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The Age Old Question, Which Comes First? A Simultaneous Test of Children's Savings and Children's College-Bound Identity

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Child Development Accounts (CDAs) have been proposed as a way to build savings among children (Boshara, 2003; Sherraden, 1991). Although these savings, depending on the CDA policy, can be used to fund first-time home purchase or retirement security, we are interested in exploring their potential to fund post-secondary education. The appeal of CDAs is not only that they could help finance college, but also that they may change how children think about college (i.e., whether they expect to attend college), and how they act as a result (i.e., whether they attend and complete college).

Theory and research on the effects of assets on educational outcomes, however, are in their early stages of development (Schreiner & Sherraden, 2007). One promising area of theoretical and research inquiry is the study of college expectations as an explanatory mechanism for the relationship between assets and children's educational outcomes (e.g., Elliott, 2009; Zhan, 2006). According to Reynolds and Pemberton (2001), college expectations are children's perceptions of the subjective probability that they will be able to attend and graduate from college at a future time point. A more psychologically grounded perspective on college expectations focuses on visions children have of

themselves in a future state—i.e., a "possible self" or, more specifically, a college-bound identity (Markus & Nurius, 1986).

This brief has three goals: (1) to summarize research on the assets/expectation relationship, (2) to outline a conceptual framework for how children's savings affects children's college expectations, and (3) to report findings from a simultaneous test of whether owning a savings account leads to college-bound identity or college-bound identity leads to owning a savings account using a path analytic technique with Structural Equation Modeling (SEM).

Summary of Review of Research

Our review reveals that asset researchers theorize about college expectations, a proxy for college-bound identity, in two distinct but compatible ways: college-bound identity as a "linking mechanism" and as a mediator. Research studies that adopt the view of college expectations as a linking mechanism posit that assets are associated with expectations and that expectations, in turn, are associated with an educational outcome (e.g., Williams Shanks and Destin, 2009; Yadama and Sherraden, 1991). Thus, college

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expectations act as a link between assets and educational outcomes, but no direct relationship between assets and educational outcomes is hypothesized. In addition, this perspective generally focuses on explaining the relationship between assets and expectations, not the relationship between assets and educational outcomes.

A more recent approach, which builds on Sherraden (1991), conceptualizes expectations as a mediator rather than a linking mechanism (e.g., Elliott, 2009; Zhan, 2006). The focus of this approach is to explain how assets affect children's educational outcomes. This new line of theorizing was first articulated by Shobe and Page-Adams (2001), who stated that expectations "may play an intermediate role in the relationship between assets and other positive social and economic outcomes." In addition, Shobe and Page-Adams made clear that assets precede expectations: "savings *first* provide people with otherwise unattainable opportunities to hope, plan, and dream about the future for themselves and their children" (italics in original, 2001, p. 119). Thus, they suggest a causal ordering in which assets precede expectations, and expectations carry at least part of the effect of assets onto educational outcomes.

This study builds on previous theory and research in three important ways. First, it further develops a framework for understanding the assets/education relationship using the Identity-Based Motivation (IBM) theory of children's motivation and behavior. Second, it uses recent data in which assets were measured prior to expectations. Third, it simultaneously tests two alternative hypotheses: (a) assets predict college expectations, and (b) college expectations predict assets. In the next section, we further specify a framework for understanding the asset/education relationship using principles of IBM.

Methods

Data for this research come from the Panel Study of Income Dynamics (PSID) and its supplements, the Child Development Supplement (CDS) and the Transition into Adulthood (TA) supplement. Since we are using savings and college-bound identity variables from 2002 as well as 2007, we limit the sample to those children who are in both the 2002 CDS and 2007 TA samples. Further, the sample is restricted to Black and White youth because only small numbers of other racial groups exist in the TA. The sample is also restricted to children who have graduated high school or completed a GED and are *not* attending a four-year college and have not

graduated from a four-year college by 2007. The reason for this restriction is because college-bound identity as measured in this study has no meaning for children who are currently attending a four-year college or have already graduated from a four-year college. Our final weighted sample is 453. Children's age in 2007 ranged from 17 to 23 (mean = 21, SD = 2.53).

The variables in this study are children's college-bound identity and children's savings. Children's savings in 2002 is the independent variable affecting children's college-bound identity in 2007. Children's college-bound identity in 2002 is the independent variable affecting children's savings in 2007.

Path analysis is used. First, a saturated SEM is examined. All parameters that are significant are retained in the final model. Since the correlation between college-bound identity and savings in 2007 is not significant, it is removed from the model (i.e., fixed at 0); as a result, model fit statistics can be reported. Second, using SEM, a path analysis is performed with college-bound identity and savings using mean and a variance-adjusted weighted least square estimation method (WLSMV) on a tetrachoric correlation matrix. WLSMV adjusts for non-normality and small sample sizes with categorical data. A listwise deletion is performed. Exogenous variables (independent variables), college-bound identity, and savings in 2002 are dummy coded, while other variables are defined as categorical variables.

Findings

Overall, the model fits between the observed and modeled covariance matrix are very good. Given the viability of the model, we examine the hypothesized paths between factors. As expected, we find evidence of a "virtuous circle" between children's savings and college-bound identity. That is, we find that savings in 2002 had a positive significant association with college-bound identity in 2007, while controlling for college-bound identity in 2002. Further, we find that college-bound identity in 2002 had a positive significant relationship with savings in 2007, while controlling for savings in 2002. Additionally, savings has a slightly stronger association with college-bound identity than college-bound identity has with savings.

Implications

Although statistical analyses examining predictive power (which requires only control of time order and showing correlation) cannot establish causal

links definitively, they can provide evidence that one direction is more plausible than another, and they can provide invaluable information for the design of fully experimental studies of causal processes (see MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Findings from this study suggest that children's savings have a slightly stronger relationship with children's college-bound identity than children's college-bound identity has with savings. Given this, the temporal ordering specified in asset theory—that assets lead to more positive college-bound identity—is supported in this study. The best interpretation of current and previous findings, however, is that there is two-way causation (assets → expectations; expectations → assets) (e.g., Yadama & Sherraden, 1996).

The potential for multiple positive effects may make policies that seek to build assets among children particularly alluring. Further, if our findings suggesting a virtuous circle between children's savings and their expectations are confirmed in future research, asset-building policies that seek to build both children's savings and college-bound identity may be most effective at increasing the number of children who have savings and successful college outcomes. Findings suggesting a virtuous circle also provide some support for the theoretical model presented in this article.

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