

10-29-2021

Economic Costs and Benefits of Tuition-Free College in Illinois

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Citation

Bartik, Timothy J., Michelle Miller-Adams, Brian Pittelko, and Bridget F. Timmeney. 2021. "Economic Costs and Benefits of Tuition-Free College in Illinois." *Employment Research* 28(4): 4-7. [https://doi.org/10.17848/1075-8445.28\(4\)-2](https://doi.org/10.17848/1075-8445.28(4)-2)

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Place-Based Consequences of Person-Based Transfers

severe recessions. On the other hand, programs such as Social Security retirement, Disability Insurance, Medicare, and Medicaid partially insure areas against the longer-term effects of recessions. On average, transfers offset 25 percent of the decline in earnings in metro areas hit harder by recessions. Furthermore, federal transfers that are nominally person-based provide implicit, persistent, and underappreciated geographic transfers from economically more successful places to economically less successful places.

Because the long-run consequences of recessions on local labor markets are not yet widely appreciated, there has been little discussion of whether the existing structure of the social safety net constitutes an appropriate policy response, not just for individuals but for communities as a whole. An important direction for future research is to study how nominally person-based transfers interact with place-based policies, such as economic development block grants and place-based scholarships, in affecting efficiency and equity of the overall system of government transfers. One important takeaway from our results is that the most responsive transfer programs in the current system are unlikely to encourage labor supply, skill development, or job creation, which could be essential factors in helping hard-hit metro areas from falling behind economically.

Reference

Hershbein, Brad J., and Bryan A. Stuart. 2020. "The Enduring Local Harm from Recessions." Upjohn Institute Policy Brief. Kalamazoo, MI: W.E. Upjohn Institute. https://research.upjohn.org/up_policybriefs/25/.

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Economic Costs and Benefits of Tuition-Free College in Illinois

Timothy J. Bartik, Michelle Miller-Adams, Brian Pittelko, and Bridget Timmeney

Why should states invest in free college for their residents? With [returns to college degrees high](#) and [most new jobs requiring a postsecondary degree or credential](#), individual motivations for college-going are easy to discern. As more states create free-college pathways for their residents—and as more will be asked to do so if the [Biden administration's tuition-free college plan](#) becomes law—policymakers should recognize that free college also generates substantial economic and fiscal returns for the state.

This article presents research findings on the economic and fiscal impacts from a hypothetical tuition-free college program in Illinois. The research was carried out with financial support from the Joyce Foundation and the cooperation of the Governor's Office of the State of Illinois. More information on how these findings were generated can be found in our [cost estimate](#) and [economic benefits](#) reports to the state.

Economic returns to free college come in the form of higher earnings for workers with degrees and spillover benefits for other residents. Fiscal returns occur when projected tax

revenues exceed the cost of a free-college program. Of course, there are many other benefits to increasing educational attainment. Employers have access to a better-trained workforce, which spurs innovation and productivity. Higher educational attainment can also reduce crime and substance abuse, help create more stable families, and lead to better outcomes for the children of college graduates. These impacts, however, are hard to quantify, so we focus here on the direct earnings effects for graduates and spillover effects for other residents.

For this project, we modeled two versions of tuition-free college: one model covers the community college sector only and the other includes both two-year and four-year public institutions. Both adopt a last-dollar structure in which a student's Pell Grants are used first, with the state grant closing any remaining gap in tuition and fees.¹

A free-tuition program in Illinois would generate economic and fiscal benefits that far exceed its costs, although the fiscal benefits would not be realized immediately. The less

ARTICLE HIGHLIGHTS

- Free college generates substantial economic and fiscal returns for the state.
- The combined two-year and four-year program, run for just the years 2021–2030, would increase Illinois residents' total earnings by \$44.7 billion.
- We find that a two-year degree yields earnings gains per individual of between \$154,000 and \$182,000 over their lifetime, while a four-year degree yields an earnings gain of between \$671,000 and \$793,000.
- We estimate spillover effects on other Illinois residents at 86 percent of the direct effect.

expensive program covering only two-year college yields positive returns more quickly, but the returns are not as high as they are for the more expensive (and expensive) program.

Free college leads to more college graduates. Depending on its structure, tuition-free college will lead more Illinois residents to complete either a two-year program, earning an associate degree, or a four-year program, earning a bachelor's degree. Some of these additional graduates will remain in the state. (Our analysis focused only on the higher earnings of graduates who remain in the state. Graduates leaving the state are also better off because of the program, but we are assessing the impact of such a program on the state and thus do not account for benefits to out-migrants.)

People with college degrees or credentials will earn more. Higher degree completion will significantly increase graduates' lifetime earnings. This earnings increase is due to these graduates' higher skills. In our analysis, we focus on the earnings effects for Illinois residents ages 25–79 who remain in state for their entire careers. We find that a two-year degree yields earnings gains per individual of between \$154,000 and \$182,000 over their lifetime, while a four-year degree yields an earnings gain of between \$671,000 and \$793,000. Based on the research literature, we estimate spillover effects on other Illinois residents at 86 percent of the direct effect.

We conclude that the combined two-year and four-year program, run for just the years 2021–2030, would increase Illinois residents' total earnings on aggregate by \$44.7 billion (in 2021 dollars; see Table 1). This is mostly due to more Illinois residents earning bachelor's degrees. The earnings gain from the added bachelor's degrees is \$39.7 billion, versus \$5.0 billion from the added associate degrees. The greater effect from the bachelor's degrees is due to the much greater annual earnings effects of such degrees. The two-year-only tuition

Table 1 Aggregate Illinois Present Value of Increased Earnings for Tuition Subsidy Programs Run from 2021 to 2030

	Combined two-year and four-year program		Two-year program only
	Effect in combined program due to two-year degrees (\$)	Effect in combined program due to four-year degrees (\$)	Effect in two-year-only program due to two-year degrees (\$)
Direct earnings effect on Illinois graduates who stay in Illinois, summed over all graduates considered in cost estimates	2,691,437,646	21,360,458,081	4,335,339,265
Spillover earnings increase for other Illinois workers (86% of direct effect)	2,314,636,375	18,369,993,950	3,728,391,768
Total effect	5,006,074,021	39,730,452,031	8,063,731,033
Total effect of combined two-year and four-year program	44,736,526,052		

subsidy program also has considerable total earnings benefits. Such a program run from 2021 through 2030 would increase the present value of Illinois residents' total earnings by \$8.1 billion.

How does this compare with the costs of operating either of these two tuition subsidy programs from 2021 to 2030? Based on our modeling, a last-dollar, community college-only program would cost \$30 million in its first year, with annual costs rising to \$58 million by the end of the forecast period. A last-dollar program covering both two-year and four-year public in-state institutions would cost \$155 million in its first year, with annual costs rising to \$615 million

in 2030. Present value costs and benefits of the program operated over 10 years, beginning in 2021, are presented in Table 2.

The present value of total earnings benefits from operating either of these two programs far exceeds their costs. For the combined four-year/two-year program, the present value of total earnings benefits, at \$44.7 billion, is over 11 times the present value of costs of around \$4 billion. For the two-year-only program, the present value of total earnings benefits, at a little over \$8 billion, is more than 18 times the present value of program costs of \$438 million.

Table 2 Aggregate Illinois Present Value Costs and Benefits of Tuition-Free College Programs Run from 2021 to 2030

	Combined two-year and four-year program (\$)	Two-year program only (\$)
Present value of costs in 2021 dollars	3,978,294,564	438,274,379
Present value of direct and spillover earnings benefits for Illinois residents	44,736,526,052	8,063,731,033
Extra state and local tax revenue (earnings benefits times 10.63%)	4,755,492,719	857,174,609
Extra state tax revenue (earnings benefits times 5.48%)	2,451,561,628	441,892,461

State residents without college degrees will earn more, too. When a larger share of a state's residents has a college degree, those without a degree

Earnings gains for other Illinois residents—those who do not get the higher educational attainment due to the tuition subsidy program—are much greater than program costs.

also benefit. Higher wages for educated workers push wages up more generally. A state with more skilled workers will be better able to attract and grow jobs and businesses, which will increase the wages of all the state's workers. Finally, a state with more skilled workers may develop better amenities, public services, social services, and community well-being, all of which may enhance child development and enhance the long-run earnings of the next generation.

Our modeling shows that the earnings gains for *other* Illinois residents—those who do not get the higher educational

attainment due to the tuition subsidy program—are much greater than program costs. For the combined two-year/four-year program, spillover benefits for other workers are over \$20 billion, which is far greater than program costs of somewhat less than \$4 billion. Similarly, for the tuition subsidies limited to two-year programs, the spillover benefits for other workers are about \$4 billion, which far exceeds program costs of a little over \$400 million. In response to the question “Why should Illinois residents pay tuition subsidies that directly benefit other Illinois residents?”, one answer is that such subsidies will increase overall earnings of many Illinois workers, not just those who get the tuition support.

States will collect more money in taxes than the cost of a free-college program—but not right away. Free-college programs can also be judged by whether their fiscal benefits outweigh their costs. Fiscal benefits come from increased tax revenue as workers' earnings rise. We model these benefits based on conservative assumptions that estimate a lower bound to their value.

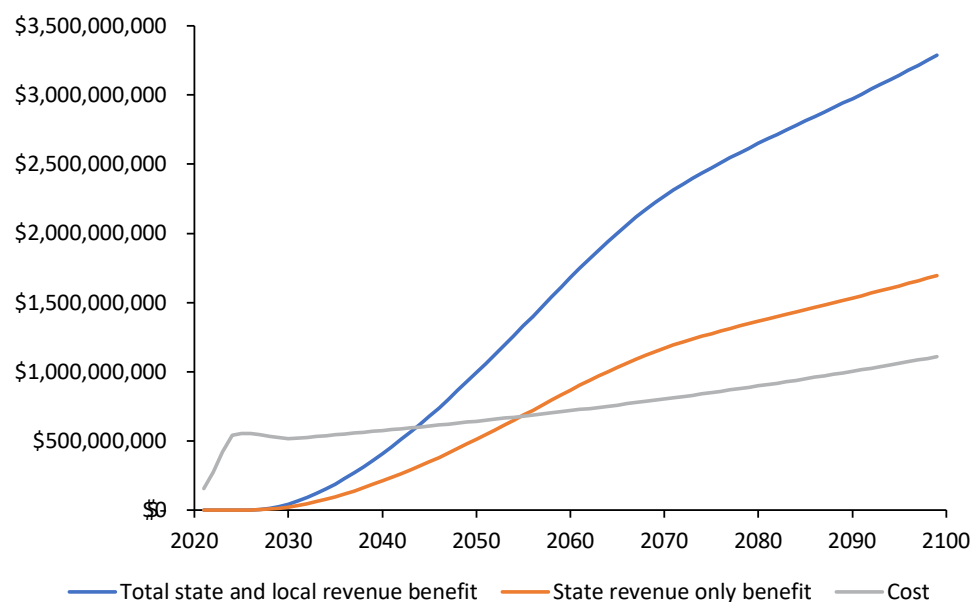
For a combined two-year and four-year program, run from 2021 to 2030, the present value of total state and local revenue collections will be slightly under \$4.8 billion, which exceeds the present value of program costs of around \$4.0 billion. For the tuition subsidy program for only two-year degrees, running from 2021 to 2030, the present value of state and local revenue collections will be almost \$860 million, compared to the present value of program costs of almost \$440 million.

The following figures show a simulation of annual costs and fiscal benefits for a free-college program that continues indefinitely.

As Figure 1 shows, the program starts out with large annual costs, rapidly increasing to around \$500 million per year in 2021 dollars. Annual fiscal benefits are far less because our earnings measures do not start counting earnings effects until graduates reach age 25, and even after that it takes many years before graduates reach their peak earnings years in their forties and early fifties. As a result, from a total state and local revenue standpoint, annual added revenue collected does not exceed annual tuition subsidy program costs until the year 2044, where the state and local revenue line crosses the cost line. From a state revenue only line, annual revenue exceeds costs in the year 2055, where the state revenue line crosses the cost line. However, in either case, on an annual basis, this combined program does eventually generate sufficient revenue that annual revenue for just the state exceeds program costs.

Annual fiscal benefits and costs of a community college-only program from 2021 through 2099 are shown in Figure 2. The fiscal results of this more limited program differ from the more comprehensive program in two ways. First, the annual costs and benefits are much lower, so the short-run net fiscal costs are less, as are the long-run net fiscal benefits. Second, the “crossover” year is five years earlier. For this cheaper program, state and local fiscal benefits exceed costs as of 2039, whereas the

Figure 1 Annual Costs and Fiscal Benefits of Illinois Combined Two-Year/Four-Year Tuition Subsidy Program

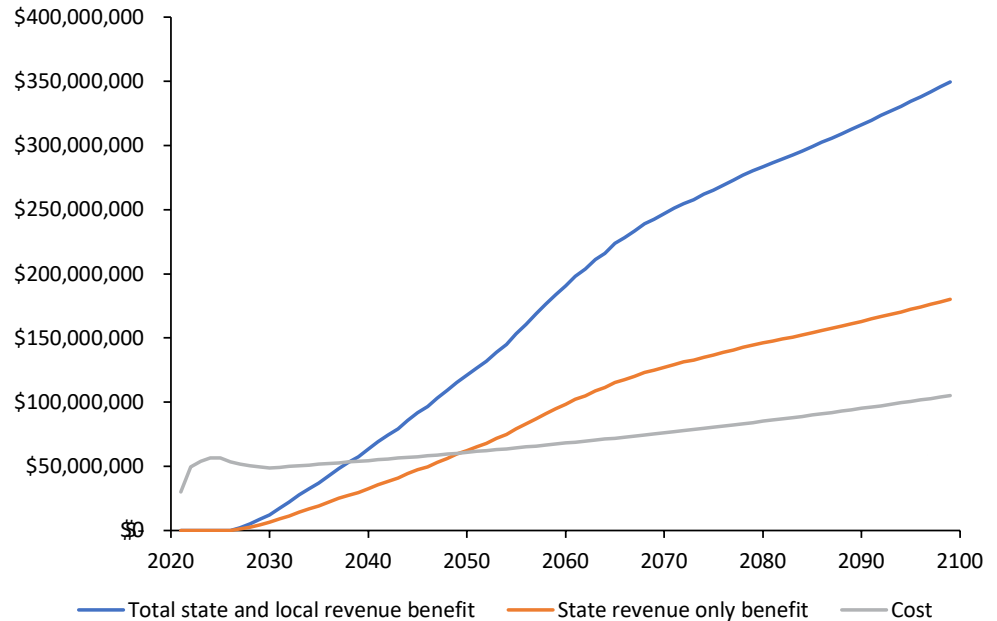


combined two-year and four-year program doesn't have such benefits exceeding costs until 2044. For state revenue only, this cheaper program has fiscal benefits exceeding costs by 2050, compared to 2055 for the more expensive combined program.

Overall, in considering these two programs' economic and fiscal benefits versus costs, two things stand out. First, for either tuition subsidy program, the true cost-benefit picture does not emerge until at least 50 years have passed and an entire generation has gained educational degrees and completed their working careers. Educational investments are long-term investments and cannot be evaluated properly without considering very long-run effects. Second, the cheaper, two-year-only program has somewhat higher ratios of benefits to costs, but the combined program has a much higher level of net benefits.

In sum, an investment by the state in either a two-year-only or a two-year and four-year combined tuition subsidy program will yield benefits far beyond the costs of either program, although not immediately. These benefits result from enhanced earnings by degree recipients and large spillover effects for those without degrees. A sufficient share of this increased income will be paid to Illinois state and local governments, and eventually annual fiscal benefits will exceed these tuition subsidy programs' costs.

Figure 2 Annual Costs and Fiscal Benefits of Illinois Two-Year-Only Tuition Subsidy Program



There are political challenges to investing state resources in a program that does not yield fiscal returns until decades later; however, the economic benefits of free college to a state's workers and employers begin almost immediately. This is the grounds on which many states have—and more states should—launch their free-college effort.

Note

1. This is not an ideal structure from an equity standpoint because non-Pell-eligible

students receive more state funding than Pell-eligible students who may then still struggle to cover the full cost of college attendance; however, it is the dominant model when it comes to statewide free-college programs.

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