis-Kean, 2005; Goyette & Xie, 1999; Singh et. al, 1995); and developing in the child the behaviors required to achieve those aspirations and expectations (Cohen, 1987). In addition, parents with greater resources can create a home environment that has stimulating and supportive materials and arrange for child care and various outside activities to encourage their child (Bradley & Corwyn, 2002; Furstenberg & Hughes, 1995; Totsika & Sylva, 2004).

Not only do parents model certain characteristics and create an environment both within and outside the home to influence child development, but they can also monitor school performance and be active in school-parent opportunities. Parents are involved at home and school in things such as child-rearing skills, school-parent communications, school volunteer opportunities, home based learning, school decision-making, and school/community collaborations (Epstein, 1992; Barnard, 2004). For one concrete example, Annette Lareau did an ethnographic study of middle-class, working-class and poor families. Drawing on in-depth observations of black and white families, Lareau (2000; 2002; 2003) found that middle class families raised their children as projects to be cultivated through many structured activities to develop talents and, unlike working class and poor children, they became much better at interacting with and negotiating societal institutions. Preparing children for successful interaction with institutions external to the immediate family early in life helps establish a smooth transition into greater responsibilities and independence as the child grows older (whether in school, relationships, or employment).

In addition to factors related to parents themselves, membership in a low SES household often means residing in more challenging environments and facing more stressors. For example, economic hardship can lead to economic pressure which leads to marital strain and parenting difficulties which negatively impact parent/child interactions and child development (Brooks-Gunn, Duncan, & Maritato, 1997; Conger & Donnellan, 2007; Conger, Ge, Elder, Lorenz, & Simons, 1994; Edin & Lein, 1997; McLoyd, 1990; McLoyd, Jayaratne, Ceballo, & Borquez, 1994; Parke et. al, 2004; Conger, Conger, Elder, Lorenz, Simons, & Whitbeck, 1992; 1993; Conger, Wallace, Sun, Simons, McLoyd, & Brody, 2002). Financial strain mediated through negative parent-adolescent relationships and decreased parental school involvement has a negative effect on adolescents' academic achievement (Gutman & Eccles, 1999). Simply residing in a low-income neighborhood may contribute to poor outcomes (Duncan, Brooks-Gunn, & Aber, 1997). In particular, the cultural and structural obstacles faced by families growing up in poor and isolated urban communities make it more likely for their children to repeat problem behaviors and cycles of poverty (Wilson, 1987, 1996, 2009).

In sum, there are many ways that economic resources indirectly influence child outcomes. These can range from parenting styles and home environment to family stress and neighborhood influences. This idea is expanded by a list of indirect and contextual features associated with SES recently noted by developmental psychologists: appropriate structure, physical and psychological safety, opportunities to belong, pro-social norms, opportunities for efficacy and mattering, opportunities for skill building, and integration with family, schools, and community (Eccles, Brown, & Templeton, 2008).

Critical Milestones

Several researchers inform this perspective by demonstrating that household SES, often more than biological, pre-natal, and neurological factors, begins to influence outcomes early in a child's life

(Entwisle, Alexander & Olson, 1997; Gutman, Sameroff, & Cole, 2003; Sameroff, Bartko, Baldwin, Baldwin, & Seifer, 1998; Sameroff, 2000; Werner and Smith 1982, 1992). Not just in early childhood, but throughout a child's development, there are critical milestones embedded within social and educational structures that can determine a child's lifetime trajectory in relation to educational attainment and other adult outcomes (Bronfenbrenner, 1979; Bronfenbrenner, 1993/2005). When not achieved, a child might fall behind or sustain ongoing disparities compared to those that do negotiate the critical points successfully. These milestones are developmentally specific and their attainment often closely linked to indicators of a family's socioeconomic status and financial stability. Practically, a household with greater economic resources might not only be able to directly and indirectly influence child outcomes, but may also be associated with a constellation of opportunities that support the early mastery of critical transitions. Then, capitalizing upon past accomplishments makes future success more likely, further exacerbating existing disparities. Recent theoretical frameworks define similar principles within a life-span developmental perspective and describe the influence of cumulative advantage and disadvantage over time (Alwin & Wray, 2005; Dannefer, 2003). The milestones listed in the following paragraphs are illustrative and not meant to be comprehensive.

At very early ages, there are measurable differences in child achievement that can influence later success. For example, children whose families differ in socioeconomic status (SES) differ in their rates of productive vocabulary development because they have different language-learning experiences, as shown in a study of 2 year olds in different socioeconomic contexts (Hoff, 2003). It is also noted that children from economically disadvantaged backgrounds have fewer emerging literacy skills and perform more poorly on cognitive assessments as they enter school. And these disparities remain after the first few years of school (Stipek & Ryan, 1997; Denton & West, 2002). One longitudinal study finds that SES leads to stratification in academic achievement as early as first grade, which is maintained into adulthood (Entwisle, Alexander, & Olson, 2005).

A lack of economic resources typically just perpetuates and exacerbates any existing disparities. For example, class-related disparities in mathematics achievement are augmented during summers between early grades, with low SES students falling further behind (Entwisle & Alexander, 1992). In addition, persistent poverty leads to lower IQ and school achievement for children through lower teacher expectancies and poorer academic-readiness skills (McLoyd, 1998).

Low-SES households also have fewer resources to help their children through predictably difficult periods. For example, the junior high transition (typically around 6th and 7th grade) is a time of great change as the school environment becomes less personal and more evaluative. Furthermore young people become more self-conscious as the physical transformations of puberty begin to show themselves more visibly. Many early adolescents show both lower levels of academic motivation and lower levels of self-efficacy during this period. Household resources and investment in formative opportunities can make it easier for a young person to adjust and rebound in relevant areas during this transition (Simmons & Blyth, 1987; Eccles and Midgley, 1989; Wigfield, Eccles, MacIver,

Reuman, & Midgley, 1991; Lord, Eccles, & McCarthy, 1994). And even as young people progress through school, increased levels of parental involvement among socially advantaged parents leads their children to advantaged track placement in high schools, making college entry more likely (Lucas, 2001; Kelly, 2004).

Not only does a critical milestone lens help clarify the influence of economic resources across a range of ages, but it also demonstrates how early setbacks can influence future progress. Without conscious remediation and focused effort, a trajectory is established that can leave a child further and further behind. However, as we transition to examining the specific influence of assets on child outcomes across several key domains, the focus will include only direct and indirect effects. Although we acknowledge the value of a critical milestone perspective, there is not yet much longitudinal empirical evidence on assets to explicitly examine this approach. Nevertheless, when thinking about the effect of SES or assets across a range of ages, it is useful to keep a critical milestone perspective in mind because it is an overarching theoretical framework that can encompass both direct and indirect effects. Regardless of age group, knowledge of previous experiences and short-term milestones could be informative.

Empirical Evidence on Assets and Child Well-Being

In addition to the influence of socioeconomic status and financial resources, in general, on child outcomes, Sherraden (1991) suggests that assets (a family's financial wealth and tangible property) will uniquely enhance the welfare of their offspring. Studies have found positive associations of assets with better child outcomes, and in a literature review, Rohe and his colleagues conclude that assets have positive associations with expanded opportunity sets for children (Rohe, Van Zandt, & McCarthy, 2002). Overall, evidence suggests that assets carry direct and indirect implications for children in the domains of educational outcomes, psychological and behavioral outcomes, and economic outcomes.

Children's Educational Outcomes

There is a growing body of research supporting the influential role of assets on children's educational outcomes independent of the effects of income and parents' education. In addition to the direct financial considerations such as paying for post-secondary education, family wealth indicates the availability of economic resources to provide extracurricular advantages such as the purchase of computers, tutoring and other enrichment opportunities. Family wealth is also a proxy for better neighborhoods, better school districts, and better access to services (Oliver & Shapiro, 1995; Shapiro, 2004). Empirical studies have examined direct effects of various types of parental assets and also incorporated the indirect mediating mechanisms of parents' diverse investments by time and involvement, parental socialization, and family processes, which have been found to positively impact children's education. A summary of this work follows.

Direct Effects

Mayer (1997b) found that income from investments and inheritance explained more variance in children's educational test scores and achievement than did total family income. In fact, she concluded that the effects of income may be weaker and more modest than had been previously thought (Mayer, 1997a). Williams Shanks (2007) used the Panel Study of Income Dynamics (PSID) and its Child Development Supplement (CDS) to investigate whether parents' assets are significantly related to children's academic achievement measures, when controlling for income. Parental net worth was, in fact, positively associated with applied problem scores for youth, aged 3 to 12, and the effect of income became insignificant after assets were included in the model.

In another analysis of the PSID, Hill and Duncan (1987) found that parental asset income has a significant effect on the years of education completed by children, but no significant effects were observed from parents' labor, welfare, and all other sources of income. In a similar study, Conley (2001), using data on 1,126 children from the PSID, found that family permanent income, controlling for other respondent and parental characteristics, significantly predicted total years of schooling. When the family's net worth was added to the model, permanent income no longer remained significant. Instead, family net worth is found to have significant effects on the total number of years of schooling. Specifically, a doubling of assets increased the probability of going to college after graduating from high school by 8.3%, and increased the chances of college graduation by 5.6% once enrolled (Conley, 2001). Analyzing a later group of African American young adults from PSID Child Development Supplement data, Williams Shanks and Destin (2009) again find that household net worth predicted both high school graduation and college enrollment.

A large body of research finds positive associations of assets, often in the form of homeownership, with children's educational outcomes. As a whole, the existing evidence suggests that homeownership has a positive impact, even after corrections for omitted variables and sample selection biases (Dietz & Haurin, 2003). Essen and colleagues found that, among British 16-year-olds, children of homeowners achieved significantly higher scores on math and reading tests than children of rented households (Essen, Fogelman, & Head, 1978). Studies using data from the PSID also found positive effects of homeownership on high school graduation rates (Aaronson, 2000) and staying in school (Green & White, 1997), controlling for household influences and other indirect effects. In addition, Green & White (1997) found that the effect is strongest for children of low-income households. Zhan and Sherraden (2003), looking at the relationship between homeownership and children's academic progress among female-headed households drawn from the National Survey of Families and Households (1987-88; N=591), found that academic performance was significantly associated with homeownership, even after controlling for characteristics such as income and maternal education. In addition, high school graduation is significantly associated with both homeownership and having savings of \$3,000 or above.

Indirect Effects

The studies reviewed above support the proposition that assets have direct associations with various child educational outcomes. However, there are many other ways assets can have an impact, and future research is needed to uncover the indirect effects and exact mechanisms by which assets influence the educational outcomes of children. One possible pathway that has been explored is that of increasing a person's future orientation, which in turn brings about other attitudinal and behavioral changes (Shobe & Page-Adams, 2001). Another pathway that has been investigated is that of parental expectations for their children's educational attainment and how they influence a child's educational outcomes. Zhan and Sherraden (2003) found that mothers who were homeowners or had savings of \$3,000 or more had higher expectations for their children's educational attainment, even after controlling for maternal age, race, employment status, education, family structure, and child characteristics. In contrast, no significant effects were found between household income and maternal expectations, but mother's educational expectation mediated the association between children's academic performance and assets in the form of homeownership and having savings of \$3,000 and above. Extending this line of inquiry to 1370 children drawn from the mother-child data set of the National Longitudinal Survey of Youth (NLSY79), Zhan (2006) continues to find a positive association between assets and mother's expectations, and between assets and children's education outcomes as measured by standardized math scores. Additionally, she finds that about one-third of the relationship between parental assets and children's education could be accounted for by mothers' educational expectations for their children.

By adding mediating pathways, other studies have highlighted that a higher level of family wealth tends to reduce financial stress and facilitate parents' involvement in child education. Orr (2003) used a sample of school-aged children aged 5 to 14 from the NLSY79 to examine whether wealth affects children's academic achievement and to test the mediating effects of variables representing cultural capital, educational resources at home, social capital, child self-esteem, and school quality. The findings suggest that family net worth has a positive effect on child academic achievement, measured by standardized math scores. Interestingly, by considering indirect effects through cultural capital, this study found that the wealth effect was largely explained by access to cultural opportunities, such as extracurricular activities and outings.

Using the PSID Child Development Supplement (Wave one), Yeung and Conley (2008) further contributed to this line of research by demonstrating wealth effects on children's cognitive abilities for school-aged and preschool children and additionally incorporating several mediating pathways into the model. Physical home environment, cognitively stimulating materials, parental warmth, and parents' activities with the child produce significant indirect wealth effects which varied by age and type of cognitive outcome.

The empirical studies reviewed above indicate that assets have both direct and indirect effects on children's educational outcomes, independent of income. It could be that assets provide the families

with a command over resources so as to enable and facilitate access to educational and developmental opportunities for their children. And in times of economic emergency or hardship, financial assets might make it possible to sustain a more stable situation. It could also be that children's educational outcomes are indirectly influenced by assets through more positive socialization resulting from increased parental non-economic resources for their education. This is further supported by a survey of the participants in a structured savings program for the poor in which participants self-reported that they were more likely to plan for their children's education after joining the program (McBride, Lombe, & Beverly, 2003). Assets also influence other important outcomes for children, besides education, including direct and indirect effects of wealth on specific behavioral and psychological measures.

Children's Psychological Well-Being and Behavioral Outcomes

Direct Effects

Using data from two general population surveys, the 1983 Ontario Child Health Study and the 1994 National Longitudinal Survey of Children and Youth, Boyle (2002) found that children from families who owned their homes had significantly lower ratings on childhood emotional and behavioral problems compared to children from families who were renters, controlling for socioeconomic factors at the family and neighborhood levels. Child problem behavior is defined in this study as a composite of conduct problems (aggressive, antisocial), hyperactivity (inattentive, impulsive, overactive) and emotional problems (depressed mood and anxiety). The lower ratings were consistent across both data sources, as well as across ratings by parents, teachers, and the children themselves. Boyle further found that the effects of homeownership were similar for families with incomes above and below the poverty line.

Haurin and his colleagues (Haurin, Parcel, & Haurin, 2002), however, found that while children of homeowners had fewer behavioral issues, the association between homeownership and child behavior outcomes was not statistically significant. Instead, they find that it was the duration of homeownership that mattered. Using data on 1,062 children from the NLSY and NLSY-Child, they found the duration of homeownership to be positively associated with lower scores on the Behavior Problem Index (BPI). The BPI is a measure of children's behavior problems based on mothers' reports on 28 items that include "acting-out" behaviors, having a strong temper, demanding attention, depressed-withdrawn behavior, and anxious-distractible behavior. Williams Shanks (2007) also examined the effect of assets on a combination of externalizing and internalizing outcomes as measured by the Behavior Problems Index in the PSID. Behavior problems were negatively associated with net worth while increases in debt and credit card ownership were associated with a greater number of behavior problems.

Assets in the form of homeownership have also been found to be associated with lower probability of teenage pregnancy. Green and White (1997), analyzing data from the 1982 High School and Beyond dataset composed entirely of 18 year olds, find that daughters of homeowners were

significantly less likely than daughters of renters to have a child by age 18. In a study examining significant predictors of premarital childbearing, Conley (1999) argues that parental assets provide public transfers, home, and quality neighborhood to offspring and thus help them rationally choose a social norm of marriage and responsible behavior. As expected, his empirical analysis tracking girls aged 10 to 13 in 1984 for eight years in the PSID suggests that primary residential equity was a significant factor reducing the risk of premarital childbearing before marriage.

The effects of assets on psychological well-being have been demonstrated among children and adolescents. Cairney (2005) concludes that assets in the form of homeownership exert a powerful impact on young adolescents' emotional and behavioral well-being. Analyzing data drawn from the nationally representative 1994-1995 National Population Health Survey (NPHS) conducted by Statistics Canada, Cairney found that children age 12 to 14 years living in rental homes reported significantly higher levels of psychological distress than those residing in owned dwellings, controlling for household income, family structure and other demographic characteristics. In addition, the prevalence of depression among 12 to 14 year old children who live in rented dwellings is approximately three times higher than children who resided in owned dwellings (Cairney, 2005). Asset accumulation in the form of savings has also been found to enhance psychological well-being in children. Having parents put aside money for college at age one significantly predicts better self-esteem at age twenty-three in a longitudinal study of 867 families drawn from the Detroit metropolitan area (Axinn, Duncan, & Thornton, 1997).

Indirect Effects

There is not as much research on the indirect effects of assets on psychological and behavioral outcomes. Yet, in one study (Sobolewski & Amato, 2005), home equity and a combination of other economic assets in the family of origin helped indirectly predict later young adult psychological well-being, as measured by self-esteem, distress symptoms, satisfaction and happiness. Specifically, these economic resources predicted adult psychological well-being through two pathways. The first route was through parental perceptions of economic stress, which in turn destabilized family relationships and led to lower adult well-being. The second pathway was that economic resources influenced offspring SES, which in turn predicted adult psychological well-being (Sobolewski & Amato, 2005).

In summary, the empirical studies reviewed indicate some evidence that assets have direct and indirect effects on behavioral and psychological outcomes. Not as much work has been done in this area, primarily because fewer longitudinal datasets have quality data on both household assets and child psychological correlates. However, given the diverse array of interesting behavioral and psychological outcomes, more work can still be done to better specify the direct and indirect effects of assets in this area.

Children's Economic Outcomes

Finally, it is perhaps most intuitive that family assets predict economic outcomes for children. Studies suggest that these effects materialize in several ways: through securing and launching a child's economic well-being through intergenerational transfers (Mulder & Smits, 1999; Oliver & Shapiro, 1995; Sherraden, 1991); by parental influences and modeling asset accumulation behaviors and portfolios (Chiteji & Stafford, 1999; Helderma & Mulder, 2007; Henretta, 1984, 1987; Smits & Mulder, 2007); and by enhancing the child's own sense of economic security (Scanlon & Page-Adams, 2006).

Direct Effects

Intergenerational transfer of wealth is a common pathway through which the life chances of children are enhanced. Some studies estimated that 20% of asset accumulation could be attributed to intergenerational transfers (Modigliani, 1988) while others have estimated that intergenerational transfers account for as high as 80% of the assets accumulated within one's lifetime (Kotlikoff & Summers, 1981; White, 1978). Intergenerational transfers of wealth are also frequently seen in first-time home purchases (Dietz & Haurin, 2003). Referred to as 'the intergenerational transmission of homeownership' by Mulder and Smits (1999), gift-giving towards housing is a direct way for people to transmit assets in the form of homeownership to their children (Helderma & Mulder, 2007). It is also known to significantly influence transition to homeownership (Davis Withers & Katz Reid, 2004). It is reported that 4% of first time homebuyers finance all of their down payment with funds from relatives, and 20% receive some help from relatives. These gifts account for 50% of the average down payment (Engelhardt, 1996). Another study similarly found 14% of youths receive a parental gift in the year of home purchase that averaged 16% of the value of the house being purchased, which is close to the typical size of the down payment (Haurin, Hendershott, & Wachter, 1996). Gifts and intergenerational transfers hence play a significant role in enabling the next generation to begin the asset-accumulation process (Oliver & Shapiro, 1995), and thereby improving their life chances.

Another common pathway through which assets may affect children's economic outcomes is by facilitating their economic mobility, either through economic transfers or by improving their economic productivity. Caputo (2003), using data on 4,476 respondents from the NLSY79, found that the length of time of asset ownership influenced economic mobility beyond that of background, socio-demographic, psychological, and other cumulative correlates.

Indirect Effects

An analysis of data drawn of the PSID (Boehm & Schlottmann, 1999) found that asset holding in the form of homeownership had a substantial impact on the child's future labor income through the indirect effect on education. That study estimated that on average, individuals whose parents

achieved homeownership had annual wages that were higher by \$7,497, which translates to an average lifetime benefit of \$155,344.

Assets could also act on children's economic outcomes indirectly by influencing the way parents socialize their children into behaviors which facilitate or encourage asset accumulation. Helderman & Mulder (2007) found a strong effect of parents' housing tenure on children's housing tenure, after controlling for parental gifts and other individual and parental characteristics. Boehm & Schlottmann (1999) similarly find parental homeownership to dramatically increase the likelihood that children will also be homeowners. Specifically, the average likelihood of homeownership increases by 24.4% overall, or by 59.3% that the child will attain homeownership within 10 years after moving away from the parental home. Helderman & Mulder (2007) suggest that the strong effect of parental tenure on children's housing tenure may be partly attributed to socialization.

Parental investment portfolios have also been found to be associated with that of their children's. Chiteji and Stafford (1999), analyzing data of 1,933 households drawn from the PSID who are aged 25 to 54 in 1994 and for whom parental wealth information in 1984 could be obtained, found that parents who held stocks are more likely to have children who go on to hold stocks as young adults. Conversely, parents who held no transaction account are also more likely to have children who similarly do not have any transaction account as young adults. They suggest that there is some stickiness across generations in the propensity to hold financial assets, and that parents can be influential in exposing their children to financial options. Their inability to do so may have important consequences for the asset-holdings of their children (Chiteji & Stafford, 1999).

Assets have been found to instill a sense of economic security and reduce the sense of economic stress (Moore, et al., 2001; Page-Adams & Vosler, 1997; Scanlon & Page-Adams, 2001, 2006; Sherraden et. al, 2005; Shobe & Boyd, 2005). In in-depth qualitative interviews with participants of the SEED demonstration, a matched savings program for children, youths spoke about the sense of security they experienced having a SEED account. Their reduced anxiety about the future was reflected in comments such as "making things easier", "feeling like I have something to fall back on" and "able to worry less" (Scanlon & Page-Adams, 2006). More significantly, Scanlon and Page-Adams (2006) reported that the effect of a greater sense of economic security is more pronounced among those who had fewer resources in their lives.

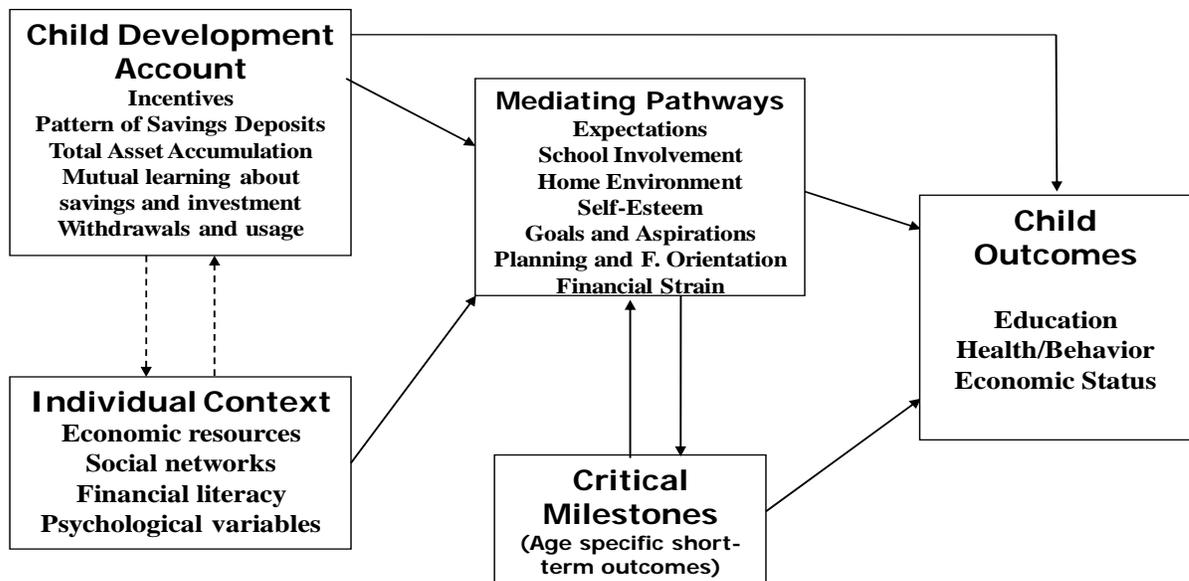
Anticipated Effects of Asset-Building Interventions

These empirical findings discussed thus far have largely come from natural observation as tested in national datasets. The sources provide compelling illustrations of the relation between assets and child outcomes for representative samples of families, often over extended periods of time. Even so, the observed asset effects may be quite different than what might be found in the context of an intervention that explicitly builds household assets or provides an opportunity to save or build assets on a child's behalf. Asset studies usually attempt to statistically control for the effects of income and several other influential variables that could be underlying the observed influence of asset measures,

but this methodology can not conclusively rule out other unmeasured or untested family and contextual variables that may be central to the asset effect. Also, because the specific pathway that leads from assets to child outcomes remains unspecified, artificially-induced asset-building interventions may derail whatever naturally observed process leads from asset-accumulation, possession, or consumption to improved outcomes for children. However, some evidence that comes from adult savings programs (IDA accounts generally and as tested in the American Dream Demonstration) and initial findings from a child savings account demonstration (Saving for Education, Entrepreneurship, and Downpayment or SEED) indicate possible asset effects even in the context of an intervention. Thus, based on existing research, interventionists can make some predictions concerning the potential short and long-term effects of child development accounts if universally offered.

As illustrated in Figure 1, Child Development Accounts (CDAs) could influence later outcomes directly, indirectly, or by helping children and families successfully navigate critical milestones. This diagram builds upon a basic model for determinants of asset building (Beverly et. al., 2008), starting with studied individual traits known to influence asset accumulation and allowing those to predict level of participation in the CDA.

Figure 1. Assets and child well-being: Conceptual framework



These accounts could then directly influence child outcomes. The most immediate direct effect from a CDA would be that an account is opened in the child's behalf for the purpose of building assets. Then, through some combination of deposits, earnings, and incentives, the total accumulation in that account could increase in value over time. This growth could create an opening for adults to communicate with the child about the account and for parents or caregivers to engage with the child in mutual learning about savings and financial management. As the child grows older, there may be additional opportunities to learn about financial concepts and for the child to become more directly involved in making deposits or monitoring the account. Money accumulated in the account might represent progress toward a specific goal and at some point the child can draw down from the account to pay for educational expenses or other purposes.

The points outlined above could be measured and tested and would all be direct influences of the account itself. Simply opening an account, interacting with and engaging others around certain features of the account, then eventually using funds that accumulate in that account, might open up new possibilities that directly influence child outcomes. Ideally, both the parent and child will perceive college (or other allowable uses) as a tangible goal and begin taking concrete action to make the goal a reality.

A CDA could also have indirect effects. From the empirical evidence we've already shared on assets and SES generally, pathways such as higher parental expectations for educational attainment, more parental involvement in school, greater educational resources at home, increased self-esteem, and a greater future orientation and increased planning for child's education are all possibilities. The child's own goals and educational or occupational aspirations could increase or become more concrete, which might lead to additional behavioral and attitudinal changes. Depending on how information is communicated, the parent and/or child might acquire better financial knowledge, exposure to more financial options, and greater financial capabilities. This could lead to less financial strain and greater economic security over time.

The indirect effects outlined above could also be measured and tested as possible mediating pathways through which a CDA might influence child outcomes. Ideally, having a child account over a period of time would encourage greater motivation and hope for the future, serving as a concrete resource that could be leveraged both within the household and by supportive external institutions to help expand a child's options.

Whether having a CDA would make it more likely for a child to successfully navigate critical short-term milestones is an open empirical question. This might be quite dependent on the child's immediate individual environment and overall socio-economic context. We know from natural observation and empirical data that children growing up in households with less economic resources (low income, few assets, poor neighborhoods) face greater educational and health disparities. We also know that these disparities become evident early in life and often remain through adulthood. On the margins, the direct and indirect effects of child accounts suggested thus far might help some

children do better and be in a position to shift what would be their predicted trajectories, reducing problem behaviors and increasing overall well-being and educational attainment.

However, for children growing up in very disadvantaged circumstances, a child development account alone might not be sufficient. In such cases, supplemental interventions might also be necessary. For example, even if a parent is excited about having a child account and desires to become involved in school or help create a more positive future, this might not improve his or her vocabulary, change circumstances at home, or immediately impact the child's school performance. This is where a quality pre-school program or other community-based organizations and mentors might be able to better leverage the CDA resource by assisting a child to more successfully navigating critical milestones. Table 1 provides a more detailed overview of potential direct effects, indirect effects, and critical milestones across multiple ages. This takes into account the fact that anticipated effects could differ or change depending on the child's age.

Table 1: Anticipated effects of a Child Development Account

Age	Account Influence (Direct Effect)	Account Mediated (Indirect Pathways)	Critical Milestones (Short-term Outcomes)
0-2 (Prenatal-Toddler)	Open account, establish a pattern of savings, commit to regular deposits	-Parent reads to child and establishes a foundation for literacy and school readiness. -Cognitively stimulating and secure home environment	-Child develops competence in language and other skills.
3-7 (Early Childhood)	-Adults can start talking to child about account -Engage parent(s) and child in mutual learning about savings and financial management - Parent perceives college as tangible goal **	-Parent engages with child and teachers around learning and assignments -Parent initiates discussions about future goals and aspirations	-Quality pre-school or other educational experiences -Successful transition to 1 st grade
8-12 (Late Childhood)	-Child learns about banks and other simple financial concepts -Child can begin to monitor own account statements and make deposits -Parent and child can clarify savings goals - Child perceives college as tangible goal**	-Parent oversees homework and interacts with child's teachers and school. -Parent manages out of school activities, extra-curricular enrichment. -Both parent and child discuss future aspirations. -Improved self-esteem	-Reading at grade level by 3 rd grade - Advantageously tracked by classroom -Establishes motivating comparison standards -Child successfully manages junior high (middle school) transition
13-17 (Adolescence)	-Child continues to monitor account and may make or negotiate own contributions -Possible to measure progress toward goal in concrete terms	-Parent monitors grades and school progression. -Parent may start getting more specific about future goals and what it takes to attain them -Parent oversees peer relationships and activities	-Successful transition into high school -Tracked into college preparatory courses -Child focuses on school achievement and preparation for post-secondary education or training.
18+ (Young Adult)	-Child continues to save -Child may start to draw down account for educational or other purposes.	Parent oversees decisions and continues to discuss child's future as well as arranging experiences and role models to facilitate ambitions.	-Child graduates from high school -College Acceptance -Child makes career/employment decisions.

**Important across all ages.

Consequences of CDA Design on Child Outcomes

In addition to individual circumstances and any barriers generated by particular disadvantages, the institutional framework of a Child Development Accounts program also matters. The potential

impact of CDAs will be highly dependent on how the intervention is designed and implemented. Here we will briefly discuss four key dimensions of a potential CDA policy.

One dimension is *access*, with a focus on who is eligible for the account. This might range from a universal offer with accounts opening as early as birth, to targeted programs, to simply leaving enrollment to typical market forces. Guidelines regarding access can greatly impact child outcomes. With a universal offer, much more could be done in terms of promotion, outreach, and advertisement and active participation would likely swell over time. A targeted program could be much more specific in terms of language style and outreach to particular communities, but might risk being stigmatized or losing funding if deemed unsuccessful or does not maintain broad enough appeal. Yet, if the status quo is any indication, relying on market forces alone leaves most children without accounts, particularly those facing the most disadvantages (Clancy, Han, Reyes Mason, & Sherraden, 2006).

Another key dimension is *restrictions*. This might range from parents and children being able to utilize funds and resources during childhood to an account that is untouchable until the child reaches adulthood. And regardless of when funds can be accessed, they might be restricted to particular uses (such as education and home ownership) or permit withdrawals for any purpose (such as in programs with foster care youth that encourage things such as automobile purchase, first month's rent, and health insurance). Such details are important and can influence outcomes, particularly by shaping goals and aspirations. Although the general recommendation is to restrict usage to discourage withdrawals and capitalize on the power of compound interest, allowing limited access could help families weather emergencies or assist children facing developmental disorders or extreme problems at an early age. This might be particularly salient in situations that require immediate resources to remedy to prevent putting the child at great long-term risk.

A third dimension is *incentives*. This could range from initial endowments to additional or matching deposits, or developmental or community benchmarks (money for community service, graduating from high school, etc.). The possibilities are varied, but incentive choices could affect child outcomes in multiple ways. They could influence how much interest a family has in the account and whether participants fully engage. They also influence how much a typical child is likely to accumulate and whether it is perceived as a meaningful amount. They also signal what is deemed to be important—a right of citizenship that everyone gets, contributing one's own fair share through savings, or attaining particular benchmarks deemed valuable by the broader community.

A final dimension is *additional supports and services*. This could range from financial education, account counseling, or simply regular account updates and a system to respond to questions. Again there are many possible options, but such supports and services could also affect child outcomes. Anything that expands participant financial knowledge and provides information relevant to saving in the account or understanding key dimensions of the account could increase the direct influence of the

account. In addition, if supports and services are targeted to more disadvantaged segments of the population, this might improve outcomes among those targeted.

Implications

The conceptual model in Figure 1 and the framework detailed in Table 1 are meant to be a starting point for conversation. There is good empirical evidence that certain indicators of SES have a direct effect on child outcomes and often work through the mediating pathways indicated. There is emerging research indicating that the institutional features of asset building programs such as the dimensions of a potential child development account program described above can influence savings and asset accumulation, even among low-income low-asset households. It is known from high quality longitudinal studies that there are critical developmental milestones that are important short term proxies of how well a young person is likely to do in adulthood. No one has put all of these pieces together as we have here. The framework in Table 1 is simply an educated guess at the possible timing of effects and how the model might be most relevant at particular ages.

Although the ideas presented still need to be tested empirically, there are implications for those considering implementing a child development account program or creating a CDA policy. First, it is important to consider what institutional features might most engage potential participants. Getting this right will help ensure greater participation and better long-term outcomes. Second, if CDAs are designed to assist children and families long term, it is helpful to think about how an account might be viewed over time and what is realistic to expect at certain ages. Third, it might work best to introduce CDAs in the context of other age appropriate programs and services, particularly if the goal is to improve child outcomes across multiple domains or reduce disparities among less advantaged populations.

Suggestions for Future Research and Conclusion

This paper has summarized much of the current work on assets and child well-being, but there are still areas ripe for future research. The most obvious need would be to conduct a longitudinal study of CDAs. By tracking households with accounts over time, direct effects, indirect effects and critical milestones could be monitored and analyzed. If enough developmental data is gathered over multiple ages and compared to a control group, it would be possible to test the conceptual framework presented here.

Whether in the context of a longitudinal intervention study or natural observation, it will be important to specify and test exact mechanisms. Demonstrating how assets impact child outcomes by documenting mediating mechanisms is an important step. If the pathways that link household assets to child outcomes are different or more robust than what has been demonstrated for income, this might have implications for shaping policy.

Whenever possible, it is important to clearly distinguish parent-specific findings from child-specific findings. This would entail gathering measures of the child's own attitudes and behavior, not just relying on parental self-report. In addition, it would help clarify whether parents take the lead and initiate changes to influence child outcomes or whether children respond to particular incentives or influences independent of their caregivers.

It is also important to test the timing of effects. Are there particular ages or moments in a child's development when assets are most critical? Do assets have a different influence in early childhood than in adolescence? Particularly in the context of an intervention, it might be helpful to better understand the levers of influence and if these change over time for children.

It is also important to test threshold effects. An open debate is whether any amount of assets accumulated in a CDA or some other savings vehicle might prove beneficial or if reaching certain thresholds has a greater impact. This is a matter of what engages someone's imagination—the simple idea of having assets or building enough resources to reach particular goals

And finally, although there is increasing evidence of the role of assets in child well-being within developed countries, there is still more to learn. For example, one area often discussed but without much empirical evidence is the influence of assets on civic outcomes. Given that it has taken decades to form a body of knowledge around poverty/income and child well-being, it is not surprising that it will take time to generate a similar body of knowledge with respect to assets and financial wealth. Since the policy and intervention options may be quite distinct for asset-building, it will be worthwhile to expand and improve research in this area.

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