Return on Investment Study: College Possible's College Access Program

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Executive Summary

College Possible

AmeriCorps contracted with ICF Incorporated, LLC (hereafter ICF) to explore and quantify the return on investment (ROI) of several programs that rely on national service—AmeriCorps and AmeriCorps Seniors—as a major resource to sustain operations. ROI analyses have the potential to help AmeriCorps measure the performance of programs and to help build the base of evidence for future resource allocation decisions. In addition, ROI study results will help AmeriCorps communicate the value of its programs to relevant stakeholders. This ROI study measures the benefits of College Possible's College Access program against its costs.

Key Results

This study estimates College Possible's ROI to be between $1.50 and $6.41 per funder dollar, depending on how long program participants and AmeriCorps members experience increased earnings as a result of College Possible's College Access program. The return on each dollar of federal support for the program is even higher. The magnitude of the results is driven by strong employment and earnings outcomes for participants and benefits to AmeriCorps members of national service that increase their earnings.

College Possible is a college readiness, access, and success organization that supports and coaches low-income students through ACT and SAT test preparation, college application assistance, financial aid consulting, guidance during the transition from high school to college, and ongoing support toward degree completion (Ingram et al., 2018). Students apply to receive College Possible support during their sophomore year. To qualify, students must a) be from low-income families, b) have grade point averages of 2.0 or higher, and c) express interest in attending a four-year college. For students that are accepted, College Possible organizes its services into two programs:

- **College Access Program.** The College Access program serves students during their junior and senior years of high school. Students attend after-school sessions led by AmeriCorps member coaches for two hours twice a week throughout those two school years in a supportive group of college-bound peers. Coaches implement an interactive curriculum designed to guide students through the key aspects of preparing for college. Topics include finding a best-fit college, academic preparation, financial planning, and personal development. Summer Bridge is a component of the college access program that uses in-person and text-based coaching to help student stay on the college track over summer break.
- **College Success Program.** After high school, college students receive coaching through the transition to college and are supported all the way through college graduation. Depending on the college they attend, students will receive in-person coaching on campus or technology-based coaching. Coaches connect students to resources on campus, help them tackle barriers, and help them identify future opportunities.

College Possible, a nonprofit organization, comprises a national office in St. Paul, MN, and six other offices that provide services in the metropolitan areas: Portland, OR; Philadelphia, PA; Chicago, IL; Milwaukee, WI; Omaha, NE; and Minneapolis-St. Paul, MN.

College Possible's College Access Program Impact: Selected Evaluation Results

This ROI study measures the benefits of College Possible's College Access program against its costs. A randomized controlled trial (RCT) study found that the College Access program increased initial enrollment at four-year colleges by more than 15 percentage points for program participants (Avery, 2013).

Return on Investment Study Methods

The methodology for the ROI study of College Possible's College Access program in Minnesota consists of the following components:

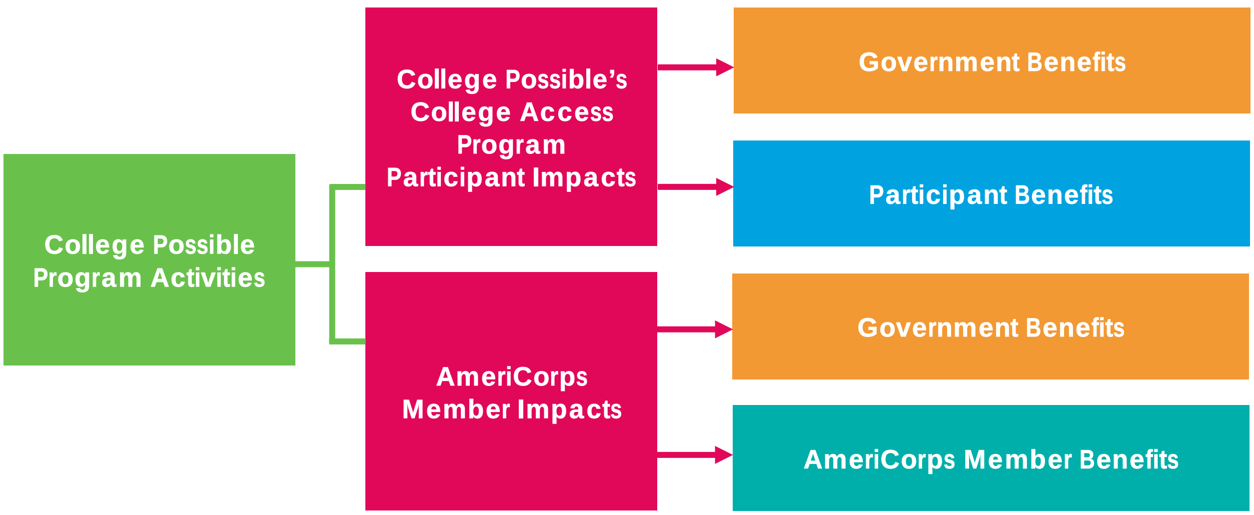
1. **Measuring and monetizing program benefits.** This includes using data from previous evaluations and other third-party sources to determine benefits. Benefits are realized across three stakeholder groups: College Access participants, College Possible AmeriCorps members, and the government. Specifically, the benefits realized include future increased earnings for College Access participants, derived from increased educational attainment, and future increased earnings for AmeriCorps members, derived from increased employment and educational attainment. AmeriCorps members also earn education awards after their service and receive living allowances during their service, which are both member benefits. Government benefits include tax revenue generation from increased economic activity and future earnings as well as reduced spending on corrections, public assistance, and social insurance. This analysis monetized program benefits using various proxies and summed those amounts to quantify the impact of the College Access program in 2019 dollars.
2. **Assessing program costs.** College Possible's total program costs were analyzed for the 2017–2018 academic year in 2019 dollars and then prorated to College Access participants.
3. **Calculating the ROI**. Minnesota's College Access program participation for students have found improvements in high school graduation, college applications, enrollment, and graduation. This analysis focuses on the impacts of College Possible for Minnesota's College Access students alone. Total College Possible costs and benefits are scaled to Minnesota's College Access students to develop the figures used in the ROI calculations. The ROI analysis includes three ROI calculations, which are each assessed under three scenarios representing different assumptions about the persistence of program outcomes:

- Total benefits per federal dollar
- Total benefits per funder dollar[1]
- Federal government benefits per federal dollar

The analysis calculated the value of these ROI calculations under three scenarios representing different assumptions about the persistence of program outcomes.

The analytical framework includes only those benefits that could be reasonably monetized given the available data, and that likely would not have occurred without the AmeriCorps program. Figure ES-1 shows how College Access program activities can result in benefits to College Access participants, AmeriCorps members, and the government.

Figure ES-1. Benefits among College Access Participants, AmeriCorps Members, and Government Derived from College Possible



[1] College Possible funding derives from government grants, contributions and grants, other contributions, and program fees (College Possible, 2019).

Figure ES-2 shows the benefits and costs that are included in each type of ROI calculation.

Figure ES-2. Benefits and Costs Included in the ROI Calculations

ROI Calculation	Benefits (numerator)	Costs (denominator)
Total Benefits per Federal Dollar	All participant, AmeriCorps member, and government benefits derived from the College Possible program	• Federal AmeriCorps funding
Total Benefits per Funder Dollar	All participant, AmeriCorps member, and government benefits derived from the College Possible program	• Federal AmeriCorps funding • Budgeted match funding • All other funding
Federal Government Benefits per Federal Dollar	Additional tax revenue generation and reduced spending attributable to the College Possible program	• Federal AmeriCorps funding

Available data established that both College Access participants and AmeriCorps members experience increased educational attainment leading to positive future employment impacts and increased earnings as a result of the program. However, the data do not establish the duration of the increased earnings benefits. To address a range of possible durations for those benefits, the analysis includes three scenarios:[2]

- **Short-Term.** This scenario assumes short-term earnings impacts. The assumption is that earnings impacts are limited to a single year.
- **Medium-Term.** This scenario assumes a longer duration of earnings impacts. The assumption is that earnings impacts last 15 years. A 3 percent discount rate is applied each year to represent net present value in 2019 dollars.[3]
- **Long-Term.** This scenario assumes sustained earnings impacts throughout College Access program participants' and College Access program AmeriCorps members' working years. The assumption is that earnings impacts last 30 years. A discount rate of 3 percent is applied to the earnings each year, to represent the net present value in 2019 dollars.

[2] These three scenarios consider varying durations of how long increased employment and earnings benefits last for both College Access participants and AmeriCorps members. Certain additional benefits are included equally across these scenarios. Specifically, lifetime benefits with regard to decreased public assistance, social insurance, and corrections costs as a result of AmeriCorps members' higher educational attainment post-service are represented in each scenario equally. Thus, whether members' employment and earnings impacts are sustained for one year (i.e., short-term scenario) or 30 years (i.e., long-term scenario), the same amount of these cost savings is realized.

[3] The Office of Management and Budget defines a discount rate as "the interest rate used in calculating the present value of expected yearly benefits and costs." Regarding the 3 percent discount rate, see Office of Management and Budget, 2003.

The only difference among the three scenarios is the length of time that increased employment and earnings are sustained; all other benefits are held constant.

Note, future employment and earnings impacts for all College Access participants will only be captured in the medium-term and long-term scenarios. The short-term scenario only captures the increased earnings resulting from the increase in high school graduates due to the College Access program who do not enroll in a higher education program.

Benefits and Costs

Figure ES-3 shows the estimates of monetized benefits of the College Access program by stakeholder group for each of the three scenarios. Under the short-term scenario, total benefits amount to over $5.2 million, in which roughly 14, 27, and 59 percent are attributed to College Possible participants, AmeriCorps members, and the federal government, respectively. Under the medium-term scenario, the total benefits equal roughly $26.9 million, of which about 50 percent are attributed to College Possible participants, 14 percent are attributed to AmeriCorps members, and 36 percent are attributed to the federal government. Lastly, under the long-term scenario, the total benefits equal $38 million, of which 56 percent are attributed to College Possible participants, 11 percent are attributed to AmeriCorps members, and 33 percent are attributed to the federal government.

Figure ES-3: Benefits by Recipient

Recipient	Benefits by Scenario (2019$)		
	Short-Term	Medium-Term	Long-Term
College Access Program Participants (percent of total)	$1,225,798 (14%)	$13,408,348 (50%)	$21,301,363 (56%)
AmeriCorps Members (percent of total)	$2,432,318 (27%)	$3,737,298 (14%)	$4,149,075 (11%)
Federal Government (percent of total)	$5,251,720 (59%)	$9,787,121 (36%)	$12,542,792 (33%)
Total (total percent)	**$8,909,835 (100%)**	**$26,932,767 (100%)**	**$37,993,229 (100%)**

Notes: All benefits are proportional to the number of College Access participants in Minnesota in the program. AmeriCorps member and College Possible participant categories are inclusive of state and local tax benefits.

Additionally, Figure ES-4 shows the cost of the College Possible and College Access program by funding source. The total cost of the College Access program in Minnesota for 2018 was $5.5 million. Twenty percent of the College Access program in Minnesota costs ($1.1 million) are funded by government grants (i.e., AmeriCorps), while the remainder (80 percent or $4.4 million) consists of other contributions, grants, and program fees.

Figure ES-4. Cost by Funding Source, 2018

Funder	Funding Provided for the Program Year (2019$)	Proportional Funding, MN & College Access (2019$)	Percent of Total (%)	Percent of AmeriCorps Funds (%)
Government Grants	$4,449,785	$1,131,498	20%	
Contributions and Grants	$15,033,888	$3,822,841	69%	388%
Other Contributions	$1,754,411	$446,114	8%	
Program Fees	$492,090	$125,130	2%	
Total	**$21,730,174**	**$5,525,583**	**100%**	

Note: Assumes that government grants encompass AmeriCorps funds.

Source: College Possible, Inc. (2019). Financial Statements, Page 6.

ROI Results

For each ROI calculation, three ROI estimates using the three scenarios (short-term, medium-term, and long-term) were developed. Figure ES-5 shows the ROI results for the College Possible program. Since two of the calculations include benefits to society (i.e., College Access program participants and AmeriCorps members), the results are expressed as benefit-cost ratios, while maintaining the ROI terminology. Specifically, these ratios take the form of the sum of monetized benefits over the sum of costs. The ROIs expressed as benefit-cost ratios in this study can be interpreted as the number of dollars returned for every dollar of investment (or cost).[4]

Figure ES-5: ROI Results for College Access Program

ROI Calculation	ROI Scenario		
	Short-Term	Medium-Term	Long-Term
Total Benefits per Federal Dollar	$7.87	$23.80	$33.58
Total Benefits per Funder Dollar	$1.50	$4.55	$6.41
Federal Government Benefits per Federal Dollar	$4.64	$8.65	$11.09

Note: This assumes that all government funding to College Possible is federal.

[4] ROIs are often expressed as percentages when measuring the financial return to a single entity from that entity's investment. Although this is consistent with one of the three ROI metrics reported (e.g., ROI to federal government), since the other ROIs lend themselves to a benefit-cost ratio, that ratio is consistently used for all three metrics. Although not shown as a ratio, the results should be interpreted as the return for every dollar of investment.

Given the assumptions under the short-term scenario, the total benefits equal $7.87 times the federal government's investment of a single dollar, meaning that College Access participants, AmeriCorps members, and the government realize a combined return of $7.87 on every dollar invested by the federal government (AmeriCorps). The total benefits per total funder[5] dollar equal $1.50 times said dollar. Lastly, under the short-term scenario, the federal government alone receives $4.55 dollars back in federal benefits for every tax dollar invested.

Under the medium-term scenario, the ROI for total benefits per federal dollar, total benefits per funder dollar, and federal government benefits per federal dollar are $23.80, $4.55, and $8.65, respectively.

Under the long-term scenario, the ROI to the federal government is $33.58 per federal dollar invested. The total benefits per funder dollar combined (under the long-term scenario), when all benefits are considered, is $6.41. In addition, under the long-term scenario, for every dollar invested by the federal government, the federal government alone realizes $11.09 in return from additional tax revenue and savings.

Given the different assumptions of the three scenarios, the respective benefits across all three ROI calculations are larger than their associated costs. At a minimum—when considering solely the federal government investment provided by AmeriCorps and the benefits that would be realized for one years' time by the federal government alone—College Possible's College Access program in Minnesota generates a very strong return (as shown under the short-term scenario with an ROI of $4.55 per funder dollar). This indicates that given the most conservative assumptions and ROI calculation, the federal government still receives a monetary return greater than the taxes allocated to pay for the College Possible program's annual operation. When all benefits are considered (i.e., that of College Access participants, AmeriCorps members, and the various levels of government), they are $7.87 times that of AmeriCorps's initial investment into College Possible for the most short-term scenario. Thus, when all stakeholder benefits are realized (and the benefit of increased earnings is only sustained for one year), they are $4.64 times the initial investment made by the federal government.

The magnitude of the positive ROI calculations is driven by several factors, including:

- The expected increased earnings resulting from increased educational attainment for College Access students. Avery's (2013) evaluation of an RCT of College Access found that participation in College Access is estimated to increase enrollment at four-year colleges by 15 percentage points (Avery, 2013).[6] Applying the increase of 15 percentage points, an estimated additional 195 College Access students from Minnesota's 2017–2018 academic year are expected to enroll in a four-year

[5] The different funder groups whose investment is in this calculation include the federal government (i.e., AmeriCorps), state and local governments, and other non-government entities.

[6] This coefficient is statistically significant at the 5 percent level whether high school fixed effects are included or not.

college. To estimate the percentage of those additional college students who are expected to attain a bachelor's degree, the Pell Institute's estimated national percentage of low-income, first-generation college students who complete a bachelor's degree or higher within 6 years (41 percent) is applied. The remaining 59 percent of students are assumed to achieve some college (Pell Institute, 2019). The U.S. Census Bureau's Current Population Survey (CPS) for 2018 by race and education provide median annual earnings (U.S. Census Bureau, 2018). The CPS data can be used to calculate the value of additional educational attainment while controlling for demographic variables such as race. For example, according to CPS data, an Asian male with a bachelor's degree earns $30,000 more than an Asian male with some college. A white female with some college earns $5,000 more than a white female with a high school degree. Applying the difference in earnings by educational attainment to the expected additional education attainments of the College Access students yields an estimated $1.7 million in additional annual earnings, on an undiscounted basis.

- The employment outcomes of AmeriCorps members. According to the national AmeriCorps Alumni Survey Outcomes Study, the percentage of members unemployed was 5 percent lower six months after serving in AmeriCorps versus six months before (Friedman et al., 2016).
- The educational benefits to AmeriCorps members. With the receipt of education awards, AmeriCorps alumni can use these funds to help pay for postsecondary degrees after exiting the program. Additionally, the vast majority (roughly 92 percent) of student loans are administered by the federal government, so these educational benefits are also an asset to the federal government (Nyekil, 2019).[7]

[7] For the portion of the education awards used to pay off federal student loans, these are treated as transfer payments and, thus, do not impact the ROI. The educational award used to pay off private student loans (7.8) was also not included in the ROI because benefits in this study include only those to College Possible participants, AmeriCorps members, and the government.

Introduction

AmeriCorps contracted with ICF Incorporated, LLC (hereafter ICF) to explore and quantify the return on investment (ROI) of several programs that rely on national service as a major resource to sustain operations. ROI analyses measure the performance of programs and build the base of evidence for future resource allocation decisions. These ROI study results will demonstrate the value of AmeriCorps programming to relevant stakeholders.

This project began with a comprehensive literature review process to assess the feasibility of ROI analyses of several national service programs. These feasibility studies included thorough reviews of these programs' recent evaluations, detailed logic models, proposed ROI analysis methodologies for each program, and a scorecard mechanism that determined the viability of conducting an ROI for each selected program.

Upon completion of five feasibility studies, AmeriCorps selected four programs to be the subject of ROI studies: College Possible, the Community Technology Empowerment Project, Minnesota Reading Corps, and AmeriCorps Seniors' Foster Grandparent and Senior Companions Programs. This ROI study measures the benefits of College Possible against its costs based on the analytical approach and data sources specified in its respective feasibility study.

Study Overview

This study is organized into five sections:

- Program Description describes the program's design, activities, and objectives, along with the role that national service (specifically AmeriCorps) plays in its operation. The section also provides a brief history of past evaluations and outlines the factors that made this program a strong selection for an ROI study.
- ROI Methodology outlines how this analysis used various data sources to monetize benefits derived from the College Possible program and describes its program costs.
- Benefits, Costs, and ROI Results provides a detailed description of the benefits and costs that are inputs into the ROI analyses and presents the results of the three ROI calculations.
- Recommendations for Further Research explores ways in which AmeriCorps and others could further build the evidence base for this program and similar programs, including how to address limitations of this study.
- Conclusion summarizes key points from the ROI study overall.

Program Description

College Possible is a college readiness, access, and success organization that supports and coaches low-income students through ACT and SAT test preparation, college application assistance, financial aid consulting, guidance during the transition from high school to college, and ongoing support toward degree completion (Ingram et al., 2018). Students apply to receive College Possible support during their sophomore year in high school. To qualify, students must a) be from low-income families, b) have grade point averages of 2.0 or higher, and c) express interest in attending a four-year college. For students that are accepted, College Possible organizes its services into two programs:

- College Access Program. The College Access program serves students during their junior and senior years of high school. Students attend after-school sessions led by AmeriCorps member coaches for two hours twice a week throughout those two school years in a supportive group of college-bound peers. Coaches implement an interactive curriculum designed to guide students through the key aspects of preparing for college. Topics include finding a best-fit college, academic preparation, financial planning, and personal development. Summer Bridge is a component of the College Access program that uses in-person and text-based coaching to help student stay on the college track over summer break.
- College Success Program. After high school, college students receive coaching through the transition to college and are supported all the way through college graduation. Students who participate in College Possible during high school automatically become participants in the College Success program after graduating from high school, regardless of whether they enroll in college right after high school graduation. Depending on the college they attend, students will receive in-person coaching on campus or technology-based coaching. AmeriCorps member coaches connect students to resources on campus, help them tackle barriers, and help them identify future opportunities (Ingram et al., 2018).

College Possible, a nonprofit organization, comprises a national office in St. Paul, MN, and six other offices that provide services in the metropolitan areas: Portland, OR; Philadelphia, PA; Chicago, IL; Milwaukee, WI; Omaha, NE; and Minneapolis-St. Paul, MN.

College Possible Evaluation History

Three evaluations—completed in 2012, 2013, and 2018—analyze the impacts of the College Possible programs in Minnesota (Avery, 2013; Howley & Uekawa, 2013; Ingram et al., 2018). These evaluations were conducted by objective, third-party research organizations: The University of Minnesota's Center for Applied Research and Educational Improvement, ICF, and the National Bureau of Economic Research (NBER). Two reports evaluated the College Access program and one evaluated the College Success program.

The Implications for ROI Analysis of the College Possible program section discusses the decision to focus this ROI study on the College Access program in light of the evaluation histories and available data on the College Access and College Success programs.

Evaluations of the College Access Program

In Howley and Uekawa (2013), ICF evaluated the College Access program and analyzed the outcomes of six College Access high school graduation cohorts (3,812 students). The study:

- Quantified outcomes for students in the program
- Analyzed how outcomes varied by the type of institution that College Access students attended or by the coaching services they received
- Identified how other factors may influence student success

The evaluation was non-experimental and did not include data collection from a control group. However, the evaluators did compare college enrollment rates of College Access students to a national average from the National Center for Education Statistics. The study found that College Access students enroll in college at a higher rate. The immediate college enrollment rate for high school graduates from low-income families is 52 percent, compared to 82 to 88 percent for College Access students (Howley & Uekawa, 2013).

NBER's paper reports the results of a randomized controlled trial (RCT) of qualified juniors participating in College Possible at eight high schools in Minneapolis and St. Paul, Minnesota, that followed them through their senior year and the subsequent spring. The trial involved 238 students, including 134 who were randomly selected for admission to the program in May 2010. Treatment Group 1 comprised 101 students who were admitted to the program on a randomized group-by-group basis and matched the control better. Treatment Group 2 comprised 33 students who were admitted from the waitlist. The results indicate that the College Access program significantly increased both applications and enrollment to four-year colleges, including selective four-year colleges. Yet, at the same time, Treatment Group students were statistically less likely to apply to popular two-year colleges. The report estimates that initial enrollment at four-year colleges increased by more than 15 percentage points for program participants. The estimated effect of the program on fall semester enrollment at any college (two- and four-year colleges) is smaller and not significant. For the spring semester, enrollment at competitive four-year colleges was significantly greater for Treatment Group students by 12 percentage points. While not statistically significant, Control Group students were more likely to be enrolled overall than were Treatment Group students. The only significant negative effect in these specifications is that admission to the program reduced enrollment overall for the Treatment Group 2 students (Avery, 2013).

Additionally, the NBER study finds little evidence of any effect of the program on ACT[8] performance. This finding could imply that some Control Group students got help from other sources after learning that they were not admitted to the College Possible program.Thus, Avery (2013) goes on to conclude, the RCT should probably be viewed

[8] The ACT is a standardized test used for college admissions that covers English, mathematics, reading, and science reasoning.

as assessing the effectiveness of the College Possible program relative to the effectiveness of potential alternative programs (Avery, 2013).

Evaluation of the College Success Program

The University of Minnesota's Center for Applied Research and Educational Improvement examined the College Success program in Minneapolis and St. Paul, Minnesota. The four-year study compared college graduation rates for the 2013 cohort (i.e., starting the first year of college in fall 2013) and other college outcomes for the 2013–2015 cohorts of College Success program participants to the outcomes of a comparison group. The study included 160 College Success students and 160 comparison group students[9] at six post-secondary educational institutions in the Minneapolis-St. Paul metropolitan area. The researchers used propensity score matching to select the students in the comparison group. For the 2013 cohort, the study found that College Success students graduated within four years at a significantly higher rate than the comparison group. The results of the analysis imply that a student in College Possible is on average 1.74 times more likely to graduate after four years than a student in the comparison group. College Success students graduated with associate and bachelor's degrees at a higher rate (46.4 percent) than the group of comparison students (27.2 percent). In the College Success group, 15.5 percent of the students received a degree from a two-year college and 30.9 percent received a degree from a four-year college, for a total of 46.4 percent. In the comparison group, 4.9 percent of the students received a degree from a two-year college and 22.3 percent received a degree from a four-year college, for a total 27.2 percent. Neither cumulative GPA, cumulative credits, nor continuous enrollment through spring 2017 yielded significant results from the College Success "treatment." These findings are concerning and require future studies to examine credits earned by treatment group. The results of three cohorts combined (2013, 2014, and 2015) showed no statistically significant effect of College Success on any of the variables (i.e., GPA, credits, and retention for the first and second years of college) (Ingram et al., 2018).

College Possible maintains internal program data as well. In its 2014 grant application to the U.S. Department of Education's Investing in Innovation fund, College Possible revealed that its participants have a high school graduation rate of 98 percent, far exceeding the national average of 72 percent of economically disadvantaged students. College Possible also reported that its participants have a college enrollment rate of 85 percent following high school graduation, far exceeding the national average of 52 percent of low-income students. Regarding college completion, College Possible reported that 57 percent of its participants graduated from a four-year school in six years or less, far exceeding the national average of 8 percent of low-income students who earn a college degree by age 24 (College Possible, 2014).

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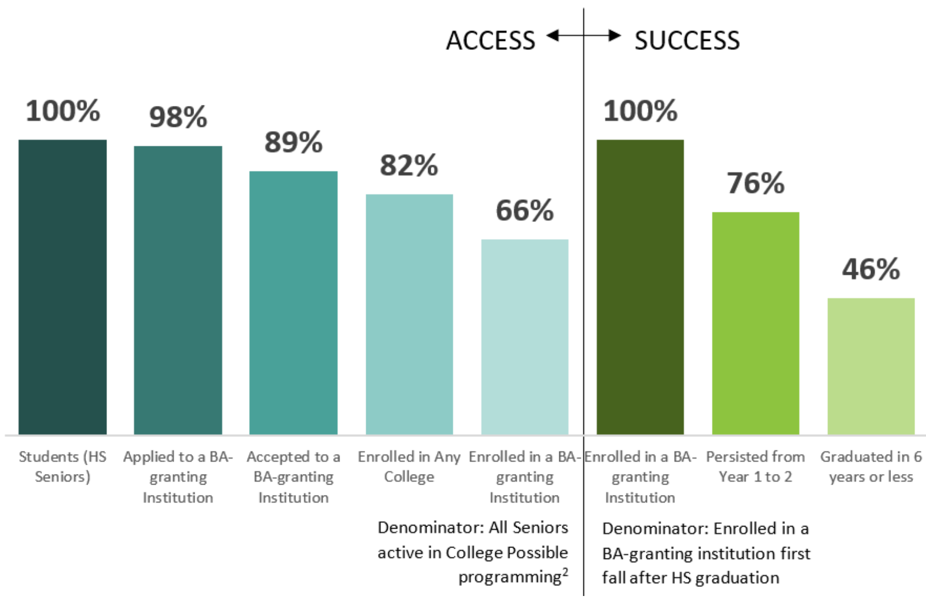
[9] The comparison group is made up of students from the same colleges who did not participate in College Possible during high school and also are not participating in the program during college. The comparison students are also graduates of Minneapolis and St. Paul high schools who enrolled in college in fall 2013.

Implications for ROI Analysis of the College Possible Program

The trend is evident that College Possible's College Access program significantly increases both applications and enrollment to four-year colleges, including selective four-year colleges. While an RCT has not been administered on College Success yet, descriptive statistics imply that College Success students graduated with associate and bachelor's degrees at higher rates than the comparison group. By only matching on observable characteristics, the results of the College Success study miss out on important unobservable characteristics, such as grit or personal goals, and is potentially subject to self-selection bias. There has not yet been an RCT that follows students in the College Access program and into the subsequent College Success program. Additionally, there is not a thorough understanding of how students in College Success that did participate in College Access compare to those who did not participate in College Access. For these reasons, the combined impact of the two programs has not been evaluated. However, College Possible retains internal data of historical student outcomes. Figure 1 depicts longitudinal data from 2008 to 2012.[10]

Figure 1. College Possible Historic Average Outcomes, Using Longitudinal Data from Class Cohorts of 2008–2012



[1]Note that these rates are averaged across graduating class cohorts 2008–2012 to provide a consistent universe of students for each outcome category; the rates do not vary significantly by class year. Access outcomes and year 1 persistence for graduating cohorts 2013–-2017 were very similar to those listed above, give or take 1–5 percentage points, depending on the category.

[2]From class years 2002–2017, College Possible has no record of any students leaving the program during junior year. Less than one-tenth of a percent of students in the class of 2018 and 3 percent from the class of 2019 are documented as having left the program before senior year. The class of 2020 was the first to be subject to a new student drop policy by which students who are not coming to sessions or responding to their coach could be removed from the program.

[10] Unless otherwise cited, all information provided directly by College Possible for this report was received through ICF's personal communication with College Possible in 2020.

Due to the lack of an RCT following students in College Access through the College Success program, this ROI analysis evaluates the costs and benefits of the College Access program only. This ROI, aiming to only use conservative and defensible findings, applies the findings of the RCT for College Access, that initial enrollment at four-year colleges increased by more than 15 percentage points for program participants. Thus, out of the 1,302 Minnesota College Access high school seniors in the 2017–2018 academic year, 15 percent (195 students) are estimated to enroll at four-year colleges that otherwise would have not enrolled. The analysis then assumes the College Access students will follow the Pell Institute's estimates that 41 percent of national low-income, first-generation college students complete a bachelor's degree or higher within six years (Pell Institute, 2019). For the purposes of our analysis, we assume that students who complete four-year degrees would have completed two-year degrees in the absence of the program. This is a reflection of the RCT results that reveal that a larger percentage of students in the control group attend two-year colleges. Thus, the increased earnings estimated for those who complete a four-year degree are net of the additional earnings earned by those who complete a two-year degree compared to graduating high school. This results in a conservative estimate of program benefits. The ROI study applied additional results from the literature as well as College Possible participant demographics to estimate increased earnings from increased educational outcomes among College Access program participants (U.S. Census Bureau, 2018).

Selection of College Possible's College Access Program in Minnesota for the AmeriCorps ROI Project

ICF recommended making the College Access program in Minnesota the subject of an ROI analysis based on a comprehensive feasibility study. The feasibility study reviewed studies conducted on the program and explored how to use available data to monetize relevant benefits and costs (Avery, 2013; Howley & Uekawa, 2013; Ingram et al., 2018). Based on ICF's review, we concluded that the College Access program in Minnesota is feasible as the subject of an ROI analysis. ICF reached this conclusion based on a review of the existing literature on the College Possible program in Minnesota and connecting enrollment to high school, college enrollment, and college graduation outcomes. As discussed in the methodology below, estimating educational impacts allows the ROI analysis to include monetary estimates of outcomes related to earnings and public expenditures on health, criminal justice, and welfare.

The feasibility study also identified research that could be used to quantify the benefits to AmeriCorps members due to their involvement in College Possible via national service. In particular, a 2016 study by Freidman et al. documented the post-national service employment outcomes associated with serving in AmeriCorps. Additionally, Zeidenberg et al. (2016) estimated the extent to which national service increases members' educational attainment. Including these additional data allowed an expanded array of benefits of the College Possible program to be captured in the ROI analysis.

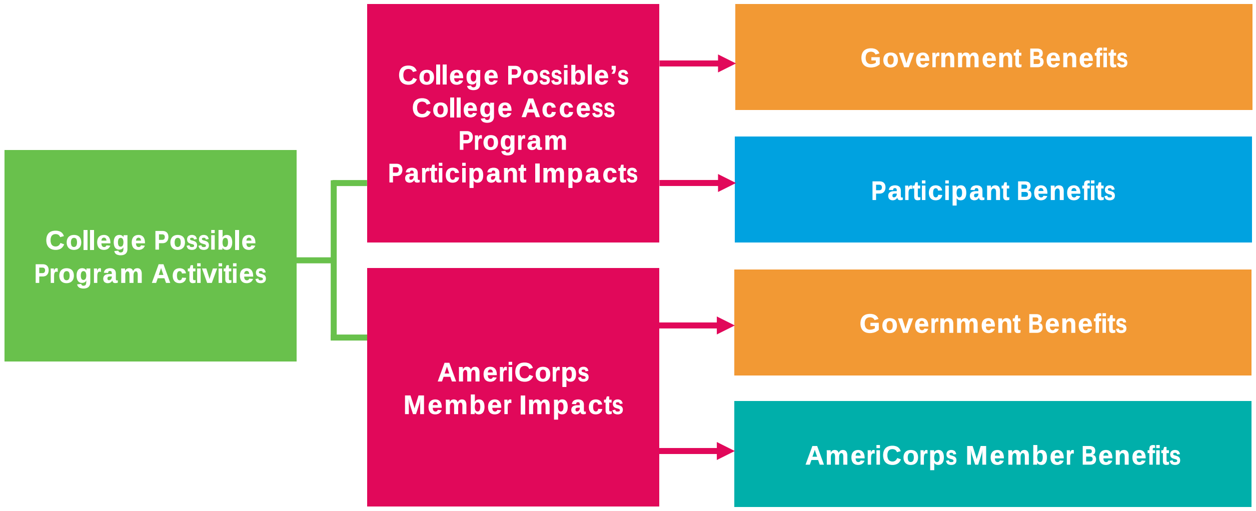
ROI Methodology

The methodology for the ROI study of the College Access program in Minnesota consists of the following components:

1. **Measuring and monetizing program benefits**. This includes using data from previous evaluations and other third-party sources to determine the benefits to College Possible's program participants, College Possible's AmeriCorps members, and the government. This ROI analysis monetized College Possible program benefits in 2019 dollars. The benefits realized across these three stakeholder groups include:
   - ***College Access Program participants***. Increased education leading to increased earnings.
   - ***AmeriCorps members***. AmeriCorps member benefits in the form of living allowances members receive during their service, education awards they receive following their service, and increased earnings post-service.
   - ***Government***. Income, Social Security, and Medicare tax revenue from College Access program participants' and members' increased earnings and sales tax revenue from the increased economic activity that result from those increased earnings. Government benefits also include reduced spending on corrections, public assistance, and social insurance associated with the increased educational attainment of College Access program participants and AmeriCorps members.
2. **Assessing program costs.** College Access program costs are based on the College Possible program budget and consist of federal and other funding for the 2017–2018 fiscal year in 2019 dollars.
3. **Calculating the ROI**. Previous studies of the benefits of Minnesota's College Access program participation for students have found improvements in high school graduation, college applications, enrollment, and graduation. This analysis focuses on the impacts of College Possible for Minnesota's College Access students alone. Total College Possible costs and benefits are scaled to Minnesota's College Access students to develop the figures used in the ROI calculations. The ROI analysis includes three ROI calculations, which are each assessed under three scenarios representing different assumptions about the persistence of program outcomes:
   - Total benefits per federal dollar
   - Total benefits per funder dollar
   - Federal government benefits per federal dollar

This analytical framework includes only those benefits that could be reasonably monetized given the available data and that likely would not have occurred without the AmeriCorps program. Figure 2 shows how College Possible program activities can result in College Possible participant, AmeriCorps member, and government benefits.

Figure 2. Benefits among College Access participants, AmeriCorps Members, and Government Derived from College Possible



Available data establish that both College Access program participants and AmeriCorps members enjoy positive future earnings impacts because of the College Access program. However, the data do not establish the duration of these benefits. To address a range of possible durations for these benefits, the analysis developed three scenarios:[11]

- **Short-Term**. This scenario assumes short-term earnings impacts. The assumption is that earnings impacts are limited to a single year.
- **Medium-Term**. This scenario assumes a longer duration of earnings impacts. The assumption is that earnings impacts last 15 years. A 3 percent discount rate is applied each year to represent net present value in 2019 dollars.[12]

[11] These three scenarios consider varying durations of how long increased employment and earnings benefits last for both College Access participants and AmeriCorps members. Certain additional benefits are included equally across these scenarios. Specifically, lifetime benefits with regard to decreased public assistance, social insurance, and corrections costs as a result of participants' and members' higher educational attainment post-program and post-service, respectively, are represented in each of these three scenarios equally. Thus, whether participants' or members' employment and earnings impacts are sustained for one year (i.e., the short-term scenario) or 30 years (i.e., the long-term scenario), the same cost savings are realized.

[12] The Office of Management and Budget (1992, October 29, p. 18) defines a discount rate as "the interest rate used in calculating the present value of expected yearly benefits and costs." Regarding the 3 percent discount rate, see Office of Management and Budget, 2003, September 13.

- **Long-Term**. This scenario assumes sustained earnings impacts throughout College Access program participants' and College Access program AmeriCorps members' working years. The assumption is that earnings impacts last 30 years. A discount rate of 3 percent is applied to the earnings each year, to represent net present value in 2019 dollars.

The only difference among the three scenarios is the length of time that increased employment and earnings are sustained; all other benefits are held constant.

The short-term scenario assumes benefits for only the year after program service, while the long-term scenario (30 years of sustained employment and earnings benefits) represents roughly a lifetime of working years. The medium-term scenario (15 years of sustained employment and earnings benefits) represents the midpoint between the short-term and long-term scenarios. Note, future employment and earnings impacts for College Access participants will only be captured in the medium-term and long-term scenarios because the 2017–2018 College Access cohort is not expected to graduate high school until 2019, achieve some college until 2021, and achieve a college degree until 2025.[13] As a result, the short-term scenario (or 1 year of expected benefits) does not capture College Access participant benefits. The medium-term scenario captures the years after assumed educational attainment (i.e., 2018 + 15 years is 2033, less 7 years of education for those pursing a B.A. would encompass 2025–2033, discounted at 3 percent to 2018). The long-term scenario captures the years after assumed educational attainment (i.e., 2018 + 30 years is 2048, less 7 years of education for those pursing a B.A. would encompass 2025–2048, discounted at 3 percent to 2018).

Monetizing Benefits and Costs

This analysis monetized an array of benefits and included College Access program costs all in 2019 dollars to assess the ROI of College Access. Additional details on the methodology employed and the calculations used for this analysis are in Appendix B.

Benefits

College Access results in monetizable benefits to College Access participants, AmeriCorps members, and the government. Figure 3 summarizes these benefits and data sources by stakeholder group.

[13] This methodology assumes that all College Access students destined to achieve a bachelor's degree will do so within six years of high school graduation.

Figure 3. Benefits Realized from the College Possible Program by Stakeholder Group

Stakeholder Group	Benefits	Data Sources*
College Access Participants	• Additional earnings from increased education[14]	• College Possible (2020) • Howley and Uekawa (2013) • Avery (2013) • Ingram et al. (2018) • Trostel (2015) • Current Population Survey (CPS) earnings (U.S. Census Bureau, 2018) • Consumer Price Index (BLS, n.d.) • Pell Institute (2019)
AmeriCorps Members	• Education awards • Additional earnings from increased education due to education award • Living allowances • Additional earnings from increased employment[15]	• Friedman, et al. (2016) • Zeidenberg, et al. (2016) • College Possible. (2020) • CPS earnings (U.S. Census Bureau, 2018) • Trostel (2015) • Consumer Price Index (BLS, n.d.) • AmeriCorps (2020)[16]

[14] Because College Access participants are juniors in high school during the 2018 program year, additional earnings from increased education are only estimated in the medium-term and long-term scenarios for the years that occur after participants are expected to graduate from high school, complete some college coursework, and receive bachelor's degree, as predicted.

[15] Freidman, et al. (2016, p. 56) found that AmeriCorps service led to a 5 percent decrease in unemployment between six months prior to service and six months after service. This is leveraged to monetize the additional earnings of AmeriCorps members who serve in the College Possible program.

[16] Unless otherwise cited, all information provided directly by AmeriCorps for this report was received through ICF's personal communication with AmeriCorps in 2020.

Stakeholder Group	Benefits	Data Sources*
Government	• Tax revenue from increased College Access participant earnings post-program and sales tax revenue from the induced increased economic activity • Public economic benefits (e.g., tax payments, health savings, reduced crime, welfare savings) from increased College Access participant education • Tax revenue from increased AmeriCorps member earnings post-national service and sales tax revenue from the induced increased economic activity • Reduced spending on corrections, public assistance, and social insurance associated with increased educational attainment of AmeriCorps members post-national service	• Consumer Expenditure Survey (BLS, 2019) • Federal and state income tax rates (IRS, 2019; Tax Foundation, 2019) • Social Security tax rate (SSA, 2019) • Medicare tax rate (SSA, 2019) • Combined state and average local sales tax rates (Tax Foundation, 2019) • Trostel (2015)

*The use of these data sources is discussed in more detail in the subsequent paragraphs. Minnesota-specific state income and combined state and average local sales tax rates are used for College Access participants' increased earnings and on AmeriCorps members' living allowances. National average tax rates are used for AmeriCorps members' increased earnings, and education awards are national averages.

Additional Earnings from Increased Education (Benefit to College Access Participants)

As discussed in the "Implications for ROI Analysis of the College Possible Program" section, College Access students' initial enrollment at four-year colleges increased by more than 15 percentage points for program participants (Avery, 2013). Thus for the College Access program's 1,302 high school seniors, 15 percent (195 students) are expected to enroll in a four-year college who would not have without the program. The Pell Institute estimates that 41 percent of national low-income, first-generation college students complete a bachelor's degree or higher within six years (Pell Institute, 2019). Applying that percentage to College Access participants yields 80 high school students who would earn a bachelor's degree who otherwise would not. Those who enroll in a four-year college but do not graduate (115 students) are expected to achieve some college education.

For the purposes of our analysis, we assume that students who complete four-year degrees would have completed two-year degrees in the absence of the program. This is a reflection of the RCT results that reveal that a larger percentage of students in the control group attend two-year colleges. Thus, the increased earnings estimated for those who complete a four-year degree are net of the additional earnings earned by those who complete a two-year degree compared to graduating high school. This results in a conservative estimate of the program benefits.To estimate additional earnings, the study uses College Possible's 2017–2018 academic year demographic data and Current Population Survey (CPS) data on the difference in annual median earnings for individuals with a high school degree versus those without a high school degree, those with some college versus those with a high school degree, and those with a B.A. versus those with a high school degree, by race and gender (U.S. Census Bureau, 2018). The analysis used the Consumer Price Index (CPI) to express the resulting dollar estimate in 2019 dollars (Bureau of Labor Statistics, n.d.). As the College Access participants are high school juniors and seniors at the time of the intervention, the short-term scenario only captures additional earnings of seniors who graduate from high school because of the program but do not pursue additional education. The medium-term and long-term scenarios (which extend 15 and 30 years, respectively, from the 2017–2018 academic year) capture the benefit of increased earnings after the College Access participants achieve their expected terminal educational attainment.

Additional Earnings from Increased Employment (Benefit to AmeriCorps Members)

Evaluations have shown that serving in AmeriCorps fosters higher skill acquisition, increased educational attainment, and higher income from increased employment post-national service (Friedman et al., 2016; Zeidenberg et al., 2016). Freidman et al. (2016) found that unemployment among AmeriCorps members six months after their period of national service was 5 percentage points lower compared to six months before.P39F To monetize this decrease in unemployment, the analysis first applied the 5 percent reduction in unemployment to the number of AmeriCorps members for the College Access program's 2017–2018 academic year and then applied the product to the median annual earnings by demographic in terms of their race, gender, age, and educational attainment (AmeriCorps, 2018).[17,18]

The analysis proceeded to:

- Estimate the additional AmeriCorps members employed attributable to national service
- Estimate the annual median earnings of the AmeriCorps members by demographic
- Calculate the total earnings for AmeriCorps members attributable to the increased employment

[17] College Possible could not provide demographic data on AmeriCorps members, so the analysis applied the demographics of the American State and National AmeriCorps members.

[18] College Possible's AmeriCorps members must have a bachelor's degree before serving in the program.

The earnings metrics for AmeriCorps members were applied and discounted based on the short-term, medium-term, and long-term scenarios in net present 2019 dollars. The post-tax AmeriCorps members' projected earnings represents the additional income earned by AmeriCorps members attributable to their participation in national service.

Education Awards and Living Allowances (Benefits to AmeriCorps Members)

AmeriCorps members receive living allowances during their national service term and education awards after program exit. Both living allowances and education awards are taxable, so post-tax amounts were used to calculate benefits to members.

Living Allowances. AmeriCorps members use living allowances to pay for expenses during their service terms. This post-tax amount represents a direct benefit to AmeriCorps members.

Education Awards. AmeriCorps members can use education awards to a) pay for additional educational attainment and b) repay student loans. Friedman et al. (2016) studied how AmeriCorps members allocate their education awards between these eligible uses.

- ***Education award used to pay for additional educational attainment***. AmeriCorps members receive an education award after serving in the AmeriCorps program, which is used by a portion of members to help pay for postsecondary degrees post-service. The additional educational attainment resulting from the use of the education award generates additional earnings for AmeriCorps members. AmeriCorps members are required to have a bachelor's degree to serve in the College Possible program. This study, therefore, assumes, based on Friedman et al. (2016), that a percentage of AmeriCorps members will use the education award to earn graduate degrees. The analysis estimated the value of the additional educational attainment attributable to the education awards (based on the proportion of graduate school tuition paid with the education award) in terms of lifetime earnings. These estimated additional earnings were included as a benefit to AmeriCorps members.
- ***Education award used to repay student loans***. The amount of post-tax education awards used to repay student loans, as identified by Friedman et al. (2016), was included in the ROI analysis as a direct one-time benefit to AmeriCorps members. The analysis assumes that AmeriCorps members would have made regular payments on student loans. Thus, the education award serves as a personal cost savings for those who do not continue their education by pursuing a graduate degree.

Tax Revenue Generation and Reduced Spending (Benefits to Government)

The benefits of College Access to program participants and AmeriCorps members also result in benefits to the various levels of government.

Benefits to the Government from Increased Educational Attainment by College Access Participants

Similar to the timeframe of College Access participants' increase in educational attainment and median annual earnings, benefits to governments are also captured. Achievement of a high school degree, some college, or a bachelor's degree increases employment opportunities and thus expected median annual earnings. Government benefits from increased educational attainment by College Access participants in the form of:

- **Income tax revenue from increased College Access participant earnings post-program**. The analysis estimated federal income tax, state income tax, Medicare, and Social Security tax for the additional earnings of College Access participants based on 2019 rates. For both the federal and state income tax rates, the analysis used the appropriate rate based on the estimated median annual earnings of participants post-program participation. For the state income tax, the analysis used a rate for Minnesota, assuming that College Access participants continue to reside in that state over the course of their working years.
- Sales tax revenue from the increased economic activity that results from increased College Access participant earnings post-program. To estimate the additional sales tax revenue generated due to the additional net earnings, the analysis multiplied the combined state and average local sales tax rate for Minnesota by the estimated taxable expenditures to income ratio for consumers whose income falls in the expected annual earnings bracket for the College Access participants who are expected to achieve an increase in education, and thus earnings (using the Consumer Expenditure Survey). The resulting product was then applied to the additional earnings of College Access participants to calculate the increase in sales tax to state and local governments.
- **Reduced spending on public assistance from increased educational attainment of College Access participants**. As a result of increased education, those with a high school degree, some college, and a bachelor's degree are expected to receive less public assistance with each educational step. The analysis estimated savings to the federal government with regard to public assistance, including lifetime reduced criminal activity, lifetime welfare cost-savings, lifetime public health savings, and lifetime public health costs (Medicaid/Medicare), using data provided by Trostel (2015).

Benefits to the Government from Increased Earnings and Educational Attainment by AmeriCorps Members

Government benefits from increased earnings and educational attainment by AmeriCorps members in the form of:

- **Income tax revenue from increased AmeriCorps member earnings post-national service**. The analysis estimated federal income tax, state income tax, Medicare, and Social Security tax for the additional earnings of AmeriCorps members based on 2019 tax rates. The analysis estimated tax rates based on the annual median earnings of the AmeriCorps members' education level and demographics. The analysis used average state income tax rates for the United States, given that AmeriCorps members may disperse to various locations nationwide following their service terms and continue to migrate during their working years.

- **Sales tax revenue from the increased economic activity that results from increased AmeriCorps member earnings post-service**. To estimate the additional sales tax revenue generated due to the additional net earnings, the analysis multiplied the average combined state and local sales tax for the United States by the estimated taxable expenditures to income ratio for consumers whose income is similar to that of the AmeriCorps member earnings post-service (using the Consumer Expenditure Survey). The resulting product was then applied to the additional earnings of the AmeriCorps members to calculate the increase in sales tax to state and local governments.
- **Tax revenue from living allowances and education awards**. The living allowance provided to AmeriCorps members during their service term is taxed. This analysis applies all the aforementioned tax rates to estimate this additional government revenue. The analysis uses Minnesota state income and state sales taxes.

  Education awards are also taxed, resulting in additional government revenue. Sales taxes are not calculated for education awards since this award amount cannot be used for consumer purchases. The education award is, however, subject to federal and state taxes,[19] such as income, Social Security, and Medicare taxes. These taxes are accounted for in the ROI analysis (AmeriCorps, 2020a).
- Reduced spending on corrections, public assistance, and social insurance associated with increased educational attainment of AmeriCorps members post-service. The last benefit related to College Possible AmeriCorps members captured by this ROI study is the lifetime reduction in public assistance, social insurance, and corrections/incarceration spending due to the higher educational attainment of members (Trostel, 2015). Higher-educational attainment is associated with less dependence on government assistance programs and lower incarceration rates (Blagg & Blom, 2018; Harlow, 2003). Because College Possible AmeriCorps participation increases educational attainment, the government spends less.

  For the monetization of these benefits, the analysis paired the expected increase in educational attainment for College Possible AmeriCorps members with the expected difference in per-person lifetime government cost savings from Medicaid, SNAP, unemployment insurance, workers' compensation, and incarceration for individuals with different levels of educational attainment. This method conservatively calculates the savings realized by government for College Possible AmeriCorps members.

Costs

The costs for the College Access program used for this ROI analysis include federal and other funding used to support program operations. The costs are specific to the program participant cohort for which the outcomes are measured. Figure 4 shows the

[19] An average rate for the state income taxes is used due to the unknown location of AmeriCorps members at the time of redemption.

segmentation of all of the College Possible program's revenue sources by funder, for the 2018 fiscal year (College Possible, 2019). The proportionally scaled costs to the Minnesota College Access program are also displayed. While College Possible is not explicit regarding the government grants, it is assumed that AmeriCorps federal funds comprise the category.

College Possible's match spending was 388 percent of government funds for the 2018 fiscal year. This match rate suggests that federal funding catalyzes other funding sources for the College Possible program, allowing it to serve more individuals and provide more services than would be otherwise available only under the federal funds, which translates into increased benefits across stakeholder groups.

Figure 4. College Possible Program Funding Sources, 2018

Funder	Funding Provided for the Program Year (2019$)	Proportional Funding, MN & College Access (2019$)	Percent of Total (%)	Percent of AmeriCorps Funds (%)
Government Grants	$4,449,785	$1,131,498	20%	
Contributions and Grants	$15,033,888	$3,822,841	69%	
Other Contributions	$1,754,411	$446,114	8%	388%
Program Fees	$492,090	$125,130	2%	
Total	**$21,730,174**	**$5,525,583**	**100%**	

Note: Assumes that government grants encompass AmeriCorps funds.

Source: College Possible, 2019.

ROI Study Limitations

There are some limitations to consider that will help to contextualize the findings of the analysis. Some of the data sources used, specifically Friedman et al. (2016), that describes program impacts for AmeriCorps members, include data that are self-reported using surveys. Specific outcomes for the College Possible AmeriCorps members were not available. Similarly, the educational outcomes of how College Possible participation helps participants obtain additional education and employment are also unavailable. The analysis instead relies on several assumptions to create a counterfactual for the College Access participants.

Since this ROI analysis only evaluates the benefits of College Access participants in Minnesota, AmeriCorps member benefits and College Possible program costs are proportional to the percentage of College Access participants in Minnesota.

Lastly, it is likely that not all possible benefits from the College Possible program are included in this analysis, since the College Possible evaluation is focused on just increased educational outcomes experienced by College Access participants in Minnesota. College Possible also serves other locations, including Portland, OR; Philadelphia, PA; Chicago, IL; Milwaukee, WI; and Omaha, NE. Additionally, the evaluation does not capture any possible improvements in College Access participants' and or their families' well-being, socioeconomic status, or health because of improved educational attainment. These benefits would also lead to a higher ROI than reported here.

Benefits, Costs, and ROI Results

The ROI for the College Possible program measures the benefits of the program compared to its costs to determine the return to different stakeholders. This section provides estimates of benefits, costs, and the resulting ROI.

Benefits

Figure 5 shows estimates of monetized benefits of the College Possible program by recipient, including College Access participants, AmeriCorps members, and the federal government, for each scenario.[20] As described above, both College Access participants and AmeriCorps members enjoy positive future earnings impacts as a result of the College Possible program. However, the data do not establish the duration of those benefits. To address a range of possible durations for those benefits, the analysis developed three scenarios: 1) short-term, assuming earnings impacts are limited to a single year; 2) medium-term, assuming earnings impacts last 15 years and diminish at a discount rate of 3 percent; and 3) long-term, assuming earnings impacts last 30 years and diminish at a discount rate of 3 percent. Lifetime cost savings to the various levels of governments as well as other benefits not associated with participants' or members' increased earnings (such as living allowances and education awards) remain constant in all three scenarios.

[20] Benefits to College Access participants and AmeriCorps members are inclusive of their respective state and local government benefits.

Figure 5. Benefits by Recipient

Recipient	Benefits by Scenario (2019$) Short-Term	Medium-Term	Long-Term
College Access Program Participants (percent of total)	$1,225,798 (14%)	$13,408,348 (50%)	$21,301,363 (56%)
AmeriCorps Members (percent of total)	$2,432,318 (27%)	$3,737,298 (14%)	$4,149,075 (11%)
Federal Government (percent of total)	$5,251,720 (59%)	$9,787,121 (36%)	$12,542,792 (33%)
Total (total percent)	**$8,909,835 (100%)**	**$26,932,767 (100%)**	**$37,993,229 (100%)**

Notes: All benefits are proportional to the number of College Access participants in Minnesota in the program. AmeriCorps member and College Possible participant categories are inclusive of state and local tax benefits.

Under the short-term scenario, the total benefits equal $9 million, of which 14 percent are attributed to College Access participants, 27 percent are attributed to AmeriCorps members, and 59 percent are attributed to the federal government. Under the medium-term scenario, the total benefits equal roughly $27 million, of which 50 percent are attributed to College Access participants, 14 percent are attributed to AmeriCorps members, and 36 percent are attributed to the federal government. Under the long-term scenario, the total benefits equal roughly $38 million, with 14, 27, and 59 percent attributed to College Access participants, AmeriCorps members, and the federal government, respectively.

Costs

Figure 6 shows the cost of College Possible's College Access program in Minnesota by category. The estimated total cost for the 2017–2018 academic year was $5,923,305. Nineteen percent (19%) of College Possible program costs ($1,131,498) are funded by government grants. The remainder derives from other contributions and grants as well as a small portion from program revenue.

Figure 6. Total College Possible Costs by Category, Proportional to College Access Participants in Minnesota

Category	Cost (2019$)
Total AmeriCorps Member Stipend	$841,710
Total Operating Costs, Less AmeriCorps Stipend	$4,753,694
Total Expected Education Grant Value Redeemed	$327,901
Total Costs, 2017–2018 Academic Year	**$5,923,305**
Total Federal Costs, 2017–2018 Academic Year	**$1,131,498**

ROI Results

Figure 7 shows the benefits and costs that are included in each ROI calculation.

Figure 7. Benefits and Costs Included in the ROI Calculations

ROI Calculation	Benefits (numerator)	Costs (denominator)
Total Benefits per Federal Dollar	All participant, AmeriCorps member, and government benefits derived from the program	• Federal AmeriCorps funding
Total Benefits per Funder Dollar	All participant, AmeriCorps member, and government benefits derived from the program	• Federal AmeriCorps funding • Budgeted match funding • All other funding
Federal Government Benefits per Federal Dollar	Additional tax revenue generation and reduced spending attributable to the program	• Federal AmeriCorps funding

Figure 8 summarizes ROI results for College Access across the short-term, medium-term, and long-term scenarios. Three different ROI results are calculated for each scenario. Since two of the scenarios include benefits to society (College Access participants and AmeriCorps members), the results are expressed as cost-benefit ratios, while maintaining the ROI terminology. The ratio takes the form of the sum of monetized benefits over the sum of monetized costs. The ROI expressed as a benefit-cost ratio in this study can be interpreted as the number of dollars returned for every dollar of investment (or cost). See Appendix B for the formulas used to calculate each ROI.

Figure 8. ROI Results for College Access Program

ROI Calculation	ROI Scenario		
	Short-Term	Medium-Term	Long-Term
Total Benefits per Federal Dollar	$7.87	$23.80	$33.58
Total Benefits per Funder Dollar	$1.50	$4.55	$6.41
Federal Government Benefits per Federal Dollar	$4.64	$8.65	$11.09

Note: This assumes that all government funding to College Possible is federal.

Given the assumptions under the short-term scenario, the total benefits equal $7.87 times the federal government's investment, meaning that College Access participants, AmeriCorps members, and the government realize a combined return of $7.87 on every dollar invested by the federal government (AmeriCorps). The total benefits per total funder[21] dollar equal $1.50 times the total investment made by all funders. Lastly, under the short-term scenario, the federal government alone receives $4.64 dollars back in federal benefits for every tax dollar invested.

Under the medium-term scenario, the ROI for total benefits per federal dollar, total benefits per funder dollar, and federal government benefits per federal dollar are $23.80, $4.55, and $8.65, respectively.

Under the long-term scenario, the ROI to the federal government is $33.58 per federal dollar. The total benefits per funder dollar combined (under the long-term scenario), when all benefits are considered, is $6.41. In addition, under the long-term scenario, for every dollar invested by the federal government, the federal government alone realizes $11.09 in return from additional tax revenue and savings.

Given the different assumptions of the three scenarios, the respective benefits across all three ROI calculations are larger than their associated costs. At a minimum—when considering solely the federal government investment provided by AmeriCorps and the benefits that would be realized for one years' time by the federal government alone—College Possible's College Access program in Minnesota generates a very strong return (as shown under the short-term scenario with an ROI of $4.64). This indicates that given the most conservative assumptions and ROI calculation, the federal government still receives a monetary return greater than the taxes allocated to pay for the College Possible program's annual operation. When all benefits are considered (i.e., that of College Access participants, AmeriCorps members, and of the various levels of government), they are $7.87 times that of AmeriCorps's initial investment into College Possible for the most short-term scenario. Thus, when all stakeholder benefits are realized (and the benefit of increased earnings is only sustained for one year), they are $4.64 times the initial investment made by the federal government.

[21] The different funder groups whose investment is in this calculation include the federal government (i.e., AmeriCorps), state and local governments, and other non-government entities.

The magnitude of the positive ROI calculations is driven by several factors, including:

- **The expected benefits/cost savings of increased education attainment for College Access participants**. Large benefits and cost savings per person can be expected from increased educational attainment. For example, Trostel (2015) estimated that the present value of federal costs savings in Medicaid, SNAP, and similar programs, expected from a high school degree over no high school degree, is more than $40,000 per person. The College Access program is estimated to help yield an additional 115 individuals attain some college and 80 bachelor's degrees from the original 1,302 high school seniors in the 2017–2018 academic year.
- **The employment outcomes of AmeriCorps members**. According to the national AmeriCorps Alumni Survey Outcomes Study, the percentage of members unemployed was 5 percent lower six months after serving in AmeriCorps versus six months before (Friedman et al., 2016).
- **The educational benefits to AmeriCorps members**. With the receipt of education awards, AmeriCorps alumni can use these funds to help pay for postsecondary degrees after exiting the program.

Recommendations for Further Research

Future ROI studies for national and community service programs such as College Possible can be strengthened in several ways.

Recommendation 1: Ensure sample sizes for program evaluations are adequate and random. AmeriCorps grantees are required to conduct evaluations for their programs. To ensure findings are statistically representative of the population served, grantees should identify what the appropriate sample size should be, which would differ by program based on the number served. Appropriate sample sizes that are randomly selected will make the findings more reliable and provide greater confidence that the outcomes can be attributed to the intervention itself versus other confounding factors. Overall, larger sample sizes in these studies can provide a smaller margin of error, identify outliers in the data, and otherwise measure program impacts more accurately.

Recommendation 2: Document outcomes using third-party data. Using third-party data, along with or in place of self-reported data, can also improve the accuracy of program outcome measurements. While self-reported data is easier to obtain, especially via survey, it has several disadvantages. Some answers may be exaggerated, respondents may not answer honestly, and response biases could affect results. AmeriCorps programs should—where possible—leverage data from third-party sources either to provide data for their program evaluation or to corroborate findings from self-reported data. For example, if employment and earnings outcomes are of interest, unemployment insurance (UI) data could be used to verify participants' wages or employment status.

Recommendation 3: Determine the persistence of impacts for both program participants and AmeriCorps members. Future studies of the College Possible program should conduct repeated data collection and measurement over time for College

Possible participants. This examination can help understand how and why the benefits of College Possible's College Access and College Success interventions vary and persist across demographics and time. This could allow for the estimation of more benefits from impacts that are currently not captured. The persistence of impacts, such as increased earnings, is often not measured in evaluations because they require tracking over a long period of time. Rigorous research on the persistence of impacts will enable AmeriCorps to determine a single value for ROI calculations and avoid relying on the scenario-based approach.

Recommendation 4: Quantify ripple effects. Earnings impacts on program participants and AmeriCorps members likely have positive benefits for those individuals' families and communities. Rigorous research on those potential ripple effects would enable AmeriCorps to capture a broader array of benefits of this and other programs, which would increase the resulting ROI.

Recommendation 5: Evaluate the combined College Access and College Success programs. As noted in the "College Possible Evaluation History" section, an RCT evaluating the participants of the College Access program who subsequently use the College Success program, as opposed to those that do not, has not yet been completed. More rigorous evaluation of the College Success program and College Access's interaction with the College Success program is recommended. Further analysis would offer additional insights in better understanding the attrition rate with and without College Success as well as the value added by each program individually and combined.

Conclusion

The results suggest that investment in College Access yields favorable impacts across a variety of stakeholder groups. Specifically, impacts are realized by College Access participants, AmeriCorps members, and the government. College Access participants benefit from increased educational attainment, which can lead to improved employment and earning outcomes. As College Possible near-peer coaches, AmeriCorps members gain valuable work experience, preparing them for future employment or educational pursuits. The government benefits from the improved employment and earnings outcomes of both the College Access participants and the AmeriCorps members in terms of additional tax revenue and reduced spending on public assistance and other forms of government spending such as corrections.

The results of the ROI indicate that the benefits realized by College Access participants, AmeriCorps members, and the government strongly outweigh the investment made by funders (e.g., federal, state, and local governments, as well as other community-based organizations who provide program funding). Although the exact ROI results vary based on the types of benefits and the source of funding, they are all significantly positive. The use of short-term, medium-term, and long-term scenarios allowed for a range of estimates. The short-term scenario results suggest that even using the most conservative estimate, the College Access program delivers a large and significant ROI.

Appendix A: Benefits and Costs Included in Return on Investment Calculations

Benefits

In Figure A-1, the rightmost three columns indicate whether a benefit is included in the numerator of a return on investment (ROI) calculation.

Figure A-1. Benefits Included in ROI Calculations

Benefit	Stakeholder Group	Data Sources	Total Benefits per Federal Dollar	Total Benefits per Funder Dollar	Federal Government Benefits per Federal Dollar
Increased earnings due to increased educational attainment of program participants	Program participant	• Howley & Uekawa (2013) • Avery (2013) • Ingram et al. (2018) • College Possible (2020) • Pell Institute (2019) • Current Population Survey (CPS) earnings (U.S. Census Bureau, 2018) • Consumer Price Index (CPI) for all urban consumers, Midwest region (BLS, n.d.)	X	X	

Benefit	Stakeholder Group	Data Sources	Total Benefits per Federal Dollar	Total Benefits per Funder Dollar	Federal Government Benefits per Federal Dollar
Increased income tax revenue due to increased earnings of program participants	Federal and state governments	• College Possible (2020) • Pell Institute (2019) • CPS earnings (U.S. Census Bureau, 2018) • CPI for all urban consumers, Midwest region (BLS, n.d.) • Tax rate data (Tax Foundation, 2019)	X	X	X
Increased Social Security and Medicare tax revenue due to increased earnings of program participants	Federal government	• College Possible (2020) • Pell Institute (2019) • CPS earnings (U.S. Census Bureau, 2018) • CPI for all urban consumers, Midwest region (BLS, n.d.) • Social Security Administration (2019)	X	X	X

Benefit	Stakeholder Group	Data Sources	Total Benefits per Federal Dollar	Total Benefits per Funder Dollar	Federal Government Benefits per Federal Dollar
Increased sales tax revenue due to increased earnings of program participants	State and local governments	• College Possible (2020) • Pell Institute (2019) • CPS earnings (U.S. Census Bureau, 2018) • CPI for all urban consumers, Midwest region (BLS, n.d.) • Tax rate data (Tax Foundation, 2019) • Bureau of Labor Statistics (BLS) Consumer Expenditure Surveys (2019)	X	X	
Lifetime reduced spending in public health, criminal activity, and welfare due to increased educational attainment of program participants	Federal government	• College Possible (2020) • Pell Institute (2019) • Trostel (2015) • CPI for all urban consumers, Midwest region (BLS, n.d.)	X	X	X

Benefit	Stakeholder Group	Data Sources	Total Benefits per Federal Dollar	Total Benefits per Funder Dollar	Federal Government Benefits per Federal Dollar
Increased earnings of national service members due to reduced unemployment of national service members	National service member	• Friedman et al. (2016) • CPS earnings (U.S. Census Bureau, 2018) • CPI for all urban consumers. Midwest region (BLS, n.d.)	X	X	
Increased income tax revenue due to reduced unemployment of national service members	Federal and state governments	• Friedman et al. (2016) • CPS earnings (U.S. Census Bureau, 2018) • CPI for all urban consumers, Midwest region (BLS, n.d.) • Tax rate data (Tax Foundation, 2019); (SSA, 2019)	X	X	X

Benefit	Stakeholder Group	Data Sources	Total Benefits per Federal Dollar	Total Benefits per Funder Dollar	Federal Government Benefits per Federal Dollar
Increased Social Security and Medicare tax revenue due to increased earnings of national service members	Federal government	• Friedman et al. (2016) • CPS earnings (U.S. Census Bureau, 2018) • CPI for all urban consumers, Midwest region (BLS, n.d.) • Social Security Administration	X	X	X
Increased sales tax revenue due to reduced unemployment of national service members	State and local governments	• Friedman et al. (2016) • CPS earnings (U.S. Census Bureau, 2018) • CPI for all urban consumers, Midwest region (BLS, n.d.) • Tax rate data (Tax Foundation, 2019) • BLS Consumer Expenditure Surveys (2019).	X	X	

Benefit	Stakeholder Group	Data Sources	Total Benefits per Federal Dollar	Total Benefits per Funder Dollar	Federal Government Benefits per Federal Dollar
Increased earnings of national service members due to educational attainment partially funded by AmeriCorps	National Service Member	• AmeriCorps Education Award (AmeriCorps, 2020b) • National Center for Education Statistics (NCES, 2018) • CPS earnings (U.S. Census Bureau, 2018) • CPI for all urban consumers, Midwest region (BLS, n.d.) • Trostel (2015)	X	X	

Benefit	Stakeholder Group	Data Sources	Total Benefits per Federal Dollar	Total Benefits per Funder Dollar	Federal Government Benefits per Federal Dollar
Increased income tax revenue due to educational attainment partially funded by AmeriCorps of national service members	Federal and state governments	• AmeriCorps Education Award (AmeriCorps, 2020b) • CPS earnings (U.S. Census Bureau, 2018) • CPI for all urban consumers, Midwest region (BLS, n.d.) • NCES (2018) • Tax rate data (SSA, 2019); (Tax Foundation, 2019)	X	X	X

Benefit	Stakeholder Group	Data Sources	Total Benefits per Federal Dollar	Total Benefits per Funder Dollar	Federal Government Benefits per Federal Dollar
Increased Social Security and Medicare tax revenue due to educational attainment partially funded by AmeriCorps of national service members	Federal government	• AmeriCorps Education Award (AmeriCorps, 2020b) P59F • CPS earnings (U.S. Census Bureau, 2018) • CPI for all urban consumers, Midwest region (BLS, n.d.) • NCES (2018) • Social Security Administration (2019)	X	X	X

Benefit	Stakeholder Group	Data Sources	Total Benefits per Federal Dollar	Total Benefits per Funder Dollar	Federal Government Benefits per Federal Dollar
Increased sales tax revenue due to educational attainment partially funded by AmeriCorps of national service members	State and local governments	• AmeriCorps Education Award (AmeriCorps, 2020b) P60F • CPS earnings (U.S. Census Bureau, 2018) • CPI for all urban consumers, Midwest region (BLS, n.d.) • NCES (2018) • Tax rate data (Tax Foundation, 2019); (BLS Consumer Expenditure Surveys, 2019)	X	X	
AmeriCorps member living allowances and education awards	National service member	• AmeriCorps Education Award (AmeriCorps, 2020b) P62F • College Possible (2020)	X	X	

Benefit	Stakeholder Group	Data Sources	Total Benefits per Federal Dollar	Total Benefits per Funder Dollar	Federal Government Benefits per Federal Dollar
Reduced spending on lifetime public assistance, corrections, and social insurance due to increased educational attainment of national service members	Federal, state, and local governments	• Trostel (2015) • CPS earnings (U.S. Census Bureau, 2018) • CPI for all urban consumers, Midwest region (BLS, n.d.)	X	X	X

Costs

In Figure A-2, the rightmost three columns indicate whether a cost is included in the denominator of a return on investment (ROI) calculation.

Figure A-2. Costs Included in ROI Calculations

Cost	Stakeholder Group	Data Sources	Total Benefits per Federal Dollar	Total Benefits per Funder Dollar	Federal Government Benefits per Federal Dollar
AmeriCorps costs for education awards, living allowances, and other College Possible program grant funding	Federal government (AmeriCorps)	• AmeriCorps Education Award (AmeriCorps, 2020) P63F • College Possible (2020)	X	X	X
Other funding	Non-government funders	• College Possible (2019)		X	

Appendix B: Additional Information on the Methodology

This appendix provides additional details on the methodology used for this study, as a supplement to the methodology section in the main report. It describes the steps used to calculate the return on investment (ROI), the results of interim calculations that contribute to the ROI calculations, and assumptions that underlie the analyses.

Methodology Overview

Calculating the ROI for College Possible's College Access program included the following steps:

- Measuring and monetizing program benefits to College Access participants, AmeriCorps members, and the different levels of government
- Assessing program costs
- Calculating the ROI

This ROI analysis included only those benefits that could be reasonably monetized given the available data and that likely would not have occurred without the AmeriCorps program.

Although both College Access participants and AmeriCorps members experience positive benefits from the College Access program (described below), available data do not establish how long these impacts are sustained over time. To address a range of possible durations for those benefits, three scenarios were developed for this ROI study:

- **Short-Term**. This scenario assumes short-term earnings impacts. The assumption is that earnings impacts are limited to a single year.
- **Medium-Term**. This scenario assumes a longer duration of earnings impacts. The assumption is that earnings impacts last 15 years. A 3 percent discount rate is applied each year to represent net present value in 2019 dollars.[22]
- **Long-Term**. This scenario assumes sustained earnings impacts throughout College Access program participants' and College Access program AmeriCorps members' working years. The assumption is that earnings impacts last 30 years. A discount rate of 3 percent is applied to the earnings each year, to represent net present value in 2019 dollars.

[22] The Office of Management and Budget defines a discount rate as, "The interest rate used in calculating the present value of expected yearly benefits and costs." Regarding the 3 percent discount rate, see Office of Management and Budget 2003, September 13.

The only difference among the three scenarios is the length of time that increased employment and earnings are sustained; all other benefits are held constant.[23] Note, employment and earnings impacts for College Access program participants who continue with their education following high school will only be captured in the medium-term and long-term scenarios because it is assumed that participants won't finish a bachelor's degree for six years.[24] The employment and earnings impacts for College Access participants who do not continue their education following high school are included in all scenarios. For each ROI calculation, three ROI estimates using the three scenarios were developed, which is explained in the "Calculating ROI" section.

Measuring Benefits

The first step in calculating the ROI for the College Access program was to measure the program benefits. As a result of the College Access program, College Access program participants, AmeriCorps members serving in the College Possible program, and various levels of the government benefit. These benefits were identified through an extensive literature review and data collection process. The methods used to measure benefits for each of these stakeholders are described below.

Benefits to College Access Participants

Figures B-1 and B-2 show the additional earnings of the College Access participants broken down by expected educational attainment for the three scenarios, discounted at a 3 percent rate.[25] Along with the earnings, Figure B-3 also shows the lifetime reduction in public assistance payments received due to the additional educational attainment of College Access participants (Trostel, 2015). In other words, it shows the reduced spending on welfare, health care costs and criminal justice costs for College Access participants due to their increased educational attainment (i.e., high school completion, some college, or a bachelor's degree). This is a lifetime benefit and remains constant across the three scenarios.

This analysis also calculated the federal and state income, Medicare, and Social Security taxes on the additional income (Internal Revenue Service, 2019; Social Security

[23] These three scenarios consider varying durations of how long increased employment and earnings benefits last for both College Access participants and AmeriCorps members. Certain additional benefits are included equally across these three scenarios. Specifically, lifetime benefits related to decreased public assistance, social insurance, and corrections costs as a result of participants' and members' higher educational attainment post-program and post-service, respectively, are represented in each of these three scenarios equally. Thus, whether participants' or members' earnings impacts are sustained for one year (i.e., short-term scenario) or 30 years (i.e., long-term scenario), the same amount of these cost savings are realized.

[24] For the purpose of this analysis, a conservative estimate of 6 years required to attain a bachelor's degree and 3 years required to attain "some college."

[25] The Office of Management and Budget defines a discount rate as, "The interest rate used in calculating the present value of expected yearly benefits and costs." Regarding the 3 percent discount rate, see Office of Management and Budget. (2003, September 13).

Administration, 2019a, 2019b; Tax Foundation, 2019).[26] The summation of these taxes for each of the three scenarios is shown in Figure B-3. Subtracting those taxes from the gross additional income resulting from the increased educational attainment for College Access participants yields post-tax income. From the post-tax income, additional sales tax revenue to the state of Minnesota (as well as local governments within the state) is estimated, assuming College Access participants remain in Minnesota.[27] These estimates are presented across the three scenarios.

Figure B-1: Additional Students with Some College and Expected Median Annual Additional Earnings (2019$)

College Access Participants	Additional Students with Some College		Annual Additional Earnings per Individual ($)		Total Annual Additional Earnings ($)	
Race/Ethnicity	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
White	1	2	$5,556	$5,091	$7,8585	$11,258
Black	11	17	$6,456	$5,478	$70,666	$93,785
Hispanic	5	5	$7,058	$8,194	$38,949	$70,726
Other	27	43	$9,743	$10,832	$270,165	$469,797
Total	**45**	**67**	**NA**	**NA**	**$1,033,201**	

Sources: Pell Institute (2019), College Possible, U.S. Census Bureau, 2018

Note: Values may not match due to rounding.

Earnings represent additional income due to some college attainment over a high school diploma.

[26] For the additional high school graduates, the analysis assumes a federal marginal income tax rate of 12 percent, the state income tax for Minnesota (7.85 percent), Medicare (1.45 percent), and Social Security (6.20 percent).

[27] The U.S. Bureau of Labor Statistics Consumer Expenditure Survey reflects that for the income bracket College Access participants who would benefit from additional annual earnings, their expected taxable expenditures would be 53 percent.

Figure B-2: Additional Students with a Bachelor's Degree and Expected Median Annual Additional Earnings (2019$)

College Access Participants	Additional Students with Bachelor's Degree		Annual Additional Earnings per Individual ($)		Total Annual Additional Earnings ($)	
Race/Ethnicity	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
White	1	2	$23,805	$16,956	$23,388	$26,056
Black	7	12	$6,786	$15,427	$51,617	$183,537
Hispanic	4	6	$9,320	$11,289	$35,741	$610,623
Other	19	30	$31,146	$20,260	$600,165	$67,713
Total	**31**	**49**	**NA**	**NA**	**$1,598,840**	

Sources: College Possible, 2020; Pell Institute, 2019; U.S. Census Bureau, 2018

Note: Values may not match due to rounding.

Earnings represent additional income due to a college degree over some college attainment.

Figure B-3: Additional Earnings for College Access Participants and Resulting Public Benefits by Scenario (2019$)

Scenario	Gross Additional Earnings of College Access Participants	Reduced Public Assistance	Payroll Tax Payments*	Estimated Additional Sales Tax Revenue
Short-Term**	$0	$5,839,113	$0	$0
Medium-Term	$16,167,949	$5,839,113	$5,125,240	$319,304
Long-Term	$26,643,085	$5,839,113	$8,445,858	$520,036

*Note: Summed federal and state income, Medicare, and Social Security taxes based on gross earnings of College Access participants.

** The short-term scenario does not include the increased earnings of those that go on to pursue higher education.

Benefits to AmeriCorps Members

The AmeriCorps members who provide services to the College Access participants also experience benefits due to their service. This analysis estimates these benefits:

- Living allowance and education award
- Increased earnings due to increased education derived from the education award

- A 5-percentage point reduction in unemployment due to AmeriCorps service (Friedman, et al., 2016).[28]

Note, the benefits to AmeriCorps members are presented here for the members serving College Possible's College Access program in Minnesota.

Living Allowance and Education Award

Living allowances are given to AmeriCorps members during their one-year service term to pay for various living expenses, such as housing and groceries. Regarding education awards, according to Friedman et al. (2016), a significant portion of AmeriCorps State & National alumni use them to pay for additional education at colleges, graduate schools, and technical schools while others use them to pay off outstanding student loans.

Both the living allowances and education awards (considered one-time benefits that are not discounted or spread over time) are taxable. This analysis included their post-tax value of living allowances for the 71 AmeriCorps members in the ROI analysis as AmeriCorps member benefits (Figure B-4). The benefits derived from education awards are described in detail, below. When calculating the ROI, these benefits are scaled using the number of College Access participants in Minnesota.

Figure B-4: Additional AmeriCorps Member Benefits

Benefit	Post-Tax Value (2019$)	Notes
Living Allowance (net)	$599,962	Post-tax living allowances members receive during service
Education Award (net) Used for Schooling	$252,484	Post-tax education award amount, assumed used to pay for schooling (graduate school, loans, etc.)
Total	**$852,446**	

Sources: College Possible, 2020; tax rates (Internal Revenue Service, 2019; Social Security Administration, 2019a, 2019b; Tax Foundation, 2019); AmeriCorps, 2020b

Increased Earnings Due to Increased Education Derived from the Education Award

The AmeriCorps education award pays for some portion of member educational attainment, and the future earnings derived from the educational attainment is treated as a direct benefit to AmeriCorps members. To calculate the portion of member educational attainment that is attributable to College Possible's College Access program, tuition cost data from the National Center for Education Statistics (NCES) were used. Figure B-5 details the average total cost of tuition for each degree type data from

[28] According to the national AmeriCorps Alumni Survey Outcomes Study, the percentage of members unemployed was 5 percent lower six months after serving in AmeriCorps than six months before.

NCES and the portion of that cost that the $6,195 education award ($4,574 after taxes) amount represents. These percentages were used to estimate the lifetime benefits of educational attainment that can be attributed to the education award. For example, according to NCES, the average cost of a graduate degree during the 2017–2018 academic year was $24,672 in 2019 dollars. The $4,574 post-tax education award represents roughly 19 percent of the cost of that degree so, accordingly, AmeriCorps is only credited that percentage of the lifetime benefits of an AmeriCorps member's graduate degree. Note, AmeriCorps members serving in the College Possible program are required to hold a bachelor's degree prior to service. Thus, only those AmeriCorps members expected to enroll in a graduate degree program post-service (based on survey results from Friedman et al. [2016]) are included in this portion of the analysis.

Figure B-5: Average Total Cost of Education by Degree

Degree Type	Cost (2019$)	Percent of Degree Tuition Covered by Education Award (%)
Graduate Degree[29]	$24,672	19%

Source: National Center for Education Statistics, 2018

The survey of AmeriCorps alumni in Friedman et. al (2016) provided the percentage of members planning to use the education award to attend graduate school (23 percent) post-service, attend college (21 percent) post-service, attend a technical or vocational school (2 percent) post-service, and repay student loans (33 percent), for a total of 79 percent planning to use the education award. This survey was conducted across many AmeriCorps programs, many of which do not require a college degree pre-service. Because College Possible's AmeriCorps members must have obtained a bachelor's degree prior to service, the percentage of survey respondents that did not plan on using the education award at all (21 percent) was removed. Next, the distribution of planned uses for the education award was scaled up to account for this. This reallocation resulted in an estimate of 29 percent of College Possible's AmeriCorps members (up from the initial 23 percent) who would use the education award to pursue a graduate degree post-service.[30] The remaining 71 percent of College Access AmeriCorps members are assumed to use the education award to repay student loans.

To determine the future lifetime earnings realized due to the use of the education award post-service, the College Access AmeriCorps members that served during the most recent program year are determined by whether they are assumed to attain a graduate degree post-service, as shown in Figure B-6. Then, the difference in the

[29] Assumes a two-year program.

[30] For example, the 23 percent of AmeriCorps members planning to use the education award to attend graduate school was scaled up by the ratio of the full distribution (100 percent) to the reduced sample of those planning to use the education award (23% * 100%/79% = 29%) to account for the fact that College Access AmeriCorps members have already attended college, differentiating them from the Friedman et al. (2016) sample of all AmeriCorps members.

additional lifetime earnings from a bachelor's degree to a graduate degree is estimated using data provided by Trostel (2015), which is shown in the third column of Figure B-6 and expressed in 2019 dollars. For example, Trostel (2015) calculated that the lifetime earnings in 2019 dollars of someone with a graduate degree is about $455,000 higher than someone with a bachelor's degree. This represents the additional lifetime earnings realized as a result of gaining a graduate degree if a bachelor's degree was already completed. This increase in income is then scaled by the percent of the degree tuition that can be paid using education award such that College Possible is only credited for the percentage of the benefits equal to the percentage of tuition that the education award pays for.

Then, this amount is applied to the estimated number of AmeriCorps members seeking a graduate degree post-service. As noted in Figure B-6, this lifetime earnings amount is roughly $1.3 million across all College Access AmeriCorps members who served in the most recent program year.

Figure B-6: Additional Earnings from AmeriCorps Members' Use of the Education Award

Degree Type	Number of College Possible AmeriCorps Members	Percent of Degree Tuition Covered by Education Award (%)	2019 Additional Lifetime Earnings over Previous Educational Step ($)*	Additional Lifetime Earnings from Education Award ($)
Graduate Degree	15.41	19%	$455,221	$1,300,458

Sources: College Possible, Trostel (2015)

* Note: This value is the difference of lifetime earnings over the prior degree type (e.g., one with a graduate degree can expect to earn roughly $455,000 more over their lifetime than with a bachelor's degree).

The improved educational outcomes realized by College Access participants and their AmeriCorps members also generate benefits to the various levels of government in the form of tax revenue generation and costs savings in public assistance, corrections, and other forms of government support. A variety of taxes and their associated rates are applied to College Access participants' and AmeriCorps members' earnings as well as to their estimated spending to determine tax revenue generation. Of note, only the difference in cumulative median net earnings for College Access participants and AmeriCorps are used to calculate government benefits in increased tax revenue. Again, this difference in cumulative median net earnings for each of these two groups represents the increased earnings solely attributable to College Access. Thus, the government taxes derived from these earnings amounts would also be solely attributable to the College Access program. Government benefits are also derived from College Access participants' increased earnings in the form of a reduction in public assistance payments and from AmeriCorps members' increased educational attainment in the form of decreased public assistance, social insurance, and corrections costs. Details concerning these different fiscal benefits are described in more detail below. Note, these benefits are only estimated for the estimated

29 percent of members who use the education award for additional education post-service.

Additionally, the survey of AmeriCorps members in Friedman et al. (2016) found that 33 percent of members planned to use their education award to pay back student loans. Due to the requirement that AmeriCorps members serving College Access hold a bachelor's degree, this analysis assumes that those who planned to obtain an associate degree (2 percent) or bachelor's degree (21 percent) will also use the education award to pay back student loans used to finance the degree they have already obtained. The analysis therefore assumes that 71 percent (scaled from 56 percent following the redistribution described above) of AmeriCorps members will use the education award to repay student loans. Assuming members planned to make payments on their student loans, the education award represents an increase in income via a reduction in out-of-pocket student loan payments. The number of full-time members (where two half-time members is equal to one full-time member) in the most recent College Access service year was calculated and then multiplied by 79 percent to identify the estimated number of members using the education award in this fashion. Next, this value was multiplied by the value of the post-tax education award to calculate the total savings to AmeriCorps members. Again, the state and local and federal taxes paid due to the receipt of the education award are included as benefits to the respective levels of government. However, cost savings in the form of public assistance, corrections, and other forms of government support are not included for the subset of AmeriCorps members using the education award to pay back student loans.

Reduction in Unemployment Due to AmeriCorps Service

According to Friedman et al. (2016) (i.e., the national AmeriCorps Alumni Survey Outcomes Study), the percentage of AmeriCorps members unemployed was 5 percentage points lower six months after serving in AmeriCorps compared to six months before. Friedman et al. (2016) did not provide actual employment rates for AmeriCorps members pre- and post-service, but rather provided the change in unemployment rates, a 5 percentage point decrease. Thus, to estimate the additional number of AmeriCorps members employed post-service attributable to the College Possible program, this analysis multiplied the 5 percentage point increase in employment by the number of College Access AmeriCorps members who served during the most recent program year, as shown in Figure B-7. The analysis applied the 5-percentage point reduction in unemployment weighted by race, gender, and educational attainment of the College Access AmeriCorps member. The analysis estimated the earnings of AmeriCorps members post-service using data from Zeidenberg et al. (2016).

Figure B-7: Additional Number Employed and Annual Median Earnings for AmeriCorps Members

AmeriCorps Members	Number of College Access AmeriCorps Members*	Percentage Point Increase in AmeriCorps Members Employment (%)	Number Employed Attributable to AmeriCorps	Weighted Median Gross Annual Earnings (2019 $)	Weighted Median Net Annual Earnings (2019 $)**
AmeriCorps Members	71	5%	3.6	$60,167	$213,592

Sources: Zeidenberg et al. (2016), Friedman et al. (2016), U.S. Census Bureau (2018)

* Note: 71 AmeriCorps members includes 63 full-time members and 8 part-time members.

**Note: Median net annual earnings exclude payroll taxes paid on earnings (i.e., federal and state income, Social Security, and Medicare taxes).

Figure B-8 shows the cumulative median net earnings for the additional AmeriCorps members employed for the three different scenarios. These post-tax (or net) monetary amounts represent the additional earnings realized due to the AmeriCorps members serving College Access whose employment is solely attributed to the program.

Figure B-8: Cumulative Median Net Earnings for AmeriCorps Members by Scenario

Scenario	Cumulative Median Net Earnings for AmeriCorps Members (2019$)
Short-Term	$208,033
Medium-Term	$2,063,015
Long-Term	$2,648,342

Sources: Zeidenberg et al. (2016), College Possible, U.S. Census Bureau (2018)

Benefits to Government

State and Local Government

State and local government benefits from College Access are realized through the generation of additional state income tax revenue, state and local sales tax revenue, and reduced spending on social insurance and corrections due to the increased educational attainment of AmeriCorps post-service. Additionally, state government revenue is derived from the taxable portion of the living allowances and education award received by AmeriCorps members.

State Income Tax Revenue: To measure income tax revenue generation for state government (any local income taxes are not included), the additional gross median earnings of College Access participants and AmeriCorps members that are solely attributed to the College Access program are taxed by a state income tax rate. For College Access participants' additional gross median earnings, the 2019 Minnesota state income tax rate is used (7.05 percent) while for AmeriCorps members' gross median earnings, the average 2019 state income tax rate across all U.S. states is used (4.80 percent). Additionally, the living allowance given to AmeriCorps members during their service term is taxed using the state income, as this analysis was done exclusively for Minnesota's College Access program. AmeriCorps members' education awards are also taxed, but at an average rate for the state income taxes. This is used due to the unknown location of AmeriCorps members at the time of education award redemption. Figure B-9 is the potential annual additional state income tax revenue under the medium-term and long-term scenarios after all College Access students have achieved their educational outcomes.

Figure B-9: Potential Annual Additional State Income Tax Revenue

Stakeholder Group	Total Annual Additional Earnings (2019$)	State Income Tax Rate* (%)	Annual Additional State Income Tax Revenue (2019$)
College Access Participants	$2,632,042	7.05%	$185,559
AmeriCorps Members	$214,274	4.80%	$10,275

*Minnesota tax rate for College Access participants; average U.S. state income tax rate for AmeriCorps Members.

State and Local Sales Tax Revenue: To measure sales tax revenue generation for state and local governments, the amount of College Access participants' and AmeriCorps members' additional median *net* earnings that are spent on taxable goods is taxed by a sales tax rate. For College Access program participants, the summation of the 2019 Minnesota state sales tax rate (6.9 percent) and Minnesota's average local sales tax rate (0.5 percent) is used, amounting to 7.4 percent. For AmeriCorps members, the average 2019 combined state and local average sales tax rate across all U.S. states is used (6.5 percent).

To estimate the amount of College Access participants' and AmeriCorps members' median earnings that are spent on taxable goods, data from the Consumer Expenditure Survey are used. These data show the amount of spending on a number of different goods and services by national consumers across several different income brackets. The proportion of earnings that are spent on taxable goods (such as alcoholic beverages, housekeeping supplies, apparel, etc.) was then calculated for consumers with incomes that matched the earnings of the College Access participants and AmeriCorps members and vary as a result of the different income brackets College Access participants and AmeriCorps members fall into. These proportions are then applied to College Access participants' and AmeriCorps members' median net earnings to calculate the post-tax monetary amount they spend on taxable goods, and sales tax rates are applied accordingly to estimate the resulting sales tax revenues. For AmeriCorps members' gross living allowance amount, the portion for AmeriCorps members' estimated spending rate multiplied by the 6.5 percent sales tax rate is applied to calculate additional tax revenue to state and local governments.

Figures B-10 and B-11 detail this process for College Access participants. In order to calculate the additional state and local sales tax revenue generated by additional earnings and likelihood of employment for AmeriCorps members, the same process was used. However, the annual additional earnings and taxable spending rate are allowed to vary by the estimated educational attainment levels of AmeriCorps members. In the case of College Access participants, the benefits are derived only from obtaining some college education or attaining a bachelor's degree. Figures B-10 and B-11 are the potential annual additional state and local sales tax revenue under the medium-term and long-term scenarios after all of the College Access students have achieved their educational outcomes.

Figure B-10: Additional State and Local Sales Tax Revenue, College Access Participants (Some College)

College Access Participants	Total Annual Additional Earnings (2019$)		Taxable Spending Rate (%)		Total Annual Taxable Spending (2019$)	
Race/Ethnicity	Male	Female	Male	Female	Male	Female
White	$7,855	$11,258	37%	43%	$2,880	$4,841
Black	$70,666	$93,785	43%	53%	$30,386	$49,706
Hispanic	$38,949	$70,726	43%	53%	$16,748	$37,485
Other	$270,165	$469,797	37%	43%	$99,961	$202,013
Total Taxable Income Spending					$444,020	
Total Taxable Income Less Income Taxes[31]					$116,495	
Total Annual State and Local Taxes[32]					$22,393	

Note: Values may not match due to rounding.

[31] Income taxes include an estimate 12 percent federal income tax, a 7.65 percent tax for Social Security and Medicare, and a 7.05 percent state and local income tax.

[32] Assumes 6.9 percent state sales tax rate and 0.5 percent local sales tax rate.

Figure B-11: Additional State and Local Sales Tax Revenue, College Access Participants (Bachelor's Degree)

College Access Participants	Total Annual Additional Earnings (2019$)		Taxable Spending Rate (%)		Total Annual Taxable Spending (2019$)	
Race/Ethnicity	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
White	$23,388	$26,056	32%	37%	$7,569	$9,641
Black	$51,617	$183,537	37%	37%	$19,098	$67,909
Hispanic	$35,741	$67,713	37%	43%	$13,224	$29,117
Other	$600,165	$610,623	32%	37%	$192,053	$225,931
Total Taxable Income Spending					**$564,540**	
Total Taxable Income Less Income Taxes[33]					**$57,708**	
Total Annual State and Local Taxes[34]					**$28,594**	

Note: Values may not match due to rounding.

State and Local Government Cost Savings: State and local governments also benefit from College Access through lifetime savings in social insurance and corrections—as reported in Trostel (2015)—due to the increase in AmeriCorps members' educational attainment after program exit. Of note, social insurance includes unemployment insurance compensation and workers' compensation. To conservatively calculate these lifetime non-federal government savings, the pre-national service education levels of AmeriCorps members is first compared to their post-national service education levels. This determines the change in lifetime costs (and thus savings) in corrections and social insurance based on the differences in education levels among College Access participants and College Access AmeriCorps members (see Figure B-12 and Figure B-13, respectively). To determine what portion of this differential represents lifetime savings to state or local governments versus the federal government, a different method is employed for each of these cost savings areas. For social insurance, 50 percent of lifetime unemployment insurance costs savings and all the lifetime costs savings for workers' compensation are apportioned to state and local governments (Oswald, 2018). Regarding reductions in lifetime corrections spending, the portion between the federal and state or local governments is determined based on the U.S. incarcerated population in 2019. Specifically, the number of individuals housed in federal government institutions (9.7 percent) versus state and local facilities (90.3 percent) was used to divide up these savings (Sawyer & Wagner, 2019). Therefore, over 90 percent of the lifetime cost savings in corrections due to AmeriCorps members experiencing an increase in educational attainment pre- to post-national service are allocated to state and local governments.

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[33] Income taxes include an estimate 12 percent federal income tax, a 7.65 percent tax for Social Security and Medicare, and a 7.05 percent state and local income tax.

[34] Assumes 6.9 percent state sales tax rate and 0.5 percent local sales tax rate.

Figure B-12: 2018 State and Local Government Cost Savings (College Access Participants)

Educational Attainment Attained	Number of College Access Participants	Lifetime UI Savings (2019$)	Lifetime Worker's Comp. Savings (2019$)	Lifetime Incarceration Savings (2019$)	Total State and Local Government Savings (2019$)
Some College	115	$36,008	$7,144	$461,350	$504,503
Bachelor's Degree	80	$104,455	$89,041	$527,799	$721,295

Note: Values may not match due to rounding.

Figure B-13: 2018 State and Local Government Cost Savings (AmeriCorps Members)

Educational Attainment Attained	AmeriCorps Members Using Education Award	Lifetime UI Savings (2019$)	Lifetime Worker's Comp. Savings (2019$)	Lifetime Incarceration Savings (2019$)	Total State and Local Government Savings (2019$)
Graduate Degree	15.41	$1,628	-$26	$1,200	$2,802

Notes: Values may not match due to rounding. The negative value for lifetime worker's compensation savings reflects that spending is higher for people with graduate degrees, compared to people with bachelor's degrees.

Federal Government

The federal government benefits from the College Access program in terms of increased tax revenue (e.g., federal income, Social Security, and Medicare taxes) from College Access participants' and AmeriCorps members' increased additional earnings. It also realizes benefits in the form of cost savings in public assistance, social insurance, and corrections expenditures due to College Access participants' improved employment and AmeriCorps members' increased educational attainment post-service. Lastly, repayment of federal student loans using the education allowance is included in this analysis as a benefit to government (and not as a benefit to AmeriCorps members to avoid double counting).

Federal Income Tax Revenue: To measure federal income tax revenue, the additional median gross earnings of College Access participants and AmeriCorps members that are solely attributed to the College Access program are taxed by a federal income tax rate, based on the estimated median gross annual earnings of College Access participants and AmeriCorps members. For College Access participants, the 2019 federal income tax rate is 17 percent while for AmeriCorps members the rate used is 22 percent. The tax rate used for the AmeriCorps members' living allowances and education awards is assumed to be taxed at the 10 percent tax bracket due to the assumptions that the living allowance is their only income source during service and that if they are redeeming the education award that they are in a similar tax bracket. The difference in the federal income tax rates stems from their earnings amounts after participating or serving in the College Access program, which are associated with different federal income tax brackets. Figure B-14 is the potential annual additional state income tax revenue under the medium-term and long-term scenarios after all College Access students have achieved their educational outcomes.

Figure B-14: 2018 Annual Additional Federal Income Tax Revenue

	Total Annual Additional Earnings (2019$)	Marginal Federal Income Tax Rate	Annual Additional Federal Income Tax Revenue (2019$)
College Access Participants	$2,632,042	17%	$447,447
AmeriCorps Members*	$214,274	22%	$47,140

Note: Values may not match due to rounding.

*Note: AmeriCorps additional annual earnings stems from the 5% reduction in unemployment due to service (Friedman et al. 2016). Lifetime earnings and state taxes to those that go on to pursue a graduate degree are presented as a present value in Figures B-6 and B-13.

Social Security and Medicare Tax Revenue: Social Security and Medicare tax revenue are measured in the same way as the federal income tax but using tax rates specific to each revenue source. Social Security and Medicare use flat tax rates, 6.2 percent and 1.45 percent, respectively; thus, these rates are applied to the additional median gross earnings for both College Access participants and AmeriCorps members to calculate the amount of revenue the federal government receives. Figure B-15 is the potential annual additional state income tax revenue under the medium-term and long-term scenarios after all College Access students have achieved their educational outcomes.

Figure B-15: 2018 Annual Additional Social Security and Medicare Tax Revenue

	Total Annual Additional Earnings (2019$)	Social Security and Medicare Tax Rate	Annual Additional Social Security and Medicare Tax Revenue (2019$)
College Access Participants	$2,632,042	7.65%	$201,351
AmeriCorps Members*	$214,274	7.65%	$16,392

Note: Values may not match due to rounding.

*Note: AmeriCorps additional annual earnings stem from the 5% reduction in unemployment due to service (Friedman et al. 2016). Lifetime earnings and taxes to those that go on to pursue a graduate degree are presented as a present value in Figures B-6, B-13, and B-14.

Federal Government Cost Savings: The federal government realizes cost savings in public assistance, social insurance, and corrections due to the improved educational attainment of College Access participants and AmeriCorps members after program exit. Using the findings of Trostel (2015), which were referenced earlier in this section, the increased educational attainment that College Access participants and AmeriCorps members achieve after national service was used to estimate the federal government portion of lifetime cost savings on social insurance (which comprises worker's compensation and unemployment insurance compensation as noted earlier), public assistance (e.g., SNAP, Medicaid, TANF), and corrections. Figure B-16 shows the lifetime cost savings to the federal versus to the state and local government for each of these areas—where applicable—by education level.

Figure B-16: Marginal Benefits to Government of Increased Educational Attainment Level per Individual's Lifetime

Source of Government Saving	High School Diploma ($)	Associate Degree ($)	Bachelor's Degree ($)	Graduate Degree ($)
Public Assistance	**$54,155**	**$31,803**	**$14,480**	**$9,394**
Social Insurance	**$9,584**	**$8,209**	**$5,863**	**$4,732**
Federal	$3,964	$3,570	$2,660	$2,090
State/Local	$5,620	$4,639	$3,204	$2,643
Corrections	**$8,488**	**$4,055**	**$1,190**	**$725**
Federal	$822	$393	$115	$70
State/Local	$7,666	$3,662	$1,075	$655
Total	**$72,227**	**$44,067**	**$21,533**	**$14,851**

Sources: Trostel (2015), Sawyer et al. (2019)

Note: The values represent marginal benefits over the previous level of education (e.g., a high school diploma over no high school diploma).

To conservatively calculate the federal government's lifetime savings (Figures B-17 and B-18), the pre-national service education levels of College Access participants and AmeriCorps members are first compared to their post-national service education levels. The differences between the public assistance, federal social insurance, and federal corrections costs for the pre- versus post-service education levels represent the cost savings realized by the federal government due to the increased educational attainment levels of College Access participants and AmeriCorps members. As previously mentioned when discussing the state and local governments' allocation of the reduction in lifetime social insurance and corrections expenditures, the federal government receives 50 percent of the lifetime cost savings in unemployment insurance compensation (part of social insurance) and almost 10 percent of the lifetime cost savings in corrections (Oswald, 2018; Sawyer & Wagner, 2019).

Figure B-17: 2018 Federal Government Cost Savings (College Access Participants)

Educational Attainment Attained	Number of College Access Participants	Lifetime UI Savings (2019$)	Lifetime Incarceration Savings (2019$)	Lifetime Public Assistance Savings (2019$)	Total Federal Government Savings (2019$)
Some College	115	$36,008	$49,451	$1,029,784	$1,115,243
Bachelor's Degree	80	$104,455	$56,574	$3,337,042	$3,498,071

Note: Values may not match due to rounding.

* These negative values reflect that unemployment insurance and workers compensation spending is higher for people with high school diplomas, compared to people without high school diplomas. High school graduates are more likely to work, producing this effect.

Figure B-18: 2018 Federal Government Cost Savings (AmeriCorps Members)

Educational Attainment Attained	AmeriCorps Members Using Education Award	Lifetime UI Savings (2019$)	Lifetime Incarceration Savings (2019$)	Lifetime Public Assistance Savings (2019$)	Total Federal Government Savings (2019$)
Graduate Degree	15.41	$1,628	-$201	$8,816	$10,244

Note: Values may not match due to rounding.

Federal government cost savings result from additional educational attainment. The total values are proportional to the percentage of tuition that the AmeriCorps education award contributes to the estimated cost of a bachelor's degree.

Additional Government Benefits

Increased federal income and state and local tax receipts due to a 5 percent reduction in unemployment associated with AmeriCorps service

The analysis estimates AmeriCorps members net earnings due to the 5 percent decrease in unemployment associated with the College Possible AmeriCorps member demographics (in terms of gender, age, race/ethnicity, and educational attainment level) that served during the most recent program year. Based on the segmentation of these population characteristics, the analysis estimated the number of AmeriCorps members who would gain employment due to the reduced unemployment program benefit. The annual median earnings for the demographic multiplied by the estimated number of additionally employed individuals yield an estimated annual increase in earnings resulting from the reduction in unemployment due to the AmeriCorps service.

Figure B-19 shows the additional earnings of AmeriCorps members, the federal and state income, Medicare, and Social Security taxes on the additional income,[35] and additional sales tax revenue,[36] similar to the estimation of the additional College Access participants' income. The undiscounted annual values are reflected above in Figures B-14 and B-15.

Figure B-19: Additional Earnings for College Possible AmeriCorps Members and Resulting Public Benefits by Scenario (2019$)

Scenario	Gross Additional Earnings of College Access AmeriCorps Members (2019$)	Income Tax Payments (2019$)*	Estimated Additional Sales Tax Revenue (2019$)
Short-Term	$208,033	$71,657	$3,221
Medium-Term	$2,063,015	$710,606	$31,940
Long-Term	$2,648,342	$912,222	$41,002

* Note: Summed federal and state income, Medicare, and Social Security taxes

Summary of Benefits to Government

Figure B-20 shows the amount of tax revenue generated and savings in expenditures for state and local versus the federal government that are solely credited to the College Access program in Minnesota and calculated using the methods described above. The data are broken out by College Access participant and AmeriCorps members, for each of the three scenarios. These government revenues and savings amounts are benefits that are included in the three ROI calculations.

Figure B-20: State/Local and Federal Government Benefits by Stakeholder Group and by Scenario

Benefit Type	Benefit (2019$)		
	Short-Term	Medium-Term	Long-Term
College Access Participant-Derived Benefits			
State/Local Government Benefits	**$1,225,798**	**$2,684,942**	**$3,624,171**
State Income Tax Revenues from Employment (Assumed Minnesota State Tax Rate Bracket: 7.05%)	$0	$1,139,840	$1,878,337
State and Local Sales Tax Revenue from Employment (Minnesota State and Local Tax Rate: 7.4%)	$0	$319,304	$520,036

[35] For the increase in employment of AmeriCorps members, the analysis assumes a federal marginal income tax rate of 22 percent, an average of all 50 states' income taxes (4.8 percent), Medicare (1.45 percent), and Social Security (6.20 percent).

[36] The average state and local sales tax rate across the U.S. is estimated to be 6.52 percent.

Benefit Type	Benefit (2019$)		
	Short-Term	Medium-Term	Long-Term
Non-federal Savings in Reduced Social Insurance and Corrections Spending from Educational Attainment (Lifetime)	$1,225,798	$1,225,798	$1,225,798
Federal Government Benefits	**$4,613,314**	**$8,598,714**	**$11,180,835**
Federal Income Tax Revenue from Employment (Assume the marginal earnings are federally taxed at an average rate of 12.0% and 22% brackets)	$0	$2,748,551	$4,529,324
Social Security & Medicare Tax Revenue from Employment (Federal Social Security Tax Rate: 6.2%) (Federal Medicare Tax Rate: 1.5%)	$0	$1,236,848	$2,038,196
Federal Savings in Reduced Social Insurance and Corrections Spending from Educational Attainment (Lifetime)	$4,613,314	$4,613,314	$4,613,314
AmeriCorps Members-Derived Benefits			
State/Local Government Benefits	**$202,224**	**$319,890**	**$357,019**
State Income Tax revenue from Living Allowances and Education Awards* (Assumed Minnesota State Tax Bracket: 5.35%)	$45,031	$45,031	$45,031
State and Local Sales Tax Revenue from Living Allowances* (Average Minnesota State and Local Tax Rate: 7.43%)	$48,155	$48,155	$48,155
State Income Tax Revenue from Reduced Unemployment (Average State tax rate for assumed marginal incomes: 4.8%)	$9,975	$98,922	$126,989
State and Local Sales Tax Revenue from Reduced Unemployment (Average State and Local Tax Rate: 6.5%)	$3,221	$31,940	$41,002
State Income, Sales, and Property Taxes from Educational Attainment (Lifetime)**	$93,039	$93,039	$93,039
Savings in Reduced Social Insurance and Corrections Spending from Educational Attainment (Lifetime)**	$2,802	$2,802	$2,802
Federal Government Benefits	**$638,405**	**$1,188,408**	**$1,361,957**
Federal Income Tax Revenue from Living Allowances and Education Awards* (Assumed Federal Income Tax Rate: 10.0%)	$116,961	$116,961	$116,961
Social Security and Medicare Tax Revenue from Living Allowances and Education Awards* (Federal Social Security Tax Rate: 6.2%); (Federal Medicare Tax Rate: 1.5%)	$89,475	$89,475	$89,475

Benefit Type	Benefit (2019$)		
	Short-Term	Medium-Term	Long-Term
Federal Income Tax Revenue from Reduced Unemployment (Federal Income Tax Rate: 22.0%)	$45,767	$453,863	$582,635
Social Security and Medicare Tax Revenue from Reduced Unemployment (Federal Social Security Tax Rate: 6.2%) (Federal Medicare Tax Rate: 1.5%)	$15,915	$157,821	$202,598
Federal Income Tax Revenue from Educational Attainment (Lifetime)**	$236,571	$236,571	$236,571
Social Security Tax Revenue from Educational Attainment (Lifetime)**	$123,472	$123,472	$123,472
Savings in Reduced Social Insurance, Corrections, and Public Assistance Spending from Employment (Lifetime)**	$10,244	$10,244	$10,244
Total	**$6,679,742**	**$12,791,954**	**$16,523,982**

* Living allowances and education awards are one-time taxable payments. The resulting tax revenue does not vary by scenario.

** Applies only to those AmeriCorps members expected to pursue a graduate degree post-service

Of note, the federal and non-federal government estimates of reduced lifetime social insurance, corrections, and public assistance spending as well increased lifetime taxes due to increased education do not vary across the three scenarios (i.e., short-term, medium-term, and long-term) because they are not dependent on how long the increased employment and associated earnings are sustained. Rather, they are derived from increased educational attainment and that is a lifetime present value.

Measuring Costs

The analysis's treatment of costs is discussed in the "Costs" section of the main report.

ROI Calculation

The analysis calculated three different ROI results for each scenario. Since two of the ROI calculations include benefits to society (program participants and AmeriCorps members), the results are expressed as a cost-benefit ratio, while maintaining ROI terminology.[37] The ROI (or cost-benefit ratio) in this study can be interpreted as the amount of dollars returned for every $1 of investment (or cost).

[37] ROIs are often expressed as percentages when measuring the financial return to a single entity from that entity's investment. Although this is consistent with one of the three ROI metrics reported (Government Revenue/Savings per Federal Dollar), since the other ROIs lend themselves to a benefit-cost ratio, that ratio is used for all three metrics.

The formulas used to calculate each of the three ROIs are the following:

$$\text{Total Benefits per AmeriCorps Dollar} = \frac{\text{Benefits to Particpants} + \text{Benefits to AmeriCorps Members} + \text{Benefits to the Goverment}}{\text{Federal (AmeriCorps)Funding}}$$

$$\text{Total Benefits per Funder Dollar} = \frac{\text{Benefits to Particpants} + \text{Benefits to AmeriCorps Members} + \text{Benefits to the Goverment}}{\text{Federal (AmeriCorps)Funding} + \text{Required Match Funding} + \text{Other Funding}}$$

$$\text{Federal Government Benefits per Federal Dollar} = \frac{\text{Benefits to the Federal Goverment}}{\text{Federal (AmeriCorps)Funding}}$$

Figures B-21, B-22, and B-23 show the total benefits, costs, and ROI results for each scenario.

Figure B-21: ROI Calculations for Short-Term Scenario

Benefits / Costs	Total Benefits per AmeriCorps Dollar ($)	Total Benefits per Funder Dollar ($)	Federal Government Benefits per Federal Dollar ($)
Total Benefits	$8,909,835	$8,909,835	$5,251,720
Total Costs	$1,131,498	$5,923,305	$1,131,498
Result	$7.87	$1.50	$4.64

Figure B-22: ROI Calculations for Medium-Term Scenario

Benefits / Costs	Total Benefits per AmeriCorps Dollar ($)	Total Benefits per Funder Dollar ($)	Federal Government Benefits per Federal Dollar ($)
Total Benefits	$26,932,767	$26,932,767	$9,787,121
Total Costs	$1,131,498	$5,923,305	$1,131,498
Result	$23.80	$4.55	$8.65

Figure B-23: ROI Calculations for Long-Term Scenario

Benefits / Costs	Total Benefits per AmeriCorps Dollar ($)	Total Benefits per Funder Dollar ($)	Federal Government Benefits per Federal Dollar ($)
Total Benefits	$37,993,229	$37,993,229	$12,542,792
Total Costs	$1,131,498	$5,923,305	$1,131,498
Result	**$33.58**	**$6.41**	**$11.09**

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