Kindergarten to College

Contribution Activity and Asset Accumulation in a Universal Children's Savings Account Program

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Introduction

Abstract

San Francisco's Kindergarten-to-College (K2C) is a Children's Savings Account (CSA) program that provides a savings account to all kindergartners in the public school system to save for postsecondary education. This study is the first analysis of families' contributions to the K2C accounts and how those contributions vary by student characteristic and school context. Following a review of existing research regarding college saving by American families in general and, specifically, by those participating in other CSA programs, this study examines contributions as one manifestation of families' engagement with the K2C accounts. In addition, the study explores how the particular features of the K2C program manifest in asset accumulation and contribution activity, as well as how individual and school-level characteristics may influence observed interactions with the K2C accounts. This research provides insights into a CSA program that is the oldest and one of the largest in the country, and it offers lessons for policymakers and CSA administrators considering interventions to encourage college saving among families with school-age children.

What Is a Children's Savings Account?

Children's savings accounts (CSAs) are interventions that seek to build assets for children to use as long-term investments (Elliott, Choi, Destin, & Kim, 2011), and the funds are commonly reserved for postsecondary education (Elliott & Lewis, 2014). Provided through financial institutions, CSAs generally include progressive features, such as initial seed deposits, incentives for attaining certain academic benchmarks, or matches for saving (Goldberg, 2005; Sherraden, 1991). Distinct among financial aid policies for their cultivation of improved outcomes throughout children's lives, CSAs aim to equip children, particularly those who are disadvantaged, with assets that research has found are associated with academic achievement (Elliott, Jung, & Friedline, 2011) and educational attainment (Elliott, 2013b; Elliott & Beverly, 2011). CSAs also connect households to mainstream financial institutions, activating families to save for their children's futures and their later financial well-being (Friedline, 2014).

Savings outcomes represent one metric considered a mark of CSA "success." However, rigorous research suggests that the positive effects of CSAs on such outcomes as educational expectations and children's well-being can be realized even if families are not contributing to the account (Sherraden et al., 2015). Therefore, the potential value of a CSA should not be viewed only in terms of the dollars in the account, and deposit activity should not be viewed as the only worthwhile interaction with the child's CSA. Simply having a CSA can catalyze other positive outcomes for children and families; indeed, possessing assets that can be used for postsecondary education may reinforce children's sense of a college-saver identity, even if the family is not actively contributing their own resources to the account (Elliott, 2013a). Building on the concept of Identity-Based Motivation, well established in the literature as a mechanism by which changing how children see themselves in the future can influence current behavior (Oyserman, 2013; Oyserman & Destin, 2010, among others), college-saver identity development may encourage children to engage with school and prepare academically.

These potentially potent effects combine with the accumulation of tangible financial assets that are associated with economic security and upward mobility (e.g., saving and mobility, see Cramer, O'Brien, Cooper, & Luengo-Prado, 2009). In sum, savings outcomes can be valuable—although not exclusive—indicators in CSA evaluation.

Kindergarten to College (K2C) is the first universal CSA of its kind in the United States. K2C automatically provides a dedicated savings account for higher education to every kindergartner in the San Francisco Unified School District (SFUSD). K2C is funded by the City of San Francisco and administered by the city's Office of Financial Empowerment, under the leadership of Treasurer José Cisneros, in partnership with the SFUSD. Reflecting core CSA design principles, K2C accounts have progressive features; all accounts are seeded with $50, and children who are eligible for a free or reduced-price lunch can receive an additional $50 initial deposit. In an effort to encourage family saving, K2C provides savings matches and provides a Save Steady bonus for accounts receiving regular family contributions. K2C accounts are custodial savings accounts held at Citibank. Because the City of San Francisco is the owner of the account, the assets in the K2C accounts do not count against families for the purposes of determining eligibility for means-tested social safety net programs and financial aid.

Background

College Saving

Contributions to CSAs such as K2C must be considered against the backdrop of the daunting college savings prospects for most Americans. Fewer than half of all American families with children reported saving for college, and 38% of nonsavers reported being overwhelmed with the prospect of college financing (Sallie Mae, 2015). National surveys point to inadequate amounts of money as the biggest reason for the lack of college saving; even 45% of nonsavers with incomes greater than $100,000 per year identify insufficient resources as a barrier to saving for college (Sallie Mae, 2015). However, income is not the only factor that influences savings outcomes. Although high-income families tend to begin saving for college during kindergarten, middle- and low-income families are likely to wait until secondary school, leaving less time for savings to accrue (Hillman, Gast, & George-Jackson, 2015). In contrast, CSA programs such as K2C seek to activate families in saving for their children's college educations far earlier.

Family Contributions in Opt-In vs. Automatic or Universal CSAs

Since becoming fully phased in at all SFUSD elementary schools in 2012, K2C has provided a custodial Citibank savings account to every kindergartner enrolled in SFUSD. This structure makes the City of San Francisco the owner of the CSA, which shields families from savings limits in public assistance and financial aid programs. K2C's opt-out model removes all obligation for student or parental action to initiate the account. This feature is crucial because CSA programs often have struggled to enroll participants without such an automated process, but it also means that it is difficult to compare family contribution rates in K2C with savings rates in programs that require families to sign up to open accounts. In a model such as K2C, families who may have little to no interest in college saving or virtually no financial capacity to save are included in the total sample, whereas such a family would not likely even be considered in an opt-in CSA program. For example, 57% of the participants in the national

Savings for Education, Entrepreneurship, and Downpayment (SEED) CSA demonstration saved their own funds (Mason, Nam, Clancy, Kim, & Loke, 2010), but these families had selected into the college savings program. SEED programs were considerably smaller than K2C; most SEED sites provided extensive support to between 67 and 82 self-selected account holders (Sherraden & Stevens, 2010), compared with the thousands of children with K2C accounts in San Francisco. In Promise Indiana, which is administered in partnership with schools, 45% of the 1,424 accounts have seen family contributions (Lewis, Elliott, et al., 2016). New Mexico's Prosperity Kids CSA, with approximately 500 accounts held by mostly low-income Latino families, had a 29% savings participation rate as of December 2015 (Lewis, O'Brien, Elliott, Harrington, & Crawford, 2016). Other CSA programs provide accounts automatically but still require families to take action to initiate an account into which they can save. For example, approximately 30% of the families with automatic Harold Alfond College Challenge accounts in Maine opened their own 529 accounts and began saving (Lewis & Elliott, 2015). In SEED for Oklahoma Kids (SEED OK), after approximately 7 years of enrollment, 8% of the parents whose children were in the treatment group had money saved in a 529 college savings account in Oklahoma (Clancy, Beverly, & Sherraden, 2016; Clancy, Beverly, Sherraden, & Huang, 2016).

Contributions and Asset Accumulation in CSAs

Compared with other financial services, CSA programs serve a higher percentage of low-income families. The small deposits in many CSAs should be viewed, then, in light of savings constraints. Median quarterly savings in SEED, nationally, were $7, with an average net quarterly contribution of $30 per participant (Mason et al., 2010). In Michigan's SEED program, the average quarterly net savings were $19 (Loke, Clancy, & Zager, 2009). The average quarterly savings in SEED grew as the enrollment tenure lengthened, resulting in approximately $18 more in deposits per quarter (Mason, Nam, Clancy, Loke, & Kim, 2009); however, this effect tapered off somewhat across time. In Promise Indiana, participant deposits average $8 per month and $25 per quarter (Lewis, Elliott, et al., 2016), whereas in Prosperity Kids, in which 84% of the account holders are eligible for a free or reduced-price lunch, average quarterly contributions by savers were $31 (Lewis, O'Brien, et al., 2016).

Even modest deposits can contribute to substantial holdings across time when augmented by robust and progressive incentives. For example, in SEED OK, the average family contributions in parent-opened accounts for treatment children were $261 in 7 years, but the average value of Oklahoma 529 assets held by these children was $1,851, including the $1,000 initial seed plus investment earnings (Beverly, Clancy, Huang, & Sherraden, 2015). Accumulation in other children's savings interventions similarly underscores the significance of using levers other than family savings to catalyze asset building. In Michigan's SEED program, initial program deposits accounted for 53% of the total accumulation (Loke et al., 2009). Median accumulation across the SEED sites was $1,093; initial deposits accounted for approximately 50% of this figure (Mason et al., 2009). CSA incentives similarly account for 55% of the total balances in the Promise Indiana accounts (Lewis, Elliott, et al., 2016).

Factors Influencing CSA Saving

Quantitative and qualitative research has contributed to knowledge regarding the barriers to saving in CSAs and the strategies used to overcome these obstacles (Lewis, Elliott, et al., 2016; Lewis, O'Brien, et al., 2016). Interviews with mothers whose children have SEED OK accounts revealed widespread

financial constraints; inadequate income and high debt constrained saving (Gray, Clancy, Sherraden, Wagner, & Miller-Cribbs, 2012). These mothers reported a strong desire to save, but higher expenses and lower incomes combined to hinder deposits (Gray et al., 2012). The length of time until children will begin college can make college saving seem a less-than-urgent financial priority, particularly when other needs encroach on family budgets (Gray et al., 2012). In addition, information gaps, confusion about account features and rules, and language barriers (Gray et al., 2012) make it difficult for some parents to navigate financial institutions. Against this backdrop, CSA design can encourage family contributions and fuel overall accumulation. Institutional features may be particularly important, including restricted access to account balances (Curley, Ssewamala, & Sherraden, 2005; Lewis, O'Brien, et al., 2016; Wheeler-Brooks & Scanlon, 2009); direct deposit (Scanlon, Buford, & Dawn, 2009); and subsidies, including savings matches (Mason et al., 2009).

Although designed as progressive interventions, CSAs do not entirely equalize the college savings experiences of different populations. In the national SEED demonstration, Latinos, Native Americans, and African Americans had smaller deposits and less accumulation than White account holders (Mason et al., 2009), who in turn had less savings participation and asset accumulation than Asian account holders, although researchers urge some caution here because of the small number of Asians in the sample. Similarly, Michigan's SEED demonstration saw poorer savings participation among African Americans (Marks, Rhodes, Engelhardt, Scheffler, & Wallace, 2009), although SEED researchers asserted that unobserved characteristics related to the general financial positions of people of color likely explain most of this variance (Mason et al., 2009). Although multivariate analysis does not allow for the assertion of causality, those with college degrees also saved more in SEED, whereas unmarried parents saved less (Mason et al., 2009). Similarly, other evaluations have found that higher savers in incentivized programs were Caucasian, more highly educated, and homeowners (Grinstein-Weiss, Wagner, & Ssewamala, 2006). In SEED OK, children whose mothers are older and more educated have larger deposits (Nam, Hole, Sherraden, & Clancy, 2014), whereas larger household sizes are associated with reduced saving (Nam, Kim, Clancy, Zager, & Sherraden, 2013).

Purpose of the Study

The purpose of this study was to examine the contribution patterns of students given the K2C CSAs and understand how student- and school-level sociodemographic and academic characteristics relate to whether students' families contribute to their child's CSA. Specifically, this study addressed the following research questions:

1. To what extent do students' families contribute to their K2C CSAs and how do savings behaviors change over time?
2. For students with at least one contribution into their CSAs, how do savings behaviors (total account value, total contribution value, and number of contributions) differ among students from higher- and lower-poverty schools?
3. What student- and school-level characteristics are associated with whether a student has at least one contribution to his or her CSA?

4. How does the relationship between school characteristics and whether students have at least one contribution to their CSAs differ by the level of school poverty?

The findings from this study provide an understanding of how families contribute to the K2C CSAs. In addition, these findings may provide insight into program features that may influence savings behaviors. These findings are of particular interest to K2C administrators considering ways to enhance the CSA program and better support family participation in K2C; the findings also may be of interest to a broad audience interested in promoting savings behaviors and cultivating college-saver identities, particularly within populations less engaged with mainstream financial institutions.

Implementation of the K2C Program

The K2C CSA program was implemented in three phases across elementary schools in SFUSD between 2010–11 and 2012–13. In the 2010–11 school year, K2C implemented the first phase of CSAs for all kindergarten students in 17 pilot schools. K2C then added 18 additional schools in 2011–12 and 39 schools in 2012–13, thus covering all schools enrolling students in kindergarten within the district (Table 1). Each school, to date, has continued to participate in the K2C program. Today, all students in the district's kindergarten cohort receive a K2C account.

Table 1. Total Number of Schools

K2C Implementation Phase	Start of Program	Total Number of Kindergarten Cohorts	Total Number of Schools
Phase 1	2010–11	6	17
Phase 2	2011–12	5	18
Phase 3	2012–13	4	39
Total	—	—	74

A student's CSA value consists of multiple contributions and incentives. A contribution includes any CSA deposit made by a family member or a guardian into the child's account, and an incentive includes any funds added to the CSA by the K2C program to encourage college savings. K2C offers five primary incentives:

- **Seed money.** All K2C CSAs are seeded with an initial $50 investment. Students from low-income families (those who qualify for a free or reduced-price lunch) receive an additional $50 initial investment (i.e., $100 total) if the parent completes paperwork allowing the district to share this eligibility information.
- **Match deposits.** K2C matches the first $100 in family contributions to the CSA.
- **Growth amount.** Similar to a typical savings account, the total CSA value receives 0.01% interest per year.
- **Performance incentives.** All students in the district can receive a one-time $100 "Save Steady" bonus if their accounts see at least $10 in deposits per month for 6 consecutive months.
- **Pilot performance incentives.** K2C provides three additional incentives at select schools: (a) an attendance incentive, which provides $1 per week to students who attend school all 5 days during that week (piloted in three schools in 2013–14 and four schools in 2014–15); (b) K2C scholarships, which provide between $500 and $1,500 to schools, to be divided among students selected, usually based on merit (piloted in 18 schools in 2015–16); and (c) a bank field trip incentive, which provides $5 to all students who participated in a bank field trip (piloted in 11 schools in 2015–16).

A student's family can withdraw its own contributions up to three times without penalty. The incentive values continue to accumulate over time and may not be withdrawn, but they can be transferred to postsecondary educational institutions to cover education costs. Incentive contributions are returned to K2C if the CSA is closed prior to high school graduation or if a student does not attend a postsecondary educational institution by age 25.

Methods

Data Sources

To examine the four research questions, K2C provided the research team with transaction records for all SFUSD students with an open CSA as of July 7, 2016. The research team also collected publicly available data on school characteristics, which were linked to students' contribution records.

K2C Account Transaction Records

CSA transaction records included all transactions made between the date the account was opened for the student and July 7, 2016 (the date when data were collected by K2C). All transactions were listed as either a contribution or an incentive. A contribution included any deposit in the student's CSA made by a family member or a guardian. An incentive included any additional funds added to the CSA by the K2C program to encourage college savings (e.g., matched funds for contributions up to $100 per year). The records also included the student's school when the CSA was opened, the year the student received his or her CSA, and demographic information, specifically student ethnicity (Hispanic, White, Black, Asian, or other) and student home language (English, Spanish, Chinese, or other).

School-Level Data

Publicly available school-level data published by SFUSD and the state of California were collected for all 74 schools. SFUSD data included the number of students enrolled in each school, the school's racial/ethnic composition (the percentage of students identified as Hispanic/Latino, White, African American, Asian, American Indian, Filipino, Pacific Islander, or multiracial), the percentage of students who are English learners, and the percentage of students receiving special education services (SFUSD, 2014). School-level data from the California Assessment of Student Performance and Progress included the percentage of students receiving free or reduced-price lunch, the truancy rate, and the percentage of students who met standards in mathematics and English language arts (California Department of Education, 2015).

Participants

As of July 7, 2016, 21,617 students had an open K2C CSA, and their accounts ranged from being in their first to sixth year of ownership (Table 2). Because students received their CSA when they began kindergarten, CSAs in their sixth year belonged to students who were in the first kindergarten cohort of Phase 1 schools (receiving a CSA in the 2010–11 school year). CSAs in their fifth year belonged to students who were in the second kindergarten cohort of Phase 1 schools and the first kindergarten cohort of Phase 2 schools (receiving a CSA in the 2011–12 school year). CSAs in their fourth year belonged to students who were in the first kindergarten cohort of Phase 3 schools, the second kindergarten cohort of Phase 2 schools, and the third kindergarten cohort of Phase 1 schools, and so on.

Table 2. Total Number of Students With Active CSAs

Age of CSA (Year)	Number of Active CSAs
1	5,412
2	4,728
3	4,378
4	4,316
5	1,890
6	893
Total	**21,617**

Note. The age of the account is the difference between the CSA open date and July 7, 2016 (the date the data were acquired). The age of the CSA in days was then transformed into years by dividing by 365 days and rounding up to the nearest whole number. Thus, accounts that are 1 to 365 days old are in their first year, accounts that are 366 to 730 days old are in their second year, and so on.

Of the 21,617 students with active CSAs, the largest percentage of students was Asian (31%), followed by Hispanic (28%), White (20%), and Black (10%). Approximately half the students spoke English as their primary language (49%), followed by Spanish (22%) and Chinese (18%; Table 3). Given that the CSA was offered to all kindergartners in the district across the three pilot phases, we can assume that these demographics are reflective of the kindergarten population as a whole. However, assignment of schools to Phase 1, 2, or 3 was not random; consequently, student and school-level characteristics vary across the phases. For example, schools in Phase 1 had a larger percentage of students who were eligible for free or reduced-price lunch than schools in Phases 2 and 3 (80% in Phase 1, 71% in Phase 2, and 54% in Phase 3) and a higher truancy rate (42% in Phase 1, 28% in Phase 2, and 28% in Phase 3; Table 4).

Table 3. Demographic Characteristics of Students With Active CSAs

	Overall	Phase 1 Schools	Phase 2 Schools	Phase 3 Schools
Number of students	21,617	5,763	5,014	10,880
Number of cohorts	6	6	5	4
Students' ethnicity				
Asian	31%	29%	30%	33%
Hispanic	28%	36%	33%	21%
White	20%	11%	18%	26%
Black	10%	14%	9%	9%
Other	10%	11%	10%	10%
Students' home language				
English	49%	41%	45%	55%
Spanish	22%	30%	28%	15%
Chinese	18%	17%	18%	18%
Other	11%	13%	9%	11%

Note. N = 21,617. Data come from K2C CSA student records.

Table 4. Demographic Characteristics of Schools

	Overall		Phase 1 Schools		Phase 2 Schools		Phase 3 Schools	
	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*
Number of students enrolled	384.6	149.3	339.5	160.8	324.0	149.5	432.2	130.1
Student ethnicity								
Percentage Asian	33%	16.4	35%	16.0	31%	16.6	32%	16.8
Percentage Hispanic	30%	26.1	36%	29.0	39%	30.2	23%	20.9
Percentage White	49%	19.1	40%	18.7	49%	18.9	52%	18.7
Percentage Black	6%	7.2	9%	9.8	6%	7.1	5%	5.6
Percentage of English learners	31%	17.4	37%	19.8	38%	15.7	26%	15.5
Percentage in special education	11%	4.2	12%	3.9	10%	5.0	11%	3.9
Percentage eligible for free or reduced-price lunch	64%	23.8	80%	18.6	71%	21.0	54%	22.5
Truancy rate	31%	18.1	42%	21.1	28%	17.6	28%	15.3

Note. SD = standard deviation. *N* = 74. The student ethnicity categories in the data were not mutually exclusive in the school-level demographic files. Data come from SFUSD, October 7, 2015, and the California Assessment of Student Performance and Progress, 2014–15.

Outcome Measures

The outcomes of interest were five measures of CSA engagement:

- **Any CSA contribution.** A binary indicator for whether a student or his or her family made at least one contribution to the CSA.
- **Number of contributions.** A count of the number of contributions made to the student's CSA.
- **Total contribution value.** The total value of all contributions made to the student's CSA.
- **Average contribution value.** The average value of contributions made to the student's CSA.
- **Total CSA value.** The total CSA value in dollars (including both contributions and incentives).

All outcomes were measured as of July 7, 2016. The research team calculated each outcome both cumulatively and by the age of the CSA. The cumulative figures include all contributions that were made to a CSA for all years that the account was opened, as of a given year. For example, Year 3 figures include all contributions that were made in Years 1, 2, and 3. The figures that present data by the age of the CSA include only those contributions that were made within that year. For example, Year 3 figures include only those contributions made in Year 3. The cross-sectional analysis contributes to an understanding of families' behavior within a given year. For example, do families contribute more during the first year than they do in the fourth year? The cumulative analysis contributes to an understanding of how savings grow across time. For example, does the percentage of students whose families contribute to a CSA increase steadily as the accounts age?

Analytic Approach

Research question 1 (To what extent do students' families contribute to their K2C CSAs and how do savings behaviors change over time?) was addressed first by calculating the percentage of students with at least one contribution to their account. For students with at least one contribution, the research team examined the frequency of contributions and the average amount that families contributed, both cross-sectionally (by age of account) and cumulatively.

Research question 2 (For students with at least one contribution into their CSAs, how do savings behaviors [total account value, total contribution value, and number of contributions] differ among students from higher- and lower-poverty schools?) was addressed both descriptively and then with regression models to control for underlying differences between the two types of schools and the students within them. Both sets of analyses were conducted on a subsample of students meeting two criteria: (a) had a CSA in at least its fourth year and (b) made one or more contributions in the first 4 years.[1] This subsample was used so that changes in savings behaviors could be examined within a consistent sample of known users across time (i.e., all students in the subsample had access to the account across 4 years and contributed to the account at least once). These differences were examined for three savings behaviors: total CSA value, total contribution value, and total number of

[1] The overall subsample includes 1,395 students (6% of all CSAs) representing 72 schools (97%); of this sample, 544 students (39% of the students) attended one of 29 higher-poverty schools (40% of schools).

contributions. Descriptive analyses examined differences in the average outcomes during the first through fourth years of the account's existence between students in higher- and lower-poverty schools. Schools with 75% or more of students eligible for free or reduced-price lunch during the 2014–15 school year were considered higher-poverty and schools with less than 75% of students eligible for free or reduced-price lunch were considered lower-poverty.[2]

Next, multilevel regression models were conducted to examine differences in savings behaviors—total CSA value, total contribution value, and total number of contributions—across time between students in higher- and lower-poverty schools, controlling for underlying differences in characteristics between the two types of schools and the students within them. All regression models included a binary indicator for whether a school was a higher-poverty school; a set of binary indicators for the account age year that the observation took place (Year 2 through Year 4, with Year 1 as a reference point); and a binary interaction indicator between higher-poverty status and the year of the observation, which allowed for differences in the influence of time between students in higher- and lower-poverty schools to be examined. Models also included school random effects to account for the nesting of students within schools (i.e., the assumption that the relationship between student characteristics and savings behaviors are more correlated within schools than between schools).

Research question 3 (What student- and school-level characteristics are associated with whether a student has at least one contribution to his or her CSA?) was first addressed descriptively by examining differences in the percentage of students with at least one contribution made to their CSA by student- and school-level characteristics. Next, a multilevel logistic regression model was conducted to examine the relationship between each student- and school-level characteristic and the likelihood of a student having at least one CSA contribution while simultaneously taking into account the relationship between other student- and school-level characteristics and savings. The student-level characteristics included in the model were binary indicators for student ethnicity and home language. The school-level characteristics examined were continuous variables for truancy rate; the percentage of students who are Black, Hispanic, and White; the percentage of students qualifying for a free or reduced-price lunch; and the percentage of students proficient in mathematics. The model also included school random effects to account for the nesting of students within schools.[3]

To address research question 4 (How does the relationship between school characteristics and whether students have at least one contribution to their CSAs differ by the level of school poverty?), the research team conducted a series of multilevel logistic regressions. The models examined whether the student had at least one CSA contribution based on each available school-level characteristic, the dichotomous variable for higher-poverty, and interactions between higher-poverty and each school-level characteristic. Each school-level characteristic was transformed into a binary

[2] These definitions are consistent with Title I funding definitions of higher-poverty schools.

[3] Prior to finalizing the school-level characteristics used, we conducted a series of multilevel logistics regressions, regressing the likelihood of having at least one contribution separately on each available school-level characteristic, controlling for student-level characteristics (i.e., ethnicity, home language, and age of account). Three school-level characteristics—truancy rate, the percentage of Black students, and mathematics proficiency—were statistically significantly related to a family's likelihood to contribute to an account. Therefore, each indicator was retained in the final model.

indicator for whether a school was above the sample median for that variable. The models also included student-level demographics and school random effects.

Findings

In the following subsections, we present the findings for each research question examined in the study.

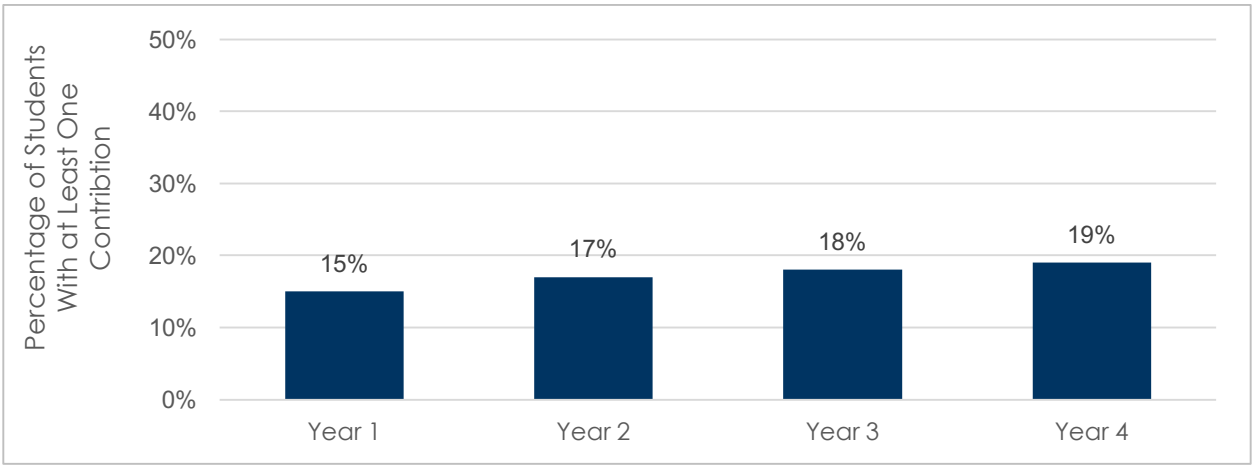
Research question 1: To what extent do students' families contribute to their K2C CSAs and how do savings behaviors change over time?

Of the 21,617 students in the analytic sample, 18% of the students (n = 3,963) had at least one contribution in their accounts. For most students with at least one contribution (80%), the first contribution was made during the first year that the account was open (i.e., the student's kindergarten year). However, we observed more younger accounts than older accounts in the sample because although all accounts are observable in the first year, an increasingly smaller percentage of accounts can be observed with each additional year of maturity. Examining only those accounts that were open for 3 years or more (n = 11,477), 18% have at least one contribution made to their account by the third year of the account being opened, and for 78% of those accounts, the first contribution was made during the first year.[4]

Fifteen percent of all CSAs had at least one contribution during the first year the account was opened. For older accounts, that percentage increases slightly, such that 19% of the CSAs in at least their fourth year of being opened have one or more contributions made within the first 4 years (Figure 1). Thus, an additional 4% of students received a first contribution during years 2 through 4. Likewise, the percentage of CSAs with contributions in a given year drops to between 8% and 10% in the subsequent 3 years (Figure 2).

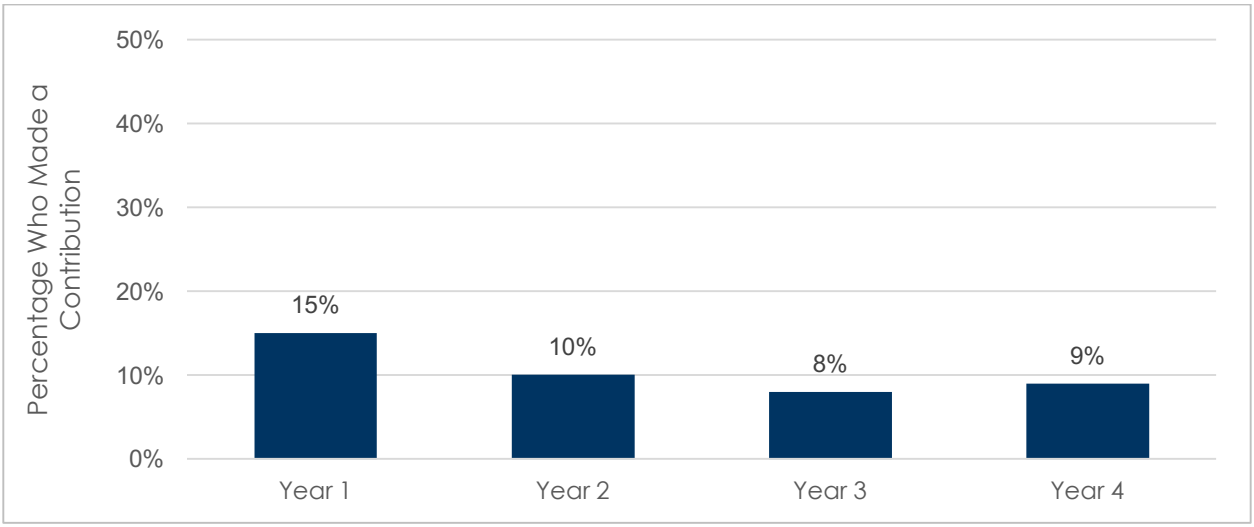
[4] The first accounts were opened in March 2011, and the oldest accounts are 6 years old. This report presents data only for the first 4 years of accounts because accounts that are in the fifth and sixth year include schools that were in the first and second phases. As a result, the data are not comparable. Appendix A presents data for all years.

Figure 1. Percentage of Students With at Least One Contribution, by Age of CSA, Cumulative



Note. A total of 21,617 students have a CSA that is at least 1 year old, 16,205 students have a CSA that is at least 2 years old, 11,477 students have a CSA that is at least 3 years old, and 7,099 students have a CSA that is at least 4 years old.

Figure 2. Percentage of Students With at Least One CSA Contribution During Each Year, by Age of CSA



Note. A total of 21,617 students have a CSA that is at least 1 year old, 16,205 students have a CSA that is at least 2 years old, 11,477 students have a CSA that is at least 3 years old, and 7,099 students have a CSA that is at least 4 years old.

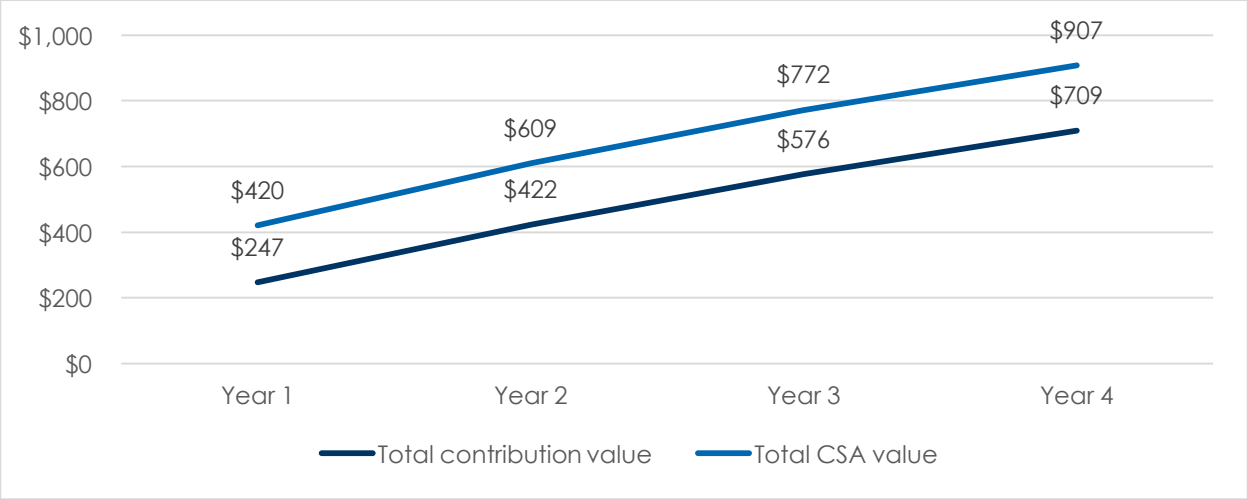
The average total CSA value gradually increases as the CSAs age, from $112 in the first year to $226 in the fourth year (Figure 3). Similarly, when focusing only on students with at least one contribution, the average contribution value and the average total value increased as the CSA ages (from $247 in the first year to $709 in the fourth year and from $420 in the first year to $907 in the fourth year, respectively; Figure 4).[5]

[5] Median values are presented in Appendix B.

Figure 3. Average Total CSA Value by Age of CSA—All CSAs

Note. A total of 21,617 students have a CSA that is at least 1 year old, 16,205 students have a CSA that is at least 2 years old, 11,477 students have a CSA that is at least 3 years old, and 7,099 students have a CSA that is at least 4 years old.

Figure 4. Average Total Contribution Value and Total CSA Value, by Age of CSA—All CSAs With a Contribution

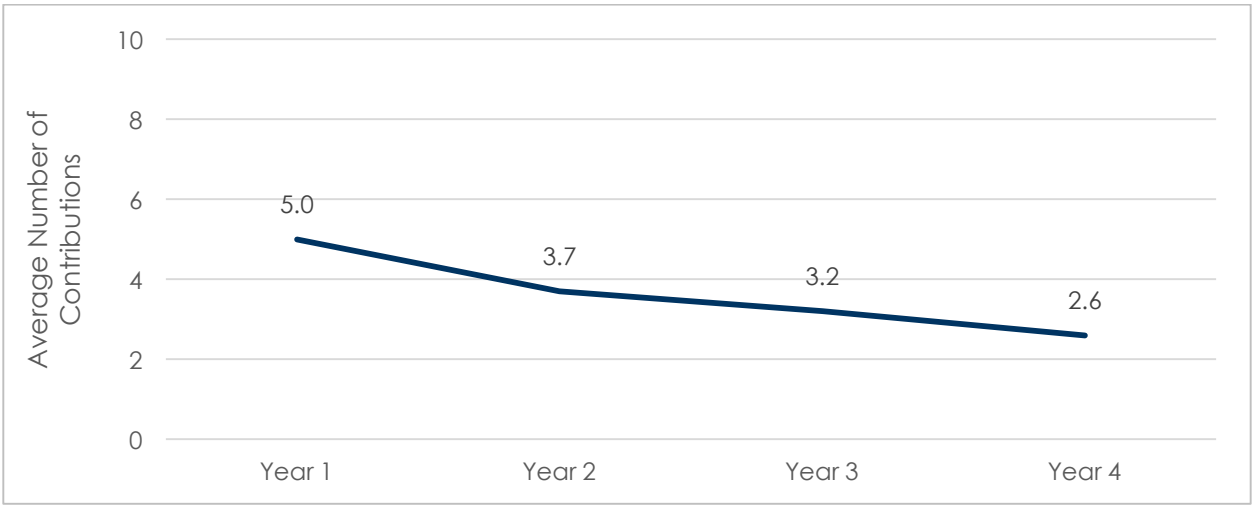


Note. Of students with at least one CSA contribution, 3,184 students have a CSA that is at least 1 year old, 2,768 students have a CSA that is at least 2 years old, 2,048 students have a CSA that is at least 3 years old, and 1,365 students have a CSA that is at least 4 years old.

Of students with at least one CSA contribution, the largest number of contributions made each year, on average, occurred during the first year that a student had a CSA (mean = 5.0). The average number of contributions made each year gradually declined across time, from 3.7 in the second year of the CSA to 2.6 in the fourth year of the CSA (Figure 5). Similarly, the average value of total contributions gradually declined across time, from $247 in the first year to $148 in the fourth year (Figure 6). The average individual contribution also was greatest during the first year ($36).

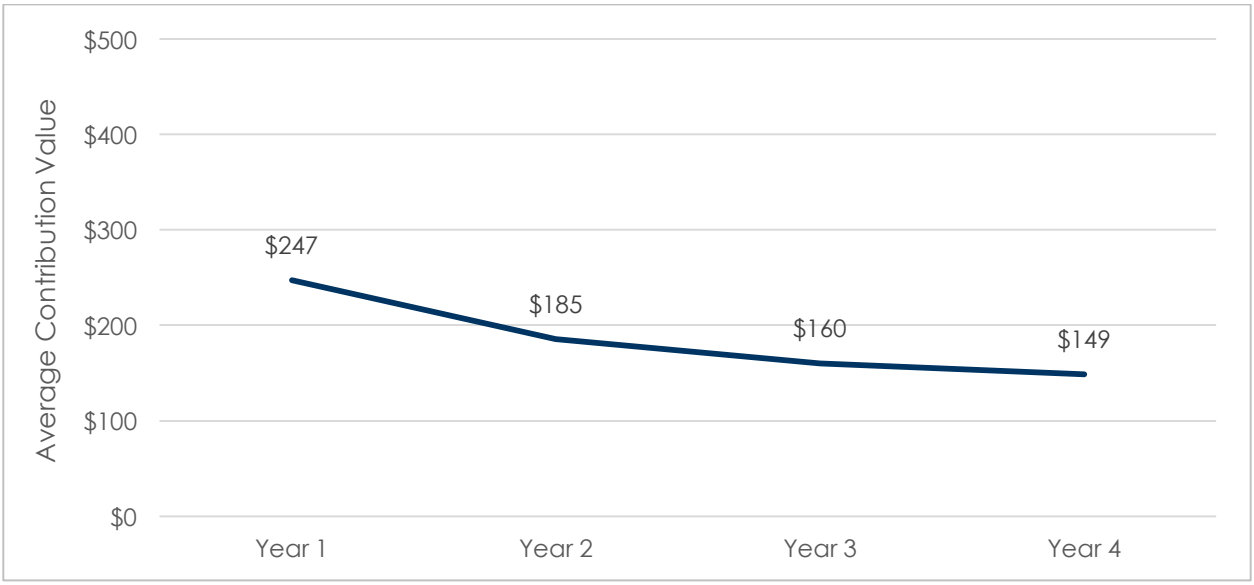
On average, families made smaller contributions as the CSA aged, from $16 during the second year to $13 in the fourth year (Figure 7).

Figure 5. Average Number of Contributions Made Each Year, by Age of CSA



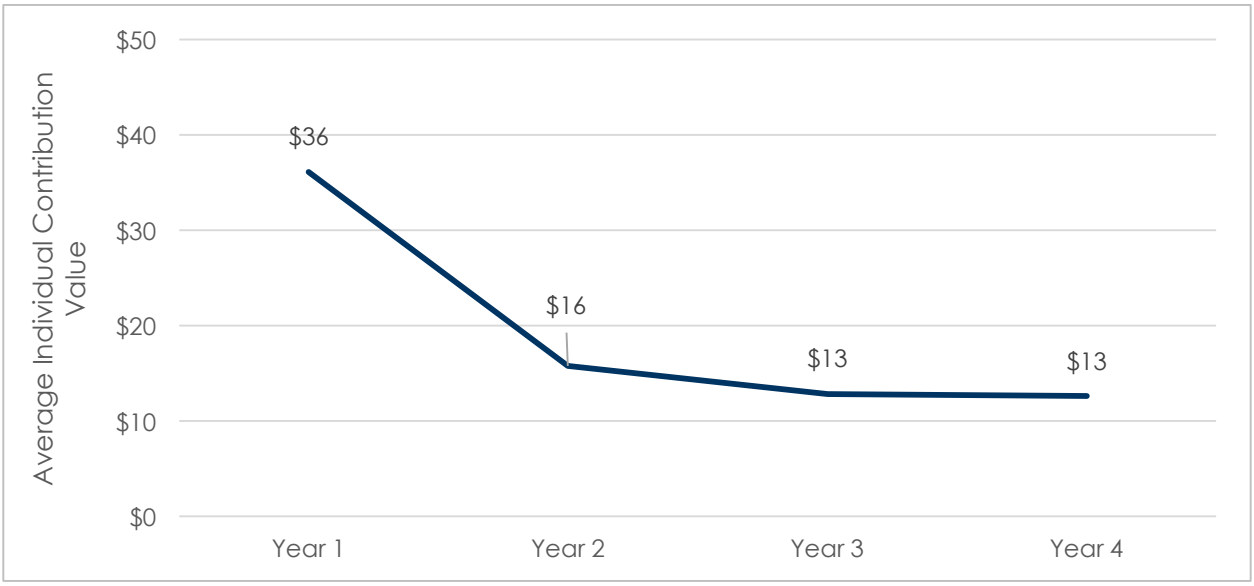
Note. Of students with at least one CSA contribution, 3,184 students have a CSA that is at least 1 year old, 2,768 students have a CSA that is at least 2 years old, 2,048 students have a CSA that is at least 3 years old, and 1,365 students have a CSA that is at least 4 years old.

Figure 6. Average Value of Total Contributions Made Each Year, by Age of CSA



Note. Of students with at least one CSA contribution, 3,184 students have a CSA that is at least 1 year old, 2,768 students have a CSA that is at least 2 years old, 2,048 students have a CSA that is at least 3 years old, and 1,365 students have a CSA that is at least 4 years old.

Figure 7. Average Value of an Individual Contribution Made Each Year, by Age of CSA



Note. Of students with at least one CSA contribution, 3,184 students have a CSA that is at least 1 year old, 2,768 students have a CSA that is at least 2 years old, 2,048 students have a CSA that is at least 3 years old, and 1,365 students have a CSA that is at least 4 years old.

Research question 2: For students with at least one contribution into their CSAs, how do savings behaviors and outcomes (total account value, total contribution value, and number of contributions) differ among students from higher- and lower-poverty schools?

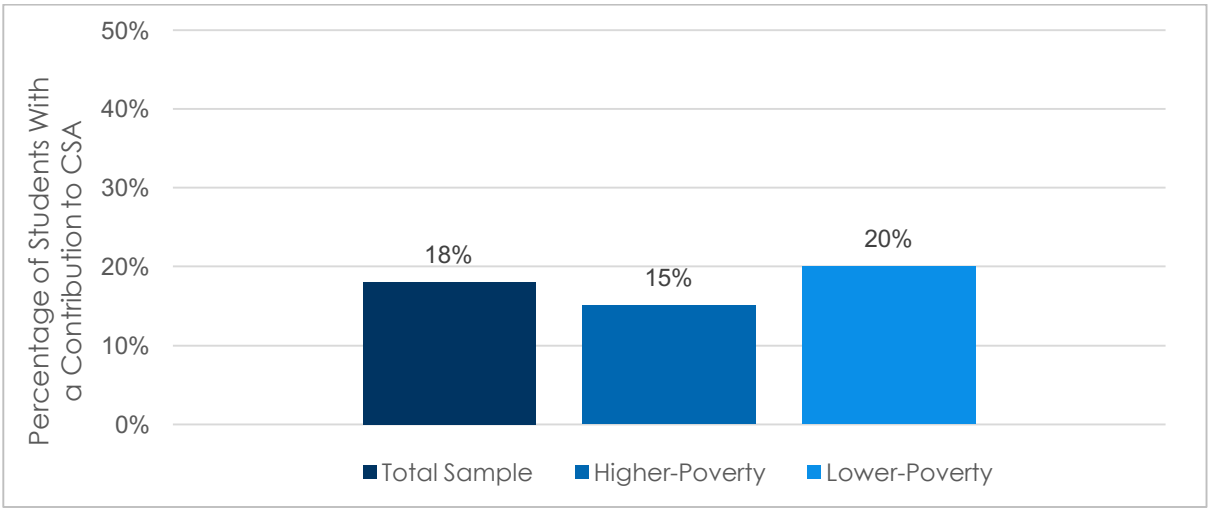
The extent to which savings behaviors differ between students in higher- and lower-poverty schools is presented in two ways—first descriptively and second with regression models to control for underlying differences between the two types of schools and the students within them.

Although family-level poverty data could not be obtained for students and families in our sample, school-level poverty might reflect the poverty status of families in the schools because low-income families are more likely to attend higher-poverty schools.

Descriptive Analyses

Overall, students in higher-poverty schools were less likely to have a contribution to the CSA than those in lower-poverty schools. Fifteen percent of the students in higher-poverty schools had a CSA contribution, compared with 20% of students in lower-poverty schools (Figure 8).

Figure 8. Percentage of Students With a Contribution to CSA in Higher-Poverty and Lower-Poverty Schools



Note. The total sample includes 74 schools and 21,617 students. Thirty of those schools and 8,983 students are categorized as higher-poverty, and 44 schools and 12,634 students are categorized as lower-poverty.

Among students with at least one contribution and an account in at least its fourth year, students in higher-poverty schools had fewer total contributions made, and their total contribution values and total account values were smaller than those of students in lower-poverty schools. These differences began in Year 1 and accumulated during the 4 years. By Year 4, students in higher-poverty schools had a mean contribution total of approximately $539 compared with a mean contribution total of $793 for students in lower-poverty schools. Students in higher-poverty schools had a mean total account value of approximately $725 compared with $994 for their counterparts in lower-poverty schools (Appendix C, Table C1).

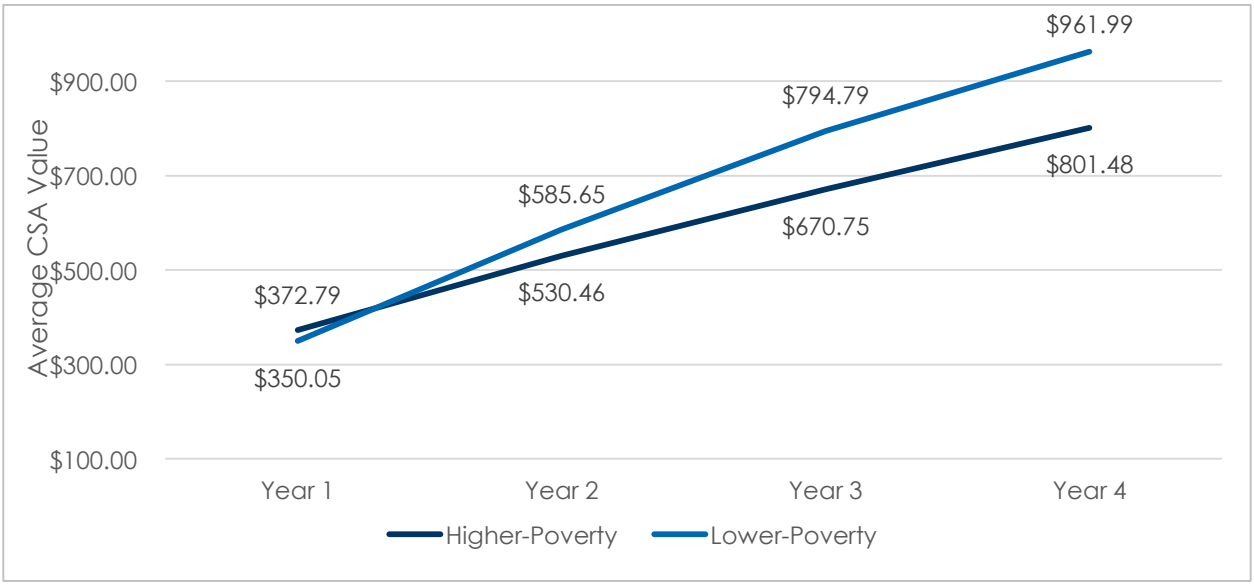
Regression Analyses

Higher- and lower-poverty schools, as well as the students who attend such schools, differ in ways that could influence their savings behavior.[6] The regression models found that among students with at least one contribution and an account in at least its fourth year of existence, for those students enrolled in higher-poverty schools, the total number of contributions, the total contribution value, and the total account value increased more slowly across time than for students in lower-poverty schools. However, these differences were not statistically different until Year 3 for total number of contributions and Year 4 for the total contribution value and total account value. Appendix C, Table C2 presents the statistical findings for each outcome.

Figures 9–11 show the means for each outcome across time: average CSA value, total contribution value, and number of contributions.

[6] Higher-poverty schools have more Hispanic students than lower-poverty schools (43% vs. 17%), more Black students (14% vs. 8%), and fewer White students (5% vs. 31%). Higher-poverty schools also have a higher truancy rate than lower-poverty schools (39% vs. 26%). Students in higher-poverty schools score lower on mathematics proficiency tests than students in lower-poverty schools (30% proficient vs. 56% proficient).

Figure 9. Total Account Value, by School Poverty Status and Year (Adjusted Means)



Note. The adjusted means represent the average mean for all students who fit within a category while accounting for all other student- and school-level characteristics in the model. For example, in Figure 9, on average, students from higher-poverty schools had $801 in their accounts compared with $891 for students in lower-poverty schools when controlling for student- and school-level characteristics.

Figure 10. Total Contribution Value, by School Poverty Status and Year (Adjusted Means)

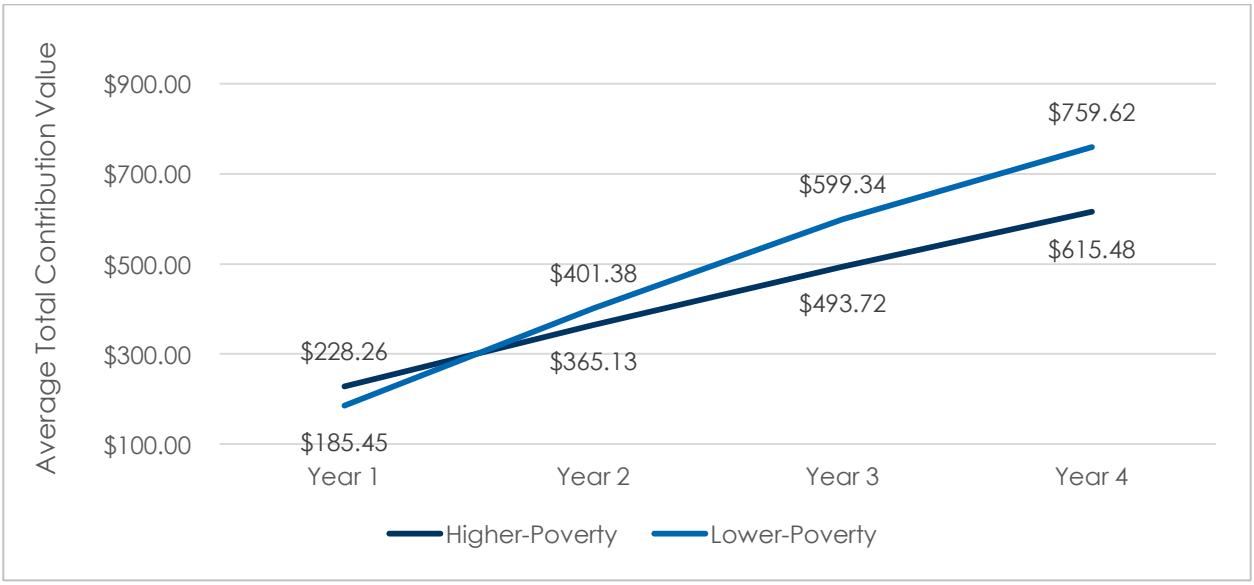
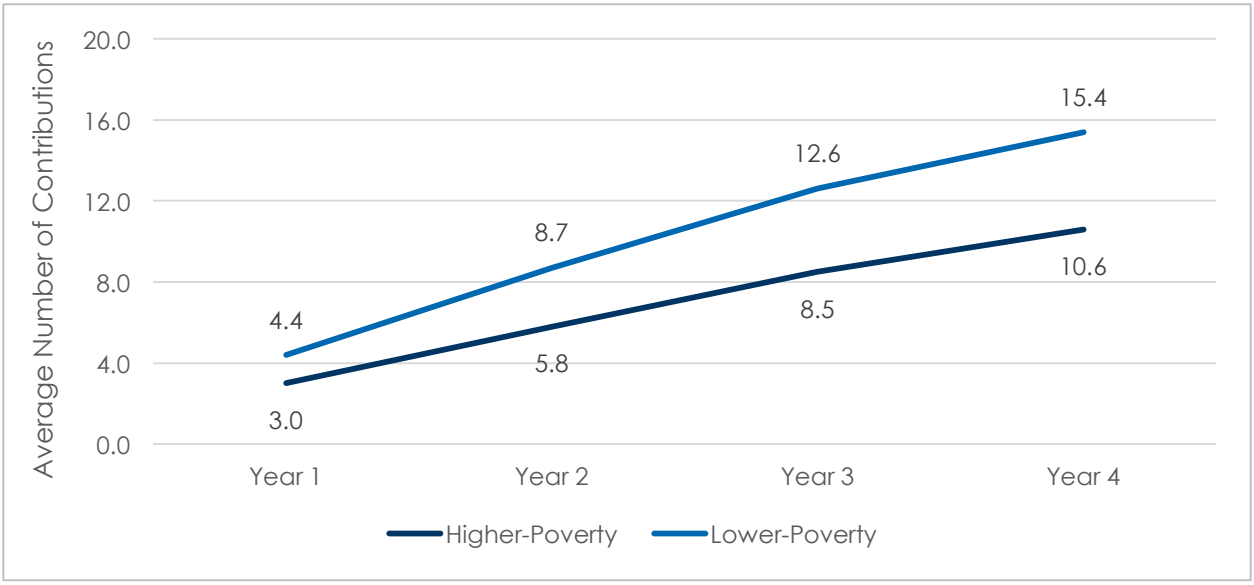


Figure 11. Number of Contributions, by School Poverty Status and Year (Adjusted Means)



Research question 3: What student- and school-level characteristics are associated with whether a student has at least one contribution to his or her CSA?

Differences in the percentage of students with a contribution are presented in two ways: first descriptively and second with regression models that simultaneously take into account the relationship between student- and school-level variables.

Descriptive Analyses

The percentage of students with at least one CSA contribution differed by student demographic characteristics. Asian students were the most likely to have a CSA contribution (27%), followed by White students (19%), Hispanic students (13%), and Black students (8%). Students whose home language is Chinese also had the highest rate of having at least one CSA contribution (30%).

The percentage of students with at least one CSA contribution also differed by school characteristics. Twenty-two percent of the students in schools with a low truancy rate had a least one contribution to their CSA, whereas the contribution rate was 14% in schools with a higher truancy rate. Similarly, the percentage of students with at least one contribution was higher in schools with a higher percentage of students who are proficient in mathematics (22%) compared with schools with a lower percentage of students who are proficient in mathematics (15%) and in lower-poverty schools (20%) versus higher-poverty schools (15%). Students in schools with a higher percentage of Asian students also were more likely to have at least one CSA contribution (21%) than students in schools with a higher percentage of Hispanic students (15%) or a higher percentage of Black students (15%; Table 5). Because these analyses are descriptive and do not control for other student- or school-level characteristics, they should be interpreted with caution.

Table 5. Percentage of Students With a Contribution, by Student and School Demographic Characteristics

	Percentage With a Contribution	*N*
Student Level		
Student ethnicity		
Asian	27%	6,416
Hispanic	13%	5,688
White	19%	4,137
Black	8%	2,139
Student home language		
English	17%	10,599
Spanish	13%	4,795
Chinese	30%	3,875
School Level		
Lower-truancy	22%	11,007
Higher-truancy	14%	10,610
Lower-mathematics proficiency	15%	10,205
Higher-mathematics proficiency	22%	11,412
Lower-poverty	20%	12,634
Higher-poverty	15%	8,983
Higher-Asian	21%	10,471
Higher-Hispanic	15%	10,841
Higher-Black	15%	12,371

Regression Analyses

Many of the student and school characteristics examined are related to the likelihood of having at least one CSA contribution and related to each other. The findings from the regression model were similar to those of the descriptive analyses. Asian students were statistically more likely to have a contribution than were White students, whereas Hispanic and Black students were less likely than White students to have a contribution. Students who speak Chinese at home were statistically more likely to have at least one contribution than students who speak English at home. Similarly, the racial makeup of a school is related to the likelihood that students had at least one contribution to their CSA. The greater the percentage of Black or Hispanic students in the school, the less likely the student is to have at least one contribution, regardless of the student's own ethnicity (Table 6).

Some caution is needed in interpreting these results. For example, these models are limited to the data available. Of note, poverty data were available only at the school level. Although students from low-income families in general are more likely to attend higher-poverty schools, the research team cannot determine whether the students who have at least one contribution are from low-income families.

Table 6. Likelihood That a Student Had a CSA Contribution, by Student- and School-Level Characteristics

	Odds Ratio	Standard Error	*p* Value
Student Level (*N* = 21,617)			
Age of account (days)	1.00	0.00	<.001
Student ethnicity (%)			
Asian	1.17	0.08	.015
Hispanic	0.77	0.06	.001
Black	0.48	0.05	<.001
Other	0.78	0.06	.002
Missing	1.39	0.11	<.001
Student home language (%)			
Spanish	1.02	0.08	.829
Chinese	1.16	0.07	.022
Other	0.91	0.06	.166
Missing	3.04	1.39	.015
School Level (*N* = 74)			
Truancy rate	0.99	0.01	.198
Hispanic (%)	0.29	0.13	.005
Black (%)	0.01	0.01	<.001
Proficiency in mathematics (%)	0.99	0.01	.189
Free or reduced-price lunch (%)	1.00	0.00	.462

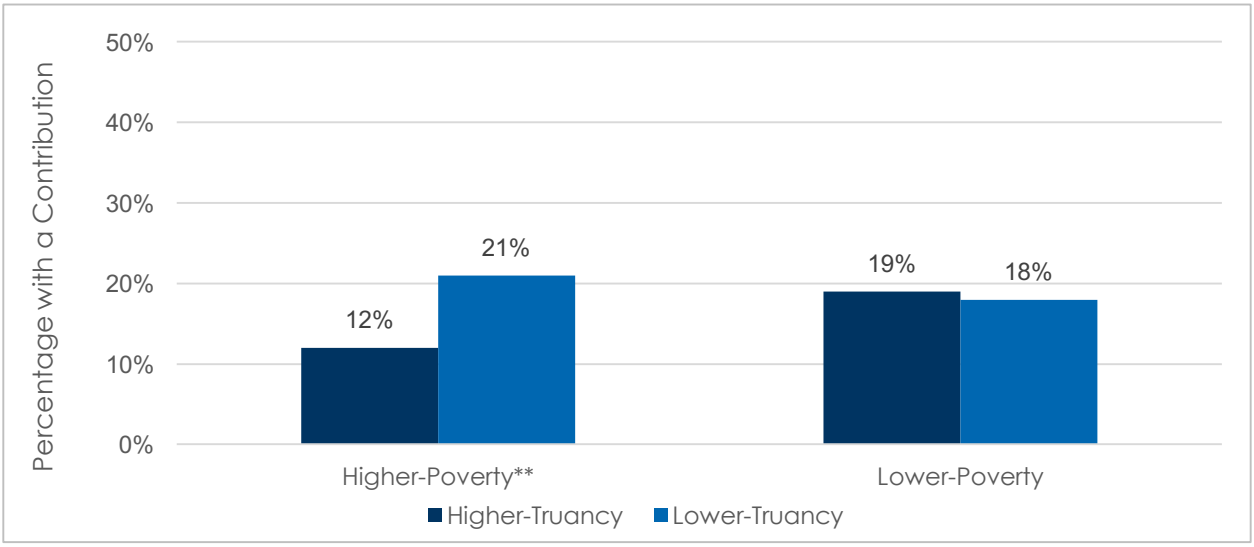
Note. The values in this table represent the odds ratios for each characteristic included in a two-level multilevel logistic model relative to the reference group, White and English-speaking families, controlling for the age of a student's account. School-level random effects also were included in the model. The odds ratio indicates the likelihood of a CSA contribution for a given category. For example, with the dichotomous variables, an odds ratio of 1 means that there was an equal likelihood of a CSA contribution being made (e.g., home language Spanish compared with home language English), an odds ratio less than 1 means it was less likely a CSA contribution was made (e.g., student ethnicity Black compared with student ethnicity White), and an odds ratio greater than 1 means it was more likely a CSA contribution was made (e.g., home language Chinese compared with home language English).

Research question 4: How does the relationship between school characteristics and whether students have at least one contribution to their CSAs differ by the level of school poverty?

School characteristics could be related to whether students' families contributed to their CSA, depending on the level of poverty within the school. For students in higher-poverty schools and lower-truancy schools, the percentage of students with at least one contribution was almost twice as large as the percentage of students in schools with higher-poverty and higher-truancy (21% vs. 12%), when accounting for student ethnicity and home language. However, for students in lower-poverty schools, the percentage of students with at least one contribution within lower- and higher-truancy schools was not statistically different (18% and 19%, respectively; Figure 12). Although we cannot determine whether having a CSA encourages greater attendance or whether students with greater

attendance are more likely to save for college, the truancy rate is related to the likelihood of students having at least one contribution to their CSA, but only in higher-poverty schools.

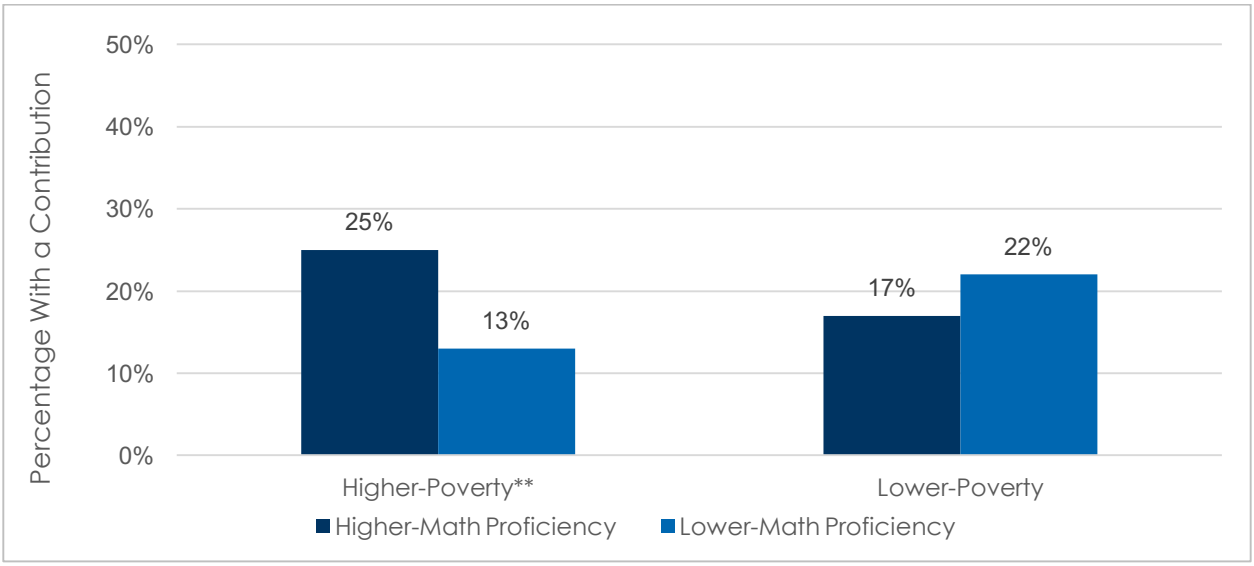
Figure 12. Percentage of Students With a CSA Contribution by School-Level Poverty and Truancy Rates (Adjusted Means)



** $p < .01$.

Similarly, taking into account differences in student ethnicity and home language, for students in higher-poverty schools and with higher-mathematical proficiency, the percentage of students with at least one contribution was almost twice the percentage of students in schools with lower-mathematical proficiency (25% vs. 13%). However, for students in lower-poverty schools, the percentage of students with at least one contribution in higher-mathematical proficiency and lower-mathematical proficiency schools was not statistically different (22% and 17%, respectively; Figure 13).

Figure 13. Percentage of Students With a CSA Contribution by School-Level Poverty and Mathematical Proficiency Rates



** $p < .01$.

We also tested other school-level characteristics, including teacher-to-student ratio, enrollment size, the percentage of students proficient on the English language arts examination, the percentage of students fluent in English, and the percentage of students who are English learners. No other school-level characteristics moderated the likelihood of contributions in higher- or lower-poverty schools. See Appendix D for output from all other models.

Limitations

Although the findings provide a greater understanding of the association between student- and school-level sociodemographic and academic characteristics and student K2C CSA activity, two limitations need to be considered when interpreting these results.

Few student-level characteristics were available in the K2C records, most notably, student poverty status. In addition to student account information, this analysis was limited to only two student-level characteristics: student home language and student ethnicity. To understand more about the influence of sociodemographic and academic characteristics, the research team used school-level characteristics from SFUSD as a proxy for student-level characteristics. Inclusion of these data assumes that students engaging in K2C CSAs represent the school population at large or are influenced by school characteristics, which is similar to students who do not engage in the program. The variable most notably missing is student-level poverty, which is only available for those students whose parents have signed a release form authorizing this data sharing. This is a particular limitation given K2C's interest in encouraging college savings for populations who typically do not save for college. For this analysis, the research team assumed that students from low-income families generally attend higher-poverty schools; however, we could not determine whether the students with CSA contributions in higher- and lower-poverty schools actually varied on the individual level. Future research should explore the extent to which student- and school-level poverty influence the likelihood that families make contributions to their child's CSA.

These results summarize associations between characteristics, but this study cannot ascertain causality. For example, for higher-poverty schools, truancy rates and mathematics proficiency appear to be associated with greater CSA participation—greater than or similar to participation in lower-poverty schools. Both of these factors may influence one another, particularly given the open enrollment procedures employed by the SFUSD, which may mean that parents exercise greater agency in school placement than would otherwise be likely in a public school system. For example, low-income families interested in sending their kids to college might have selected schools with better achievement. Conversely, because their kids are in schools with better achievement, parents may see their child as more capable of going to college. Given the available data, the research team cannot conclude the extent to which these dynamics may influence families' experiences with both their children's schools and the K2C CSA program.

Discussion

This study examined the association between deposit activity into the K2C CSA and student- and school-level sociodemographic and academic characteristics. Two findings from the analysis of the first 6 years of San Francisco's K2C program are particularly noteworthy. First, this analysis indicates that the initial enrollment year, at kindergarten, is the most vigorous in terms of frequency and volume of family contributions. This finding suggests that the point of account opening may activate families' thinking about saving for their children's education within the K2C program. This insight is particularly meaningful because the K2C structure does not require parents to take any action to initiate their children's K2C account, yet the period after account opening is still associated with greater family deposit activity. In addition, the family deposits made in this first year compare favorably with average deposits made by savers in some other CSA programs (see Loke et al., 2009; Mason et al., 2010); this finding suggests that families in K2C are summoning comparative savings engagement as early in their K2C account ownership as other programs. Second, although there are gaps in the contribution behavior of children in higher- and lower-poverty schools, after adjusting for observable differences, these gaps do not become statistically significant until the second or third year of account ownership. Similarly, gaps in asset accumulation in K2C do not widen until Year 3. Taken together, particularly against the backdrop of college saving in general and saving within other CSA programs in particular, these findings suggest that universal, automatic, and progressively seeded CSAs may help to mitigate some of the disadvantages that families and communities in poverty face as they seek to save for postsecondary education.

Contribution Behaviors

For more than three fourths of the students, the family's first contribution occurred during the first year the account was opened. On average, families contributed the largest amount of money during the first year of having a CSA, and the average size of any individual contribution made by families was largest during this year. Moreover, subsequent family contributions were more likely to occur during the account's inaugural year. As described, the overall savings rate observed in K2C should be considered in light of the truly universal account provision in this CSA model. Although other CSA programs have sometimes evidenced higher rates of family contributions, these models first require that families signal their interest in college saving by opening an account. For example, in Promise Indiana, although 45% of the accounts have family contributions, because enrollment never exceeded 63% of the eligible students, fewer than 30% of kindergartners eligible for accounts are actually saving.

Association With Student- and School-Level Characteristics

Family deposit activity into the K2C account was least favorable across the board for higher-poverty schools compared with lower-poverty schools. Families of students attending higher-poverty schools were less likely to contribute to the CSA (15% vs. 20%), had fewer total contributions made (10.28 vs. 15.45, by Year 4), and their total contribution values and total account values were smaller than those of students in lower-poverty schools were. However, after adjusting for observable differences between the schools and the students within them, it is apparent that these poverty-related gaps in

savings behaviors are not statistically significant until after the account's second or third year (Appendix C, Table C2). Specifically, the universal account opening may provide a more level playing field, so to speak, for families' savings behavior, whereas K2C's model, which seeds the accounts of children from low-income families with larger initial deposits than for children from high-income families, also may mitigate disparities in asset accumulation. In addition, it is important to note that the gap in family deposit activity between lower- and higher-poverty schools is not as wide as what separates advantaged and disadvantaged households in many other financial institutions, including state 529 college savings plans. In 2012, 529 savings accounts were owned by only 3% of U.S. households, a relatively more advantaged group with 25 times the median assets of those without 529 accounts (Government Accountability Office, 2012). However, other findings from K2C align with CSA literature suggesting that although CSAs can help mitigate disparities in savings outcomes, the intervention does not entirely erase such differences. For example, savings outcomes were less favorable for Black and Hispanic students in K2C as well as for students from schools with a majority of Black or Hispanic students, regardless of the race or ethnicity of the individual student.

In the overall sample, no difference was evident in the likelihood of at least one contribution between schools with lower- and higher-truancy rates or lower- and higher-mathematical proficiency when controlling for school poverty. However, when we looked at the relationship between contribution and student- and school-level characteristics separately for higher-poverty and lower-poverty schools, we found considerable variation. Families of students in schools with higher-truancy and lower-poverty were more likely to contribute (19%) than families of students attending higher-truancy, higher-poverty schools (12%).

Interestingly, contribution likelihood was higher in schools with higher-poverty and higher-mathematical proficiency than in schools with higher-poverty and lower-mathematical proficiency. However, the "influence" of mathematics proficiency was not present for the lower-poverty schools. Lower-poverty schools with lower-mathematics proficiency had the second highest contribution likelihood (Appendix D, Table D1). Because we cannot ascertain causality, future research should explore further whether and how these school characteristics influence family contributions to CSAs.

Conclusion

In addition to continuing to build the base of evidence demonstrating the potential of CSAs to improve children's outcomes, one primary purpose of current CSA research is to consider the potential effects of different policy elements and program features. This study, the first to examine family contributions to K2C accounts, offers some insights in this regard. First, the long-term growth in balances speaks to the potential for asset accumulation in CSAs and the significance of the provided incentives for fueling overall asset building. Even students in higher-poverty schools are seeing their accounts accumulate value as they progress through school. At the same time, the total balances held in K2C accounts underscore the relatively modest holdings possible with small initial seeds and low-growth account vehicles. These findings should be considered as communities across the United States continue to develop CSA programs and, especially, as CSA advocates articulate an agenda for national CSA policy. At the same time, the relatively small-dollar deposits observed in K2C suggest that the accounts are accessible to families, perhaps particularly when compared with state 529 college savings plans. K2C accounts lack transaction fees, which may make modest deposits seem worthwhile and reduce hurdles to contribution behavior. Citibank accepts cash contributions to K2C accounts, making them feasible "gateways" to relationships with formal financial institutions. As the CSA field continues to innovate delivery mechanisms best suited to scaling CSAs, the savings patterns analyzed in this study may provide valuable information.

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Appendix A. Savings Behaviors for All Six Years

Table A1. Savings Behaviors for All Six Years

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6	
	Percentage or Mean	N	Percentage or Mean	N	Percentage or Mean	N	Percentage or Mean	N	Percentage or Mean	N	Percentage or Mean	N
Percentage of students with at least one contribution	15%	21,617	17%	16,205	18%	11,477	19%	7,099	21%	2,783	21%	893
Percentage of students with at least one CSA contribution during the year	15%	21,617	10%	16,205	8%	11,477	9%	7,099	7%	2,783	3%	893
Average total CSA value	$112.00	21,617	$154.10	16,205	$189.09	11,477	$226.29	7,099	$265.69	2,783	$266.11	893
Average total contribution value	$247.21	3,184	$422.25	2,768	$576.43	2,048	$709.20	1,365	$782.55	583	$768.76	187
Average total CSA value for students with a contribution	$420.16	3,184	$609.43	2,768	$772.14	2,048	$907.14	1,365	$992.30	583	$966.52	187
Average number of contributions made per year	5.0	3,184	3.7	2,768	3.2	2,048	2.6	1,365	1.8	583	0.3	187
Average value of total contributions made per year	$247.21	3,184	$185.25	2,768	$160.17	2,048	$148.55	1,365	$131.40	583	$35.25	187

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6	
	Percentage or Mean	N	Percentage or Mean	N	Percentage or Mean	N	Percentage or Mean	N	Percentage or Mean	N	Percentage or Mean	N
Average value of an individual contribution made per year	$36.13	3,184	$15.77	2,768	$12.85	2,048	$12.63	1,365	$13.18	583	$9.13	187

Appendix B. Contributions and Contribution Values

Table B1. Median Number of Contributions and Contribution Values

	N	Median
Total CSA Value		
Year 1	21,617	$50.00
Year 2	16,205	$50.00
Year 3	11,477	$50.00
Year 4	7,099	$50.00
Total Contribution Value		
Year 1	3,184	$110.00
Year 2	2,768	$160.00
Year 3	2,048	$200.00
Year 4	1,365	$200.00
Number of Contributions per Year		
Year 1	3,184	3.0
Year 2	2,768	1.0
Year 3	2,048	0.0
Year 4	1,365	0.0
Value of Contributions per Year		
Year 1	3,184	$110.00
Year 2	2,768	$10.00
Year 3	2,048	$0.00
Year 4	1,365	$0.00
Individual Contribution Value		
Year 1	3,184	$26.12
Year 2	2,768	$4.65
Year 3	2,048	$0.13
Year 4	1,365	$0.03

Appendix C. Savings Behaviors

Table C1 presents the mean account value, contribution value, and number of contributions for the full sample and for students in higher- and lower-poverty schools.

Table C1. Difference in Savings Behavior

	Total Sample (*n* = 1,395)		Higher-Poverty Schools (*n* = 544)		Lower-Poverty Schools (*n* = 851)	
	Mean	***SD***	**Mean**	***SD***	**Mean**	***SD***
Total Account Value ($)						
Year 1	348.86	414.05	296.50	354.15	382.33	445.15
Year 2	554.06	795.72	454.17	576.22	617.92	903.23
Year 3	736.35	1,160.07	594.46	825.48	827.06	1,323.10
Year 4	889.34	1,496.31	725.20	1,208.00	994.26	1,646.63
Total Contribution Value ($)						
Year 1	192.59	377.66	151.41	317.51	218.90	409.54
Year 2	377.68	764.37	288.28	538.56	434.83	874.36
Year 3	548.59	1,130.93	416.87	789.73	632.80	1,296.51
Year 4	693.85	1,470.34	538.63	1,178.12	793.07	1,622.83
Total Number of Contributions						
Year 1	3.78	5.19	2.66	4.30	4.50	5.58
Year 2	7.49	11.04	5.46	9.60	8.79	11.69
Year 3	10.90	16.49	8.21	14.97	12.63	17.18
Year 4	13.43	20.46	10.28	18.55	15.45	21.36

Note. SD = standard deviation. The analysis includes only those students with at least one contribution and had an account for at least 4 years.

Table C2 presents the results from three regression models examining whether savings behaviors across time differ between students in higher- and lower-poverty schools, controlling for underlying differences in characteristics between the two types of schools and the students within them. Each regression model regresses a savings outcome on a binary indicator for higher-poverty school, a set of binary indicators for the account age year that the observation took place (Year 2 through Year 4, as compared with Year 1), and an interaction between higher-poverty and the year of the observation.

In higher-poverty schools, families of students contributed less frequently, contributed less money, and had lower account values when controlling for student- and school-level characteristics than families in lower-poverty schools. However, these differences were not statistically different from zero until Year 3, for the difference in the total number of contributions, and Year 4, for the total contribution value and total account value.

Table C2. Differences in Savings Behaviors by School Poverty Status and Time

	Difference	Standard Error	*p* Value
Total Account Value			
Year 1	$22.74	87.93	.796
Year 2	$77.92	79.20	.325
Year 3	$146.78	79.20	.064
Year 4	$183.25	79.20	.021
Total Contribution Value			
Year 1	$42.81	84.69	.613
Year 2	$79.07	77.39	.307
Year 3	$148.43	77.39	.055
Year 4	$186.95	77.39	.016
Total Number of Contributions			
Year 1	1.43	1.32	.277
Year 2	1.50	1.09	.168
Year 3	2.58	1.09	.017
Year 4	3.33	1.09	.002

Note. *n* = 1,395. The values in this table are the beta coefficients of the interaction terms between an indicator for higher-poverty school and each year (Years 2, 3, and 4). The model includes student- and school-level covariates, including student ethnicity, student home language, the school-level truancy rate, the school-level percentage of Black students, and the school-level percentage of Hispanic students. The model also includes random effects for each school.

Appendix D. School Poverty and Other Characteristics

The research team ran a series of multilevel regression models regressing the binary outcome variable for whether a student had at least one CSA contribution, on each available school-level characteristic, a binary indicator for higher-poverty, and interactions between higher-poverty and each school-level characteristic. Each school-level characteristic was transformed into a binary indicator for whether a school was above the mean for that variable. The models included student-level demographics and school random effects. Table D1 shows the adjusted mean average contribution rate depending on whether the school was higher- or lower-poverty and whether it was higher or lower on each school-level characteristic.

Table D1. Percentage With Contributions (Adjusted Means) by School-Level Poverty and Other School Characteristics

School-Level Characteristic	Higher-Poverty, Higher-SLC		Lower-Poverty, Higher-SLC		Higher-Poverty, Lower-SLC		Lower-Poverty, Lower-SLC	
	Percentage With Contributions	*SE*	Percentage With Contributions	*SE*	Percentage With Contributions	*SE*	Percentage With Contributions	*SE*
Percentage Hispanic	13.03	1.40	19.53	2.50	24.05	1.40	17.26	1.52
Percentage Asian	16.85	2.42	18.49	2.04	12.81	1.80	18.01	1.85
Percentage Black	13.00	1.42	20.09	2.19	26.43	5.59	17.05	1.70
Percentage White	13.33	1.87	19.55	1.80	16.21	2.25	15.82	1.96
Truancy rate (reverse)	20.92	2.98	17.76	1.69	11.62	1.46	19.05	2.07
Teacher-to-student ratio (reverse)	12.73	1.64	20.39	2.07	18.26	2.75	16.39	1.71
Total enrollment	13.92	2.25	16.45	1.91	15.12	1.94	19.43	1.90
Mathematics proficiency	25.39	4.70	16.68	1.44	12.78	1.37	22.33	2.70
English language arts proficiency	17.77	6.20	17.58	1.55	14.36	1.53	19.91	2.92
English fluency	13.82	7.25	17.10	1.50	14.58	1.47	21.71	3.13
English learners	14.57	1.46	22.40	3.37	13.42	7.07	17.08	1.47

Note. SLC = school-level characteristic; *SE* = standard error. For the truancy rate and the teacher-to-student ratio, we reverse coded the schools so that a higher-teacher-to-student ratio and higher-truancy rate are rated as lower "variables" and vice versa to make the reporting consistent with the other factors.


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