State "Free College" Programs:

Implications for States and Independent Higher Education and Alternative Policy Approaches

William Zumeta and Nick Huntington-Klein

A REPORT FOR

The Council of Independent Colleges

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About the Authors

William Zumeta is professor of public policy and higher education at the University of Washington in Seattle where he has taught since 1985. He is a fellow of the TIAA Institute and previously served as senior fellow at the National Center for Public Policy and Higher Education (2005–2011). In 2009–2010, Zumeta was president of the Association for the Study of Higher Education. Earlier, he taught at UCLA as well as the University of British Columbia and Claremont Graduate University. Zumeta's research touches on many aspects of public policy toward postsecondary education at all levels, and he has studied the private sector of academe extensively. His most recent book is *Financing American Higher Education in the Era of Globalization*, co-authored with Patrick Callan, David Breneman, and Joni Finney (2012). In 2011, Zumeta co-edited with Daniel Levy a special issue of the *Journal of Comparative Policy Analysis* titled, "Private Higher Education and Public Policy: A Global Comparative View." He holds a BA from Haverford College and a PhD in public policy from the University of California, Berkeley.

Nick Huntington-Klein is assistant professor of economics at California State University, Fullerton. His research interests include choice in higher education, decision making under uncertainty and risk, and teacher labor markets. Some of his work has been published in the *Economics of Education Review*, *Research in Higher Education*, *Education Finance and Policy*, and as policy briefs and working papers at the Center for Education Data and Research. One chapter of his dissertation, "Beliefs, Choice Structure, and Human Capital Investment," was published in the *Journal of Economic Behavior & Organization*. He holds a PhD in economics from the University of Washington and a BA from Reed College.

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Note: This manuscript was researched and written before COVID-19 appeared in the United States. As yet, we cannot tell what the full implications of the pandemic and its economic fallout may be for states and for U.S. higher education. The report provides an assessment of the status and effects of "free college" and related college affordability policies in four of the early mover states in this arena (Tennessee, Oregon, New York, and Washington) as of late 2019.

Preface

The Council of Independent Colleges (CIC) explores fresh solutions to major challenges faced by independent colleges and universities and promotes the success of these institutions. One such challenge has been determining the effects of recent "free college" efforts in the United States where policymakers seek to offer tuition-free college to certain students attending some public institutions of higher education. While this concept has received considerable national attention, much empirical research on its actual costs and results has yet to be done—partly because state-level programs of this nature are still new.

This report by William Zumeta and Nick Huntington-Klein follows in the vein of their previous research for CIC on degree productivity and cost-effectiveness. In this new report, they first analyze free college programs in four states (New York, Oregon, Tennessee, and Washington) and then analyze alternative ways that states can cost-effectively incentivize greater college enrollment and degree production.

Notably, when examining the effects of various free college policies on independent colleges to date, the authors find mixed results. Although community college enrollments have increased significantly in Tennessee and Oregon since the policies were enacted, the authors find little evidence that tuition-free community college programs have significantly affected private four-year college sector enrollments. It is still too early to tell how many additional college credentials will be awarded as a result of the programs. While data are scarce, the authors find that in New York, the Excelsior Scholarship program has benefited fewer students than originally predicted and its effect on the private sector is still unclear. Other factors (for example, decreasing high school graduate numbers and flat grant sizes in the state's major student aid program) may also play a role in New York. Zumeta and Huntington-Klein find that the design of the Washington State program is more traditional but offers an attractive model for state college affordability policies and one of the most even-handed (across sectors) and generous state aid programs in the country.

In Section Two of the report, the authors use these states to run a simulation based on their previous report, *Utilizing Independent Colleges and Universities to Fulfill States' College Degree Attainment Goals*. The simulation is designed to examine the effects on enrollments, degree production, and state budgets of offering hypothetical enhanced state financial aid to state resident students who are on the margin of choice between a private and a similar public institution. In all four states, a grant increase of just $1,000 targeted at these students would save the state money by diverting them to private colleges where they cost the state much less to support; in three of the four states, the private sector's higher degree productivity per enrolled student would also lead to greater annual bachelor's degree production.

In Section Three, Zumeta and Huntington-Klein outline possible designs for capitation-based (per enrolled student) approaches for states to efficiently subsidize growth in private higher education utilization and capacity where state needs and the private sector's capacity and interest are well-matched.

These results are informative for both policymakers and members of the public interested in empirical analysis of the free college movement and its effects on the broader landscape of American higher education including independent colleges and universities. In addition, offering alternative models for increased degree productivity using the cost-effective means of private colleges and universities (as demonstrated in the authors' earlier report, *The Cost-Effectiveness of Undergraduate Education at Private Nondoctoral Colleges and Universities*) benefits all citizens of a state by lowering costs to the state and increasing bachelor's degree production.

Richard Ekman
President
Council of Independent Colleges

May 2020

State "Free College" Programs:

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Executive Summary

This analytical report responds to the current policy interest in some states in offering "tuition-free college" to income-eligible students attending certain public colleges and universities. In most cases only public two-year colleges are covered, although New York State's Excelsior Scholarship program also covers public four-year colleges and universities. In Section One, we use the latest available empirical data to assess the early effects of the Excelsior program and the two longest-standing state "free community college" programs, Tennessee Promise and Oregon Promise, each of which is only a few years old. We also contrast these largely single-sector "free college" approaches to college affordability policy with the approach of another state, Washington. This state also makes a commitment to cover college costs for low-income students, as well as to give generous help to more moderate-income students, but without distorting aided students' choices among higher education sectors (two-year vs. four-year or public vs. private). Sections Two and Three of the report analyze alternative approaches for states to create cost-effective incentives for increases in college enrollment and degree production.

In general, we find that the early effects of the Tennessee and Oregon tuition-free community college programs have been to increase community college enrollments significantly. However, it is too early to tell how many additional college credential awards will result. In the first year of implementation, four-year college enrollments experienced modest negative effects in both states; but thereafter these effects appear to have largely disappeared. To date, neither program seems to have meaningfully affected enrollments at private four-year colleges and universities in the two states.

In New York, the much-heralded Excelsior Scholarship program, which places many restrictions on student eligibility, has benefited fewer students than originally predicted. In addition, a high rate of students have been terminated from the program for failing to maintain full-time status. While data are still scarce, there are

signs that the program may have shifted some student enrollments in the public sector from two-year to four-year institutions. Although the state accompanied Excelsior's rollout in 2017 with the creation of a new Enhanced Tuition Awards program for eligible students seeking to enroll in New York's private colleges and universities, this program imposed such stringent requirements on the colleges that there has been limited take-up in this sector. Still, the enrollment trend data for the private sector do not provide any clear indication that Excelsior has had much effect as yet, except perhaps on a subset of institutions heavily dependent on New York students. Other factors are at work as well, such as decreasing high school graduate numbers and a stagnant income eligibility ceiling and flat grant sizes in the state's major student aid program (the Tuition Assistance Program, or TAP).

The Excelsior program, however, saw its income eligibility ceiling increase substantially in 2019–2020 to $125,000 in family income. The governor has proposed increasing it further to $150,000. These changes could have more substantial effects on both private college and community college enrollments as many more students become eligible for grants for public four-year college attendance. We suggest that a better approach for New York would be to reprogram the funds it now spends on Excelsior Scholarships so as to update the TAP program's long-stagnant income eligibility and award levels. This would be more equitable in terms of student choice and would also take advantage of TAP's more sophisticated formula (compared to Excelsior's) for assessing family financial circumstances in order to determine need. Such a shift also may lead more students to be able to choose private colleges, thus relieving the state of some of the financial burdens of supporting them in public institutions.

We find that Washington State's more traditionally designed need-based student aid programs provide an attractive model for state college affordability policies. This is especially true given recently enacted enhancements that make the programs among the most generous and even-handed (across sectors) in the country. The programs do not privilege two-year college attendance—beyond what greater proximity and lower tuition already do—and they facilitate the choices of needy students who wish to elect private college options but need aid to do so. The state also has an early commitment (from middle-school age) guarantee program for very low-income students that provides especially generous grants for attendance in any sector.

Section Two simulates, for the same four states studied in Section One, the effects on enrollments, degree production, and state budgetary costs of offering hypothetical enhanced state financial aid to state resident students on the margin of choice between a private and a similar public college, *if* the student elects the private sector option. The results vary by state, but in all four cases a grant increase of just $1,000 targeted at such students would save the state money by diverting some students from public to private colleges where they cost the state much less to support. In three of the four states, the private sector's higher degree productivity per enrolled student also would lead to greater annual bachelor's degree production.

In New York, the much-heralded Excelsior Scholarship program, which places many restrictions on student eligibility, has benefited fewer students than originally predicted. In addition, a high rate of students have been terminated from the program for failing to maintain full-time status.

Section Three sketches out possible designs for approaches that are "capitation"-based (that is, per enrolled student-based), rather than student-aid-based.

This approach enables states to efficiently subsidize growth in private higher education utilization and capacity where there is a good match between state needs and this sector's capacity and interest. Such an approach is likely to make most sense when a state's public sector capacity is near its limit, whether statewide or in a particular field or region of the state. It may also make sense when a public institution has had chronic low enrollments and it is clear that nearby private institutions could absorb more students, especially if they were subsidized. One possible program design considered would incentivize increased enrollments and another would instead reward additional degrees produced. In either case, the state may be able to avoid bearing the full costs of public sector expansion by negotiating a cost-sharing arrangement along the lines suggested with willing private college partners that pays the college for *additional* enrollments (or degrees) of the targeted types.

In sum, several promising avenues are available to help states meet higher education needs efficiently and equitably while preserving student choice. All are likely to be superior to offering tuition-free college only to some in a single sector.

In sum, several promising avenues are available to help states meet higher education needs efficiently and equitably while preserving student choice. All are likely to be superior to offering tuition-free college only to some in a single sector.

Introduction

A key purpose of this report is to provide the Council of Independent Colleges and its constituents with an up-to-date assessment of the status and evident effects of state-level programs in selected states that are designed to increase the affordability of college for some citizens by making certain public colleges tuition-free (Section One).[1]

Such programs are often called "Promise" programs because states typically design and message them as guaranteed entitlements for eligible students. These programs are increasingly popular among states across the country (Mishory 2018; Callahan et al. 2019). Promise-type programs at the local level have been around longer and have already seen more thorough assessment (see, for example, Swanson et al. 2016), but state-level programs are relatively new and generally unexamined. Thus, it is important to begin assessing the results of programs that have been in place for a few years.

Here, we focus on three "leading-edge" states that implemented Promise-type programs relatively early: in the fall terms of 2015 (Tennessee Promise), 2016 (Oregon Promise), and 2017 (Excelsior Scholarships and Enhanced Tuition Awards in New York). Like most state programs, the Tennessee and Oregon programs limit their guarantee to eligible state resident undergraduates who enroll in public two-year colleges. New York's programs are included because this state has broadened its guarantee to cover tuition at public four-year as well as two-year colleges and added a special tuition grant enhancement, called Enhanced Tuition Awards, for eligible state residents who attend private colleges and universities.

We include in our analysis in Section One a fourth state, Washington, with a contrasting approach to college affordability policies. Washington has long included a guaranteed state commitment of tuition coverage for qualifying low-income students (those in foster care or

[1] This report was prepared at the request of the Council of Independent Colleges from July through November 2019, with a few updates added in January 2020.

eligible for public assistance programs) who sign up in middle school and meet certain basic standards, known as the College Bound Scholarship. In addition, the state has long supported a relatively generous traditional, need-based state grant program (College Grants, formerly called State Need Grants) that has recently been substantially enhanced. Both these programs provide comparatively large state financial aid awards to eligible students enrolling in private as well as public colleges and universities within the state.

State-level programs are relatively new and generally unexamined. Thus, it is important to begin assessing the results of programs that have been in place for a few years.

Second, this report provides specific analysis of two other alternative state policy approaches to the "free college" initiatives that are currently so popular. In Section Two we report results of updated analyses for the above four states of an approach we examined in two earlier reports (see Related Reports, p. 9); the approach is designed so states can take advantage of the cost-effectiveness of independent colleges compared to public institutions. Our approach uses the portable (across sectors) need-based student aid programs already on the books in most states (see National Association of State Student Grant and Aid Programs 2019) and proposes to enhance these existing grants for students on the margin of choice between a public and private college in the state *if* they choose a private college over a similar public institution. These increased funds would have the effect of reducing the net price to the student of attending a private college, thus improving college affordability as well as choice. Using realistic price elasticity values from the empirical literature on higher education economics, we estimate the enrollment, degree completion, and state budgetary effects of modest additional state grant assistance amounts for private college attendance of $1,000 and $2,000 for the four focal states named above. Under plausible, conservative assumptions about reduced need for state support related to these students in public institutions (because they enroll instead in private colleges), we find that states would save more than their spending on the enhanced grants and would also in most cases gain some additional bachelor's degrees for their labor force each year once students completed college.

Finally, in Section Three of the report we sketch out the design of a different policy approach to better utilizing private sector capacity to meet state policy goals. This is a capitation-payments-based approach whereby the state would subsidize private colleges and universities to enroll students at degree levels (for example, undergraduate and, potentially, master's level) or in fields (for instance, nursing, engineering, and computer science) or perhaps in particular regions of the state where there is additional need but where public sector capacity is at its limit. Where private sector capacity is available or could readily be created in the needed areas, we explain how states could go about negotiating mutually acceptable financial terms with interested institutions to partially subsidize the desired increased enrollments. While institutions would be able to charge these students tuition to enhance total revenues, providing a financial incentive for college participation, state support would likely make it possible to provide some students with additional institutional aid packages. This would serve both to ensure meeting enrollment targets and to enhance affordability by keeping the net price to the student competitive. We also explain how, with some modifications, the capitation approach could be refocused to increase degrees awarded rather than enrollments, if that were preferred by a state, to better ensure increased degree productivity.

Related Reports

In ***The Cost-Effectiveness of Undergraduate Education at Private Nondoctoral Colleges and Universities: Implications for Students and Public Policy*** **(2015)**, we used federal Integrated Postsecondary Education Data System (IPEDS) data (primarily) to demonstrate that private nondoctoral colleges and universities, on average, graduate higher proportions of their students and do so in significantly less time than do statistically matched public institutions. The differences apply to both genders and all major ethnic subgroups. This report also compared costs per bachelor's degree awarded across the two sectors. State budgetary costs per degree were more than six times as high in the public compared with the private sector. When total costs to all parties were compared, including labor market earnings foregone during student time enrolled in college ("opportunity costs"), private sector degrees were found to be less costly to society than those awarded to students in the public higher education sector.

In ***Utilizing Independent Colleges and Universities to Fulfill States' Degree Attainment Goals*** **(2017)**, we simulated the enrollment, bachelor's degree attainment, and state budgetary effects of offering hypothetical enhanced state financial aid to state resident students on the margin of choice between a private and a similar public college *if* they elected the private sector option. Public institutions could be statistically matched to the private nondoctoral sectors in 24 states for this analysis. The simulations showed that, in 22 of the 24 states, the state could save money overall by inducing some students to choose a private college over similar public options—thus saving the state considerably in support for public institutions—for an aid grant enhancement of just $1,000 per year. In 19 of the 24 states, the shift also would enhance annual bachelor's degree production, owing to the superior degree production efficiency of the private sectors in most states. In short, these studies demonstrate that most states would be better off (that is, it would be more cost-effective) if more of their college students chose private colleges rather than similar public ones within the state.

Section One: Assessment of Four States' College Affordability Programs

In this section, we provide up-to-date assessments of the status and effects to date, to the extent these can be determined, of the programs concerning our four focal states. Since Tennessee Promise is the oldest of the recently adopted state tuition-free college programs, we start with it and follow with our assessment of Oregon Promise, New York's Excelsior Scholarships and Enhanced Tuition Awards, and Washington State's programs (College Bound Scholarships and College Grants).

Tennessee

The Tennessee Promise program was signed into law by Governor Bill Haslam in 2014. The statewide promise initiative was modeled on a similar localized promise program, Knox Achieves, which ran from 2008 to 2011 in Knox County, Tennessee, and offered a preview of the likely effects of Tennessee Promise. Knox Achieves was successful in increasing community college attendance substantially, especially among career and technical education students. However, some of that additional community college attendance came from students who likely would have attended four-year institutions in the absence of Knox Achieves. Overall, according to rigorous empirical analyses by academic scholars, the policy increased attainment of certificates and associate's degrees by 7 to 9 percentage points. But by the time six-year bachelor's degree completion rates could be observed, they were reduced by 5 to 6 percentage points compared with what they otherwise would have been (Carruthers and Fox 2016; Carruthers, Fox, and Jepsen 2018; Carruthers and Attridge 2019). This data illustrates a significant downside to the two-year college promise-type program, although the available data do not permit distinguishing private from public sector baccalaureate award decreases in the case of Knox Achieves.

Program Structure

The Tennessee Promise program enrolled its first cohort of eligible students, as described below, in fall 2015. These students received full "last-dollar" funding from

the state for tuition and required fees at two-year degree and certificate programs in Tennessee. Last-dollar funding means that the state provides funds to eligible students to cover full tuition, but only after applicable federal and other state aid has been applied. Beyond the direct payments provided under the Promise program itself, no significant appropriations were made directly to colleges to prepare for or to provide capacity for additional enrollment. In addition to financial aid, students were paired with a volunteer mentor to help guide them through college. Mentorship is coordinated by three organizations: tnAchieves (in 83 counties), the Ayers Foundation (five counties), and the Regional Economic Development Initiative (seven counties) (Tennessee Higher Education Commission [THEC] and Tennessee Student Assistance Corporation [TSAC] 2019). These three partner organizations are largely privately funded, although they received a small amount of grant funding from the state (M. Tribble, tnAchieves, private correspondence 2019). Students must reapply for the Promise aid each year and must complete eight hours of community service per semester to remain eligible. Academic requirements include satisfactory academic progress at technical schools, or 12 credits per semester and a GPA of 2.0 or greater at community colleges and universities with eligible associate or certificate programs (THEC and TSAC 2019). Promise aid is only available to recent high school graduates who are younger than 19 and enroll in the fall following their graduation or receipt of a GED.

Enrollment and Participation Rate Effects

The impact of the Tennessee Promise program on enrollment at Tennessee's two-year institutions has been large, although increases have leveled off since the first year of implementation. In fall 2015, Promise's first year, the proportion of Tennessee high school graduates attending college jumped from 58.1 percent to 64.0 percent, and the proportion has remained at this higher level since then (THEC and TSAC 2019). Enrollments at community colleges specifically increased by about 27 percent for the first eligible cohort relative to the year immediately before the policy. Subsequent cohorts of two-year college enrollments were around 20 percent larger than those immediately before the policy. Table 1 shows the distribution of the first three Promise cohorts by sector. Enrollments in eligible (certificate and associate's degree) programs in private institutions are small but growing.

Retention and Completion Effects

Perhaps surprisingly, community college retention and completion rates are comparable to those recorded before the Promise program was initiated. First-term to second-term retention is at about 82 percent for the first three Promise cohorts, and first- to-second-year

TABLE 1

Tennessee Promise Enrollment by Sector

	Cohort 1 (Fall 2015)		Cohort 2 (Fall 2016)		Cohort 3 (Fall 2017)	
	Count	Percent	Count	Percent	Count	Percent
Community College	13,369	82.5%	13,852	80.6%	14,260	79.9%
Tennessee College of Applied Technology	2,038	12.6%	2,038	11.9%	2,090	11.7%
Private Institution	423	2.6%	666	3.9%	850	4.8%
Austin Peay State University or Tennessee State University	377	2.3%	632	3.7%	656	3.7%
Total	**16,207**	**--**	**17,188**	**--**	**17,856**	**--**

Source: Tennessee Higher Education Commission (THEC), 2019.

retention has remained at about 60 percent (THEC and TSAC 2019). These retention rates are very similar to those for students who had finished high school just before the Promise went into effect, and are much higher than the 2015–2016 retention rate of 42 percent for non-Promise students (THEC and TSAC 2017). A more appropriate comparison would be of entire cohorts from before and after implementation of the Promise program, not of Promise to non-Promise students, but these data are not available.

The evidence regarding impact of the Promise program on other institutions is mixed.

After five semesters, the time limit for Promise aid to individuals, 21.5 percent of Promise students from the first Promise cohort had earned a degree or certificate, compared with 13.8 percent of students entering in fall 2014 (the year before Promise) and with just 8.3 percent of non-Promise students in the fall 2015 cohort. Dziesinski et al. (2019) also found that retention rates were higher for Promise students than for prior cohorts, although this impact appeared to be related to the amount of aid received rather than to the Promise format specifically.

Comparing Promise students to the previous non-Promise cohort, fewer students transferred out (10.1 percent vs. 12.2 percent) and fewer were still enrolled (20.6 percent vs. 23.9 percent), for a total "success" (graduation, transfer, or still enrolled) rate of 52.2 percent (vs. 49.9 percent of the pre-Promise cohort) after three years (Tennessee Board of Regents 2018). At that point, 29 percent of the first Promise cohort had earned a degree or certificate and 23 percent had transferred to some other institution. However, the latter measure includes transfers to other community colleges as well as to baccalaureate institutions (THEC and TSAC 2019), so it is not an ideal outcome measure.

Promise Student Characteristics

The mix of students making use of the Tennessee Promise program is fairly similar to the makeup of non-Promise students who attend Tennessee community colleges. Table 2 shows the demographic characteristics of the first cohort of Promise students in fall 2015. These students were very similar both to the full-time first-year students attending Tennessee community colleges directly from high school in the year prior, fall 2014, as well as to the whole body of Tennessee first-time freshmen in community colleges in fall 2015. The Promise group in 2015 had slightly higher average ACT scores and high school GPA; there was a similar proportion of white students in both groups. The biggest differences are that the Promise students in fall 2015 were much more likely to also receive a Tennessee Education Lottery Scholarship grant from the state and were considerably (4–5 percentage points) less likely to be black. Later Promise cohorts are somewhat higher-achieving and more diverse than the initial ones. By the third cohort of Promise students, the percentage of white students had dropped to 71.8 percent, the average ACT score had risen to 19.3, and the median family income had fallen from $55,710 to $53,521. However, the percentage who were first-generation college students also dropped from 45.6 percent to 40.6 percent (THEC and TSAC 2018).

Effects on Other Institutions

The evidence regarding impact of the Promise program on other institutions is mixed. The great majority of Promise students attend institutions that do not have any programs longer than two years of full-time study, with fewer than 5 percent attending a qualifying program (that is, an associate's degree or certificate program) at a private institution and fewer than 4 percent attending a qualifying program at a public four-year college (see Table 1). The Promise initiative may have pulled some students away from public four-year institutions and into community colleges, as was true with the Knox Achieves findings. Qualitative research suggested that students responded strongly to the availability of Promise aid and were basing educational decisions on it (Barber 2018).

TABLE 2

Characteristics of Tennessee Promise and Other Tennessee Community College Students

	Tennesee Promise CC Students	FTF out of HS, Fall 2014 (CCs)	FTF at CCs, Fall 2015
Female	56%	56%	56%
Average ACT	19.1	18.7	18.9
Average High School GPA	3.05	3.04	3.00
Race/Ethnicity			
White	74%	70%	74%
Black	14%	19%	18%
Hispanic	4%	5%	3%
Financial Aid			
Tennessee Education Lottery Scholarship	58%	48%	43%
Any Pell	53%	53%	55%
Pell Covers Tuition and Fees	45%	53%	44%
Full Pell	34%	40%	33%

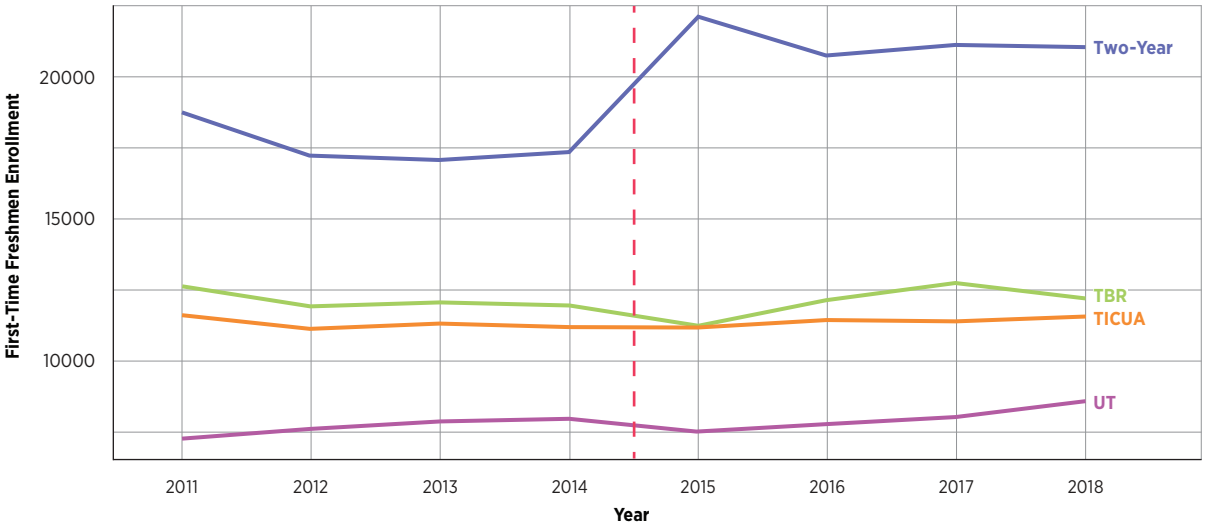
Note: CC = community college; FTF = first-time freshmen.
Source: Tennessee Higher Education Commission, 2017.

Enrollment trends (see Figure 1) show that the first year of the Tennessee Promise was accompanied by a sizable decline in enrollment at Tennessee's public four-year institutions, about 5 percent at both University of Tennessee and Tennessee Board of Regents (regional) campuses. However, these latter enrollments rebounded in subsequent years. By fall 2017, every four-year sector in the state had higher enrollment than before the Promise went into effect. It is unclear whether this occurred naturally or because the four-year institutions changed their recruitment efforts in response to the Promise. Also, increasing college enrollment numbers may be occurring partially because the number of incoming Tennessee high school graduates has been increasing, assisted both by growing age cohort sizes and increasing high school graduation rates, with the number of high school graduates rising from 61,450 (spring 2015) to 64,407 (2017) to 65,043 (2019) (Tennessee Department of Education 2019). Since the enrollment count at all public four-year college types increased by 2,138 from 2015 to 2017, it is unlikely that the entirety of the increase is attributable to the gain (of 2,957) in the number of high school graduates over these years, but the demographic growth probably plays a role.

It appears that the independent (TICUA) institutions overall were not affected by the Promise program in terms of enrollment, suggesting that the students considering two-year institutions do not overlap much with students considering four-year programs at independent colleges. However, this generalization masks some heterogeneity across institutions. TICUA President Claude Pressnell (private correspondence 2019) reports that while the Promise program has not had much effect on selective private colleges, less selective private institutions are competing more heavily for students with the community colleges than before,

FIGURE 1

Tennessee Enrollment by Sector before and after Tennessee Promise



Note: TBR = Tennessee Board of Regents four-year public institutions; UT = University of Tennessee four-year public institutions; and TICUA = Tennessee Independent College and University Association independent four-year institutions.
Source: Public institution data from Tennessee Higher Education Commission *Higher Education Factbooks*, 2011–2019. TICUA data are directly from TICUA reports.

and some are facing declining enrollments. Further, Tennessee Promise students who transfer have not thus far transferred in large numbers to independent institutions. Despite the large increase in community college enrollment in the Promise cohorts and the 23 percent overall inter-institutional transfer rate of the first Promise cohort, community college transfers into TICUA institutions declined from 1,292 in 2014 (the last year before Promise) to 1,161 in 2015, rebounding only slightly to 1,219 in fall 2018. The 2018 transfer figure is lower than for any of the years from 2011 to 2014 (TICUA internal enrollment figures).

One area in which the Promise program has positively affected private institutions is in their programs qualifying for Promise support, namely, associate's degree or certificate programs. Driscoll (2019) reports that Cumberland University has seen enrollment in its qualifying programs nearly triple following implementation of the Promise. By fall 2017, more than two-thirds of these Cumberland enrollees were Tennessee Promise students, and 84 percent of those reported that they would not be able to afford the program without the Promise aid. Cumberland is a notable case in that the Promise does not cover full tuition there but the university has made allowances and reductions so that students do not have to take on additional loans. The performance of Cumberland suggests that Promise-eligible students are willing to consider private institutions if additional aid can be used to cover costs at those institutions. TICUA is relatively unusual among state independent sectors in having several member institutions that offer two-year programs.

Oregon

Program Structure

The first cohort of Oregon Promise students began attending college in fall 2016. The program is similar to Tennessee's in that students generally must enroll in the term after they graduate from high school or receive a GED. This last-dollar state Promise program requires that students apply for federal financial aid, have a high school GPA of 2.5 or higher or a GED score of at least 145, and maintain at least part-time enrollment at a public community college, although only a fraction of the full award is given to students who attend part-time. The program covers the first 90 community college credits based on a quarter system of academic terms. Tuition and fees (up to 12 credits per term) are covered, and, for students whose tuition and fees are already paid by Pell Grants or other sources, Oregon Promise offers up to $1,000 for other college-related expenses (less a $50 registration fee).

Enrollment and Participation Rate Effects

The 12-credit limit presented something of a stumbling block in implementation, as many full-time students expected that all of their 15 enrolled credits would be covered and were surprised and unhappy to find that their grant was smaller than expected (Hodara et al. 2015). Messaging in early years was confusing in other ways, leaving students unsure what their benefits were (Gulbrandsen et al. 2017). Some students also found the enrollment and credit requirements to maintain the Promise grant difficult: Of the first cohort (fall 2016 entrants), half of the students still enrolled in community college as of 2018 were doing so without a Promise grant. Most of these students lost eligibility by missing a term; reaching the 90-credit maximum was the next most-common reason for losing Promise aid (Oregon Higher Education Coordinating Commission [OHECC] 2018).

Evidence on the extent to which Oregon Promise has affected community college enrollment is mixed. The aggregate proportion of recent Oregon high school graduates enrolled in community colleges in their first year after high school rose from 26.1 percent in 2015 (the last pre-Promise year) to 29.3 percent in 2016, the first year under Promise (OHECC 2018). However, these gains were more than reversed in 2017. The proportion of recent graduating seniors with federal Pell or state Oregon Opportunity grants who attended community college (not necessarily in just the first year after high school as the Promise requires) jumped from 25.7 percent to 50.2 percent (OHECC 2018). In contrast to these aggregate comparisons that include many students not eligible for or affected by the Oregon Promise, Gurantz (2019) offers a rigorously designed early study on the causal effects at the student level of exposure to the Oregon Promise. Gurantz finds that recent high school graduate enrollment (share of the eligible high school graduate cohort) in community colleges rose by 4 to 5 percentage points as a result of the policy.

Evidence on the extent to which Oregon Promise has affected community college enrollment is mixed.

Gurantz (2019) also finds that the shifts in community college enrollment were driven in the first year of Oregon Promise largely by students who would have otherwise attended four-year institutions, but that this was no longer true by the second year. Gurantz's finding is consistent with aggregate changes in enrollment and with Gulbrandsen et al. (2017), who found numerous reports in the first year of students explicitly rerouting from a four-year institution because of Promise. The Promise also may have prompted students to shift away from more rural community colleges toward urban ones (Gulbrandsen et al. 2017).

TABLE 3

Percentage of Oregon Students and Promise Recipients by Race/Ethnicity

Race	Oregon 12th Graders in 2015–2016	Community College (CC) Enrollees in 2013–2014	Oregon Promise Recipients in 2016–2017
American Indian or Alaskan Native	1.6	1.7	1.0
Asian	4.1	4.2	4.0
Black	2.7	3.1	1.3
Hispanic or Latino	21.3	14.1	19.6
Multi-Racial/Ethnic	5.0	3.5	4.9
Pacific Islander	0.6	0.5	0.5
White	64.6	73.0	65.2

Note: In CC calculation, students with Not Reported or International designations were dropped.
Sources: Demographics of 12th graders and Promise recipients are from Oregon Higher Education Coordinating Commission (OHECC), 2016. Demographics of CC enrollees are from OHECC data and calculated by authors.

Determining whether students were shifting their enrollment away from private institutions as a result of Promise is difficult. According to figures from the Oregon Alliance of Independent Colleges and Universities (OAICU), undergraduate first-time enrollment at Oregon private institutions declined slightly over the first two Promise years, from 4,602 in 2016 to 4,494 in 2018. Overall in-state undergraduate enrollment at these institutions similarly declined from 8,691 to 8,168. The number of incoming transfer students declined dramatically from 1,841 to 1,347. Students with prior experience at Oregon community colleges declined from 771 to 600.[2] It is difficult to associate these declines with the Promise program, however, as Oregon's private colleges saw similarly sized declines for graduate students and out-of-state undergraduates over the same period. Because enrollment among student types unaffected by the Promise experienced declines at almost exactly the same rate as state resident undergraduates, our reading of the OAICU data is that it seems unlikely that there was any significant diversion from Oregon private institutions as a result of Promise. This appears also to be the general understanding of the OAICU members we were able to talk to, but there is no official statement from the organization.

Promise Student Characteristics

Although the program was designed partially with the intent of promoting equity, the Promise grants have been disproportionately awarded to higher-income groups within the set of eligible students. Table 3 compares the racial demographics of Promise recipients to Oregon high school students and to community college enrollees before the policy took effect. Compared with the recent high school graduate population, black and Hispanic students are less likely to become Promise grant recipients, and white students are more likely. Recipients also are less likely to be first-generation college students (Báez-Arévalo 2019). The comparison of Promise recipients with all recent community college enrollees is imperfect as the two data sources use different data collection approaches for the race/ethnicity

[2] This paragraph focuses on figures from 2016 and 2018, omitting 2017 because enrollment figures are very low for that year, implying potential data inconsistencies. The comparable figures from 2015 are not available; however, evidence from IPEDS, which is less specific but goes back farther, generally supports the interpretation that OAICU colleges' enrollment trends are responding to factors other than the Promise program.

TABLE 4

Oregon Promise Spending by Expected Family Contribution (EFC) Quintile

Projected Awards, by EFC Quintile	EFC Range	Projected Oregon Promise State Funding 2016–2017	Percent of Total Projected Oregon Promise State Funding
First	$0	$0.86 million	7.9%
Second	$0–$2,736	$0.95 million	8.7%
Third	$2,737–$8,673	$2.55 million	23.3%
Fourth	$8,674–$19,644	$3.29 million	30.0%
Fifth	$19,645 and above	$3.30 million	30.1%

Source: OHECC tabulation of Oregon Promise data, OHECC, 2016.

data. Black students are much less likely to be Promise recipients than their representation among all community college students, but Hispanic/Latino students are more likely to be in Promise. White students show lower representation among Promise recipients than their share of all community college students. There is evidence that racial gaps in Promise enrollment closed slightly for later cohorts (Báez-Arévalo 2019).

Consistent with its last-dollar approach, among awardees higher-income students receive larger awards from Oregon Promise, and most funds go to those students. As shown in Table 4, the Oregon Higher Education Coordinating Council found that in the first year of the Promise program more than 60 percent of Promise funds went to students with the highest 40 percent of Expected Family Contributions (EFCs) among Promise recipients (which is indicative of higher family income), while only 16.6 percent of funds went to the students in the lowest 40 percent of EFC. Lower-income students may be less likely to respond to the Promise as well, perhaps because their ability to attend college depends upon more than just having tuition covered. Murray-Jensen (2018) found that community college enrollment did not increase significantly as a result of Oregon Promise among students from low-income high schools.

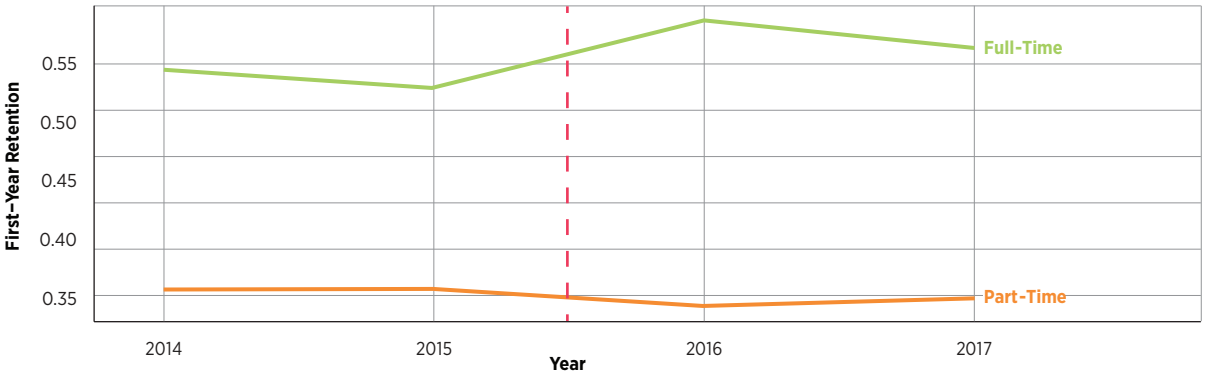
At times, the Oregon Promise program has also had a family income limit (stated in terms of Expected Family Contribution to college costs under federal student aid formulas) for eligibility. Partially in response to first-year enrollment in Promise being higher than expected and possibly also in response to findings about which students were receiving the grant, in 2018 families were required to have an EFC of $18,000 or less in order to qualify for the Promise. This step, according to OHECC, reduced approved awards by about 15 percent. The income (EFC) cap was lifted again for fall 2019 students, but this is too recent for us to observe the effects as fall 2019 enrollment data are not yet available.

Effects on Other Institutions

Students enrolled in Oregon Promise have similar completion and retention rates as those who enrolled in community colleges before the policy took effect. Figure 2 shows changes in retention rates at two-year colleges after the introduction of Promise. There was a several percentage-point jump upwards in retention (from first-to-second year of enrollment) among full-time students, but most of these gains were not seen in the second cohort. Overall credential attainment rates have not risen much, although it is still too early to tell a great deal about such outcomes. When comparing 2015–2016 high school graduates who enrolled in community college, the first cohort eligible for Promise,

FIGURE 2

First-Year Retention Rates at Oregon Two-Year Colleges



Source: Integrated Postsecondary Education Data System (IPEDS).

against 2014–2015 graduates who enrolled in community college slight changes can be noted: As of two years after matriculation, the proportion with an associate's degree rose from 2.4 percent to 3.1 percent, those with a career certificate increased from 0.7 percent to 0.8 percent, and the proportion still enrolled increased from 38.3 percent to 39.7 percent. Thus outcomes for most students are still uncertain. Transfer rates to public universities, with or without a credential, fell slightly between these two cohorts, from 8.2 percent to 7.9 percent (OHECC 2018).

Overall, while it is still early and the program has shifted its target group somewhat over time, Oregon Promise appears to have mainly affected initial community college enrollments, with effects on credential attainment still unclear. There are few signs of large or lasting impacts on four-year college enrollments, including those in private colleges.

New York

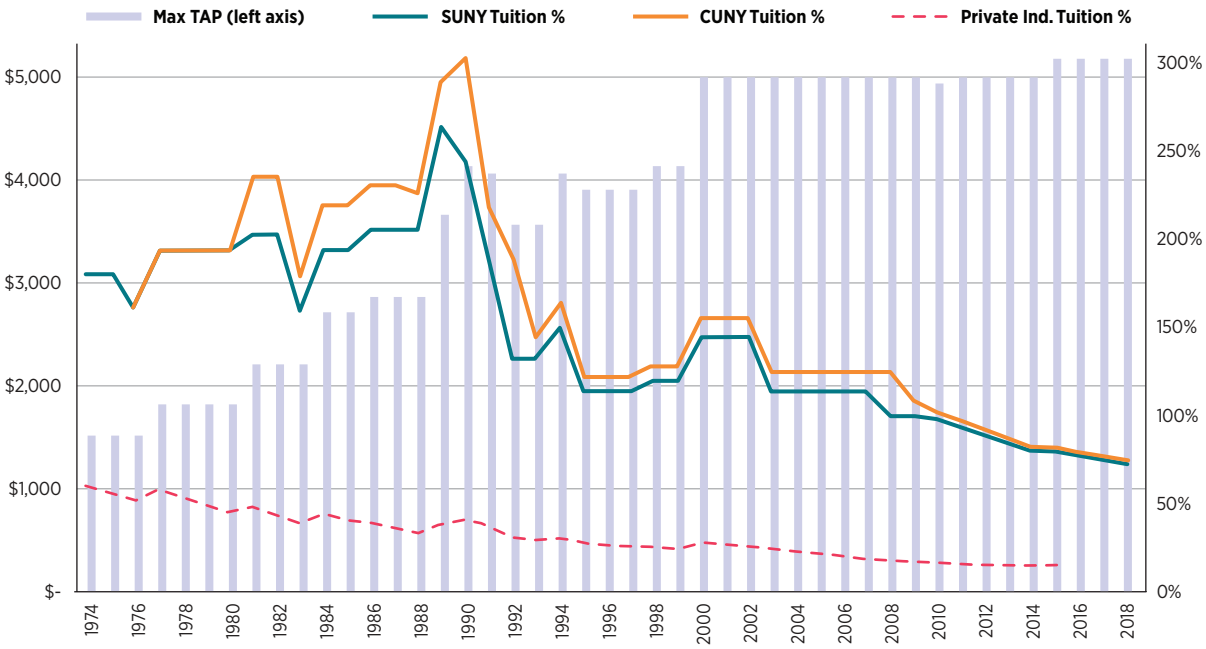
Program Structure

New York initiated its Excelsior Scholarship program in 2017–2018. This program permits income-eligible students[3] to attend either public community or four-year colleges in the State University of New York (SUNY) and City University of New York (CUNY) systems. Excelsior is important because it is the first state effort to offer tuition-free public college at the baccalaureate institution level. Excelsior is a last-dollar program that is designed to supplement the state's basic need-based

[3] In an effort to be simple and clear to potential beneficiaries, the Excelsior program uses gross family income (without adjustments for family size or deductions allowed on income taxes) to determine eligibility rather than adjusting income for personal exemptions and deductions (reflecting family size and the like) as does the state's major need-based financial aid program, the Tuition Assistance Program (TAP). This difference, however, causes some complications and undesirable effects in how the two programs interact (see McMahon 2019, p. 10). For example, as McMahon puts it, "In effect, Excelsior eligibility is based on a reverse-means test; after deducting the value of TAP and Pell grants, the scholarship is worth most to students from households with higher incomes—up to the $125,000 cutoff, …" (p. 10). The initial family income cutoff for Excelsior eligibility was $100,000, rising to $110,000 in 2018–2019 and then topping out at $125,000 beginning in 2019–2020. (The governor has recently proposed to increase the income eligibility cap further to $150,000.) This means that substantially more students will be eligible for Excelsior going forward than were so in the two initial years. As of 2018, median household income in the state was $67,844 and the median for a four-person family was $89,137 (Census Bureau estimates cited in McMahon 2019, p. 16, note 1). Thus, in theory, the majority of New Yorkers are likely to be eligible for the program before considering its other restrictions.

FIGURE 3

Maximum Tuition Assistance Program Award and Share of Institutions' Tuition Charges, 1974–2018



Source: Reproduced with permission from McMahon, 2019, Figure 3. Tuition is for New York residents at four-year undergraduate institutions, not including fees.

student aid program, the Tuition Assistance Program (TAP). Maximum TAP assistance is $5,165, a figure which has not increased much since 2000 (when it was $5,000; see Figure 3). As Figure 3 shows, the long stagnation in TAP award size has meant that the aid provided has declined sharply in relation to tuition in all sectors.

The Excelsior Scholarship is designed to cover the difference between an eligible student's TAP award and SUNY or CUNY tuition, figured at 2016–2017 rates, up to a maximum Excelsior award of $5,500 (McMahon 2019, p. 8). This leaves a substantial gap between students' awards and current posted tuition (which for the 2019–2020 academic year is $7,070 at SUNY and $6,930 at CUNY four-year campuses excluding fees) that these institutions are required to absorb without charging aided students. The award-to-income schedule for TAP[4] implies that many lower-middle and middle-income students would be eligible for Excelsior's last-dollar awards, with that number increasing substantially in 2018–2019 as the Excelsior income ceiling jumped from $110,000 to $125,000 (with a further increase to $150,000 recently proposed by the governor; see: *www.governor.ny.gov/programs/2020-state-state-address*).

[4] Under TAP, a student from a family of four claiming the standard deduction would need to have an adjusted gross income (AGI) of $25,050 or less to qualify for the maximum award of $5,165. The award amount falls sharply with income up to $68,050 whereupon the minimum award size, $500 in 2018–2019, is reached. Students with family AGI up to $98,050 are eligible for such minimum awards. About 30 percent of 338,000 TAP awards in 2017–2018 went to students attending private colleges, which enroll about 34 percent of all undergraduates in New York (including many nonresidents who are not eligible for TAP) (McMahon 2019, pp. 3, 7). Thus, TAP is quite important for keeping private colleges accessible to New Yorkers of modest income. TAP students receiving Pell Grants or institutional aid can use those funds to defray non-tuition costs, unlike with Excelsior's last-dollar design focused exclusively on tuition costs *after* all other aid is considered.

Excelsior students must enroll full-time and earn 30 academic (semester) credits per year. This is a high bar for many students, particularly those in the CUNY system and the community college population in general. Excelsior recipients need not be recent high school graduates or first-time college enrollees, as in most other states' free college programs, but there are stringent "backward-looking" requirements for previous full-time enrollment history that rule out many older students. Also, Excelsior recipients must live *and* work in New York after graduation for the same number of years as they received the award; if they fail to do so, their scholarship is converted to an interest-free loan.

The upshot of all these strict rules—together with initial implementation difficulties experienced in the first year of the program—has been that the number of Excelsior awardees has fallen far short of what Governor Cuomo implied initially when his office predicted that 940,000 New York families with college-age children would qualify (McMahon 2019, p. 1). In the first year of the program, 2017–2018, only about 20,100 students received Excelsior awards (Hilliard 2018),[5] and in 2018–2019 the number was still only 24,000 (New York Governor's Office, September 10, 2019). Official projections are that the number of awardees will reach 30,000 in 2018–2019 when the income eligibility ceiling reaches its statutory level of $125,000 (State of New York, FY 2020 Executive Budget 2019, cited by McMahon 2019, p. 10).[6] The 20,000-odd Excelsior Scholarships awarded to SUNY and CUNY students in 2017–2018 represented about 3.2 percent of these systems' total undergraduate enrollments (Hilliard 2018). The Excelsior awardees' share of enrollments was substantially higher at public four-year (4.5 percent) than two-year (1.8 percent) institutions (Hilliard 2018), suggesting that Excelsior had its expected effect of shifting some students from two-year to four-year institutions. Excelsior utilization also was much higher in the SUNY system than at CUNY.

New York's private nonprofit colleges and universities serve nearly half of the state's undergraduates enrolled in baccalaureate institutions (McMahon 2019, p. 3, Figure 1) and have historically been seen by the state as important contributors to state policy goals in higher education. Thus, in addition to the Excelsior program, which is exclusively for public sector students, in 2017 the state also created a program called Enhanced Tuition Awards (ETA) that permits eligible students[7] seeking to enroll in New York private colleges and universities to top off their TAP grants with ETA awards of up to $3,000, up to a total in state aid (TAP + ETA) of $6,000. However, the private college at which a would-be ETA awardee enrolls must agree to match the ETA amount from its own funds and guarantee not to raise the student's tuition for four years in order to participate. These stringent conditions have meant that only about 30 of the state's more than 100 private colleges and universities have agreed to accept ETA students, and some of these have limited the number they will take.[8] State data show that 1,948 students received ETA awards in 2017–2018, the program's first year and the only year for which these data are available.[9] Moreover, not all of the state money allocated for the program has been expended, evidently because most of

[5] This study reported that more than two-thirds of the nearly 64,000 applications for Excelsior Scholarships in the initial year had been rejected, most of them because the applicants were taking too few credits to qualify (Hill 2018).

[6] If Governor Cuomo's proposed increase in the income ceiling to $150,000 is adopted, the numbers of Excelsior recipients would likely grow considerably as eligibility expanded to include the more affluent.

[7] The income levels, course credit, and post-graduation residency requirements are identical to those of the Excelsior program.

[8] See the Higher Education Services Corporation (HESC) website: *www.hesc.ny.gov/pay-for-college/financial-aid/types-of-financial-aid/nys-grants-scholarships-awards/enhanced-tuition-awards/enhanced-tuition-awards-program-participating-colleges.html.*

[9] About 322,000 total and 64,400 first-time undergraduates enrolled that year in New York's independent sector institutions, according to published data from the New York State Department of Education. Thus, ETA awardees were well under 1 percent of total independent sector undergraduates, far fewer even than Excelsior's small share of public sector students.

the independent colleges find the program's conditions too costly and cumbersome to utilize extensively. Nonetheless, the state continues to project its ETA spending for 2018–2019 at $7.2 million on a total of 5,350 students (McMahon 2019, p. 10).[10] This compares with projected spending on Excelsior Scholarships of $119 million, which itself is well below the $163 million that Governor Cuomo had originally estimated Excelsior would cost when fully implemented.[11]

Enrollment and Participation Rate Effects: Public Sector

The only credible enrollment data publicly available, which includes non-resident students who would not be affected by Excelsior or the ETA program, suggests that Excelsior/ETA may have had some effects in its first year (2017–2018, the only year for which complete enrollment data has been published by the state education department). In particular, after several years of relative stability, first-time full-time (FTFT) undergraduate enrollments at SUNY jumped by 5.7 percent in 2017–2018 while part-time enrollments, which are small, fell. Similarly, in the CUNY system FTFT enrollments increased by 8.9 percent in 2017–2018 after several years of stability. In both systems' community college sectors, FTFT enrollments fell slightly, although less than in immediately prior years, and part-time enrollments declined more sharply. These breaks from enrollment trends, albeit covering only a single year, may well reflect students' efforts to take advantage of the new Excelsior awards that provide additional aid for four-year college attendance but require full-time enrollment.

Enrollment and Participation Rate Effects: Independent Sector

Table 5 shows independent sector enrollment trends compiled by the Commission on Independent Colleges and Universities (CICU) of New York from state education department data.

The top panel in Table 5 shows that overall undergraduate enrollments in the sector have been declining very slightly since 2014 (2015 excepted), by about 700 students per year, or less than 1 percent for the entire period. There is no clear break from the small downward trend with the introduction of Excelsior and Enhanced Tuition Awards in fall 2017. Meanwhile, first-time undergraduate enrollments, which might be expected to be more sensitive to the availability of these new aid programs, have actually risen since their introduction. First-time undergraduates in independent institutions have increased in both years since the introduction of Excelsior and ETA, by a total of 3,338 students, or 5.3 percent over the two years.

The second panel of data in the table, which depicts New York resident undergraduates for 2016 and 2018, shows almost no change (-0.2 percent) for the post-Excelsior period. Together, these two sets of data do not suggest that Excelsior has had the dramatic impact on independent sector enrollments overall that was feared initially.

Still, some independent colleges may perceive an impact. The third panel of data aggregates undergraduate enrollment data for a set of about 48 "New Yorker-serving" institutions whose undergraduate student bodies consist of 65 percent or more New York residents. In terms of total undergraduate enrollments, these institutions have seen a decreasing trend since 2014. Between 2014 and 2016 (pre-Excelsior), their enrollments fell by nearly 4,975, or 3.7 percent. In the two post-Excelsior years (from 2016 to 2018), enrollments decreased by an additional 3,319, or 2.6 percent. Thus, it is not at all clear that Excelsior had much to do with the latter decline, which seems to follow a pre-existing trend. Indeed, an important factor may be that the high school graduating cohort in New York decreased steadily and by an estimated 5,500, or 2.5 percent, over the years from 2014 to 2018 according

[10] This projection seems inconsistent (specifically, too high) with both the earlier level of take-up and with what we learned from interviews with independent sector representatives.
[11] These figures are from McMahon (2019, p. 10), who cites FY 2020 Executive Budget presentations by HESC, a state agency.

TABLE 5

Undergraduate Enrollment Trends at Four-Year Institutions in New York State, Fall 2014 to Fall 2018

Independent Four-Year Institutions	2014	2015	2016	2017	2018
Total Undergraduates	323,305	326,178	322,753	321,838	320,469
First-Time Undergraduate Total	63,504	62,806	62,647	64,408	65,985

Source: New York State Education Department (NYSED), degree-credit fall enrollment, full-time and part-time students.

Independent Four-Year Institutions	2016	2018
NY Resident Undergraduate Total	168,350	168,062

Source: NYSED, degree-credit fall enrollment, full-time and part-time students.

Independent Four-Year New Yorker-Serving Institutions	2014	2015	2016	2017	2018
Total Undergraduates	133,186	131,634	128,211	125,827	124,892
First-Time Undergraduate Total	23,163	23,696	23,868	22,622	24,130

Note: Independent New Yorker-serving institutions enroll 65 percent or more New York State resident undergraduates.
Source: NYSED data compiled by CICU, degree-credit fall enrollment, full-time and part-time students.

to the most recent national projections (Bransberger and Michelau 2016). The pattern of first-time undergraduate enrollments at these colleges also sheds little light on Excelsior's effects, as it was fairly stable from 2014 to 2016, fell by 5.2 percent in the first Excelsior year (2017), but then rebounded fully to a five-year high in 2018.

In sum, we cannot conclude from these data, taken as a whole, that Excelsior has to date had much effect on independent sector enrollments. However, as students and families become more familiar with Excelsior over time, and with its substantial expansion of income eligibility up to $125,000 that began in 2019–2020 (and perhaps will further increase to $150,000 in the future), impacts on the independent sector could well become more noticeable. This is more likely if utilization of Enhanced Tuition Awards continues to languish due to the stringent conditions the state places on independent institutions attempting to participate.

Excelsior Student Characteristics

We were unable to locate any published reports or official data about Excelsior Scholarship student characteristics. As mentioned earlier, we do know from an independent research report (Hilliard 2018), based on data obtained via a New York Freedom of Information Law (FOIL) request, that 68 percent of applications for Excelsior Scholarships for 2017–2018 were denied, with the most common reason by far being that the applicant had "not sufficient credits." This means that they had a prior history of less than full-time enrollment or, if a first-time college student, would not be enrolled full time in the scholarship year (Hilliard 2018, p. 3). Given the program's last-dollar design and strict requirements for full-time enrollment, recipients are more likely than the larger student population to be in four-year colleges; the first year's data from the public higher education sector mentioned above are consistent with this expectation. In addition, they almost certainly will have higher average incomes (but below the Excelsior eligibility cutoff), and the Excelsior recipient contingent

will likely include a lower proportion of underrepresented students than TAP-aided students not receiving Excelsior aid.

Retention and Credit Accumulation

The only data we were able to obtain relevant to assessing the effects of Excelsior and Enhanced Tuition Awards on student retention or credit accumulation was a single report published by the CUNY system showing trends in its year-to-year retention rates. No external data were available. This report covers the fall-to-fall retention rates from freshman to sophomore year of CUNY first-time freshmen in associate's degree and baccalaureate programs, respectively, and also of transfers into these types of programs. For the one post-Promise year available (the fall 2017 entry cohort), the first-to-second year baccalaureate student retention rate was lower, at 80.7 percent, than in any prior year dating back to the fall 2008 cohort. That cohort's retention rate was identical to the fall 2017 cohort's rate. For all the intervening cohorts, the comparable retention rate was between 82.0 percent and 83.7 percent, so considerably higher than in the first Promise cohort.

Retention of transfers into baccalaureate programs also was low for the first post-Excelsior cohort, at 75.2 percent, which was near the lowest rate in the ten years covered by the data and well below the typical rate. For first-time first-year students in associate's degree programs at CUNY community colleges, the rate of retention into the sophomore year was just 62.6 percent for the fall 2017 freshman cohort, fully 3.4 percentage points lower than the next-lowest rate in the ten-year period covered by the data. Transfers into CUNY associate's degree programs in fall 2017 also experienced the lowest retention rate into the following fall term in the past ten years. Other factors may be at work here, of course, but the one post-Promise cohort available stands out as having lower retention than virtually all recent prior cohorts; this is at least consistent with concerns about Excelsior's rigorous full-time enrollment/credit attainment rules. These stringent requirements could induce students to initially enroll at CUNY who simply will not be able to continue at the pace required to retain award eligibility.

The governor's press release of September 10, 2019, includes some credit accumulation data through fall 2018, which also suggests potential difficulties with retention of Excelsior recipients. Although it reports that the "on-time to graduation" rate for both CUNY and SUNY community college students with Excelsior aid reached 30 percent, compared to 11–12 percent for non-Excelsior students, this evidently means that 70 percent of the Excelsior recipients are no longer eligible for the scholarship, which will likely lead some to drop out. (An appeals process is available for certain students, including members of the military and disabled students, but the numbers of how many appeals have been applied for or granted are unavailable.) Also, being on time for graduation (to graduate within two years in most cases) early on does not mean that students will be able to continue at this pace to completion. Only time, and appropriate data, will tell.

Similarly, the governor's press release claims that, "… since 2016, SUNY and CUNY have experienced a notable increase in the percentage of full-time freshmen taking 15 credits or more in their first semester—the amount necessary to graduate on time. CUNY increased from 31 percent to 44 percent, while SUNY increased from 54 percent to 58 percent." These figures combine both two and four-year campuses in the two systems, according to a senior SUNY research staff person to whom we spoke. In the end, the question for policy evaluation is not whether Excelsior recipients outperform nonrecipients early on but whether retention and completion for the entire cohort improves over time.[12]

[12] There is clearly selection bias in regard to which students are able to meet Excelsior's requirements for full-time study in the early terms of their academic careers. Many of those who meet Excelsior's strict enrollment requirements initially would be likely to have characteristics (prior enrollment patterns, younger age, higher family income, and other demographics) that would make them more likely to accumulate credits toward completion faster in any case, thus making, in the above simple comparison, Excelsior's impact appear greater than it actually is.

An Alternative Policy Approach

A better policy approach for New York in terms of the usual policy criteria of equity, efficiency, and choice would be to eliminate Excelsior and ETA and expand TAP by an amount equivalent to the $120 million or so that Excelsior now costs annually. McMahon (2019) estimates that such a policy would allow the state to increase TAP eligibility levels to about $110,000 in family income and increase the long-stagnant minimum and maximum award levels. With this approach, more students who decided that an independent college or university would best meet their needs and goals could make this choice more readily. The shift in the currently imbalanced incentives between the sectors created by Excelsior/ETA as presently designed would likely also divert more students into the independent sector where they both cost the state less (due to requiring no enrollment-related institutional support to private colleges) and have similar completion rates (Zumeta and Huntington-Klein 2017). TAP increases would also likely be more equitable than the current Excelsior/ETA arrangements because TAP's need analysis formula takes broader account of family needs (including number of children and the like) and necessary student non-tuition costs than does Excelsior, which considers only the family's income and tuition costs.

Washington

College Bound Scholarship and Its Effects

The state of Washington has two major state student aid programs of interest. The one that most resembles more recent tuition-free college programs in other states is the College Bound Scholarship (CBS) program, created in 2007. It actually belongs to the genre of state "early commitment" programs in which eligible students with low family incomes formally commit in middle school to earn a designated grade point average in high school (a C average in Washington's program), graduate with no felony convictions, and complete the FAFSA financial aid application (or the Washington State equivalent for undocumented students). As for family income, eligibility for the Washington College Bound Scholarship requires that at initial sign-up students be in foster care or from families participating in government assistance programs,[13] and that during college students have family income at or below 65 percent of the state median. Students with histories in foster care also are eligible.[14] Unlike most state tuition-free college programs, Washington CBS students may attend either a two- or four-year institution in the private or public higher education sector.[15] In return for meeting these requirements, CBS-eligible students are entitled by law to have their full tuition and required fees paid at public colleges and universities and to receive a book stipend. Students attending private colleges and universities receive the equivalent dollar value of the highest public institution's tuition and fees. According to Fumia et al. (2018), CBS students in private four-year colleges received grants as high as $11,904 in 2017–2018 (p. 3). Thus, CBS recipients are eligible for some of the largest state student aid grants in the country.

Washington's first CBS cohort graduated from high school in 2012. Long et al. (2019), in an as-yet unpublished study using rigorous methods and citing earlier studies by the state, found that the Washington College Bound Scholarship program had only very modest effects on college-going by the target group overall, but it shifted a small percentage of students from community colleges and out-of-state institutions into Washington four-year colleges. The authors do not distinguish public from private four-year colleges, but data we obtained from the Washington Student Achievement Council (a state agency) show that the number of College Bound Scholarship students enrolled in

[13] These include the Free or Reduced School Lunch program, Temporary Assistance for Needy Families program, or the Supplemental Nutrition Assistance Program.

[14] Program descriptors are from Fumia et al. (2018, p. 1).

[15] New York is an exception to this generalization if one considers both the Excelsior Scholarship and the Enhanced Tuition Awards program, the latter being for enrollees in private colleges and universities.

Washington's private four-year colleges rose steadily, from 326 in 2012–2013 to 1,573 in 2017–2018, partly due to successive cohorts becoming eligible for the scholarship over its first four years. The state projects this number to increase to 1,770 by 2020–2021.[16] Thus, this program is an important source of financial support that enables low-income students to choose private colleges and universities in Washington. Total state expenditures for the CBS students in private colleges in 2017–2018 were $4.3 million, according to data from the Washington Student Achievement Council.

Washington State also has published a rigorous study of the impact of College Bound Scholarship receipt on college retention (they term it "persistence"), credit accumulation, and graduation rates, including attainment of bachelor's degrees, finding significant positive effects (Fumia et al. 2018). The effects appear to be largely concentrated on students who begin at community colleges, however. The authors suggest that this may be because the College Bound Scholarship leads new types of students (specifically, more at-risk) to enroll initially in four-year colleges who would not have done so otherwise (pp. 33–34). Those who start at one of the campuses in the state's large system of community colleges and then transfer tend to be more successful. Transfers specifically to private colleges and universities are not disaggregated in the report.

Washington College Grants and Recent Changes

Washington has long had one of the most generous need-based state student grant programs in the country (National Association of State Student Grant and Aid Programs 2019). Expenditures on the program were about $324 million in 2018–2019. Until 2019, the program was called the State Need Grant. Students with family income at or below 70 percent of the state's median income (SMI) were eligible for grants. Full grants, equal to the state's highest public sector tuition and fees but slightly lower for private college attendees, were limited to those with incomes at or below 50 percent of the SMI. At the time of the Great Recession, state budget cuts led to a situation where thousands of eligible applicants for the grants could not be funded with the money appropriated; this situation continued until earlier this year.[17]

The 2019 legislature enacted the Workforce Education Investment Act (WEIA), which largely corrected these problems (Zumeta 2019). First, in addition to renaming the program "College Grants," it made eligible students entitled by law to their grants upon submitting an appropriate application. Second, it changed the income eligibility formula so that students from families with incomes at or below 55 percent of state median income (up from 50 percent previously) will become eligible for full grants, and families all the way up to 100 percent of SMI[18] (up from 70 percent previously) will be eligible for some state College Grant assistance. The state's Caseload Forecast Council estimates that, when it takes full effect in 2020–2021, these changes will mean an increase from about 78,000 to nearly 102,500 grant recipients (Washington Caseload Forecast Council 2019). It is projected that state expenditures on College Grants will grow by at least 25 percent per year relative to the old Need Grant program.[19] Of the new College Grant recipients, 6,478 are projected by the Forecast Council to be in private four-year colleges

[16] Data provided to the authors by the Washington Caseload Forecast Council, November 2019.
[17] Students who met the College Bound Scholarship requirements, however, were guaranteed their grants "at the front of the line." The two programs have been integrated over time (Fumia et al. 2018, pp. 5–6).
[18] According to the Washington Student Achievement Council, the state median income for a family of four is currently around $92,000.
[19] Initial estimates of the cost of the new College Grants and the productivity of the new taxes enacted to help fund them were evidently too optimistic. As of early 2020, the state legislature was considering additional funding measures to cover the added costs (Furfaro 2020).

TABLE 6

Enrollment and Spending for Washington State Need/College Grant and College Bound Scholarship in Private Four-Year Institutions

	State Need Grant		College Bound Scholarship	
	Grants	Students Served	Grants	Students Served
2012–2013	$26,261,150	3,911	$1,966,935	326
2013–2014	$26,172,187	3,884	$2,997,699	606
2014–2015	$32,555,323	5,663	$3,496,562	879
2015–2016	$32,167,896	5,172	$4,311,535	1,209
2016–2017	$31,931,023	5,219	$4,756,536	1,358
2017–2018	$35,915,501	5,289	$4,303,589	1,573
Forecast from the Caseload Forecast Council for College Grants and College Bound Scholarship				
2019–2020				1,676
2020–2021		6,478		1,770

Sources: Actual figures are from Washington Student Achievement Council records. Forecast figures of future headcount are from the Washington Caseload Forecast Council, November 2019.

and universities in 2020–2021, an increase of 1,189 (22.5 percent) from the latest available actual figure, for 2017–2018, which was 5,289 Need Grant recipients in this sector.

Table 6 depicts the number of recipients and the amount of state grant funds flowing to private four-year colleges and universities from the State Need Grant and College Bound Scholarship programs from 2012–2013 through 2017–2018 (actuals), along with the projected recipient figures for 2020–2021 under the new WEIA act. It shows that the CBS numbers in private colleges were increasing steadily while Need Grant recipients were more stable over time prior to the enactment of WEIA. Although it remains to be seen whether the WEIA changes will actually produce the expected results, the changes clearly promise to make more aid available to more students, many of whom are in the income ranges that private colleges and universities draw upon for students within Washington. Since fall 2009, data from the ten colleges/universities that are members of the Independent Colleges of Washington (ICW) organization have seen their enrollments of Washington undergraduates decrease by about 1,050 students, or 7.5 percent, although the colleges have offset this decline with a nearly similar growth in non-residents. Washington residents remained 52 percent of ICW undergraduate numbers in fall 2017.[20]

The state's policy research unit published a rigorous, if now somewhat dated, study of the effectiveness of the State Need Grant program in 2014 (Bania et al. 2014). The main conclusion was that, for very similar recipients just barely on either side of an income threshold for eligibility for larger grants, receipt of a 25 percent larger grant was associated with a 2 to 4 percentage point increase in re-enrollment rates from year to year and a four- to eight-point gain in college completion rates for the lowest-income category of Need Grant recipients. Unfortunately, the sample of

[20] This enrollment data was provided courtesy of the Independent Colleges of Washington.

recipients attending private colleges was too small to assign such effects by sector of attendance, but it is not unreasonable to surmise that larger need-based grants would be at least as beneficial for student outcomes in the private academic sector as in the public.

In sum, Washington's student aid programs provide a promising approach to improving college affordability for students with low and moderate incomes while also further facilitating student choice. Moreover, to the extent that more generous aid induces more students at the margin to choose to attend private colleges and universities rather than public ones, it is likely to increase degree productivity as well.

In sum, Washington's student aid programs provide a promising approach to improving college affordability for students with low and moderate incomes while also further facilitating student choice. Moreover, to the extent that more generous aid induces more students at the margin to choose to attend private colleges and universities rather than public ones, it is likely to increase degree productivity as well.

Section Two: State Student Aid Enhancement Simulations

As described in the introduction, in this section we present results from a policy simulation study to test the likely effects of a modest enhancement in state student aid available to students who choose an independent rather than a comparable public college or university in our four states of interest (Tennessee, Oregon, New York, and Washington). In each of these states, we examine the likely impact of increasing student aid from state grants by either $1,000 or $2,000 per year for students who enroll specifically at private nondoctoral colleges,[21] targeting the aid at students who otherwise would have attended similar public institutions. We report below the results from simulation of a $1,000 grant increase for each of our four focus states, since these seem to be most meaningful, with the results for $2,000 increases for each of these states described in Appendix A. In general, the hypothetical grant increase incentives for private sector attendance induce a fair number of students to switch their sector of attendance from public to similar private institutions, resulting in net savings for states and, generally, an increase in annual degree production.

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Initially for each state, we perform a matching process using a well-established technique, called Mahalanobis matching, to select in-state public and private four-year colleges that are especially alike in terms of the

[21] These are private, nonprofit colleges and universities in the U.S. that either do not offer or offer very few doctoral degrees.

proportion of students who are undergraduates, undergraduate selectivity, undergraduate enrollment, the proportion of undergraduate students receiving federal or state grants, the proportion of undergraduates receiving student loans, the proportion of undergraduates receiving Pell Grants, and the proportion of undergraduate degrees produced that are in STEM or health fields. Matching on these characteristics more closely reflects how students would likely switch institutions if deciding to attend a private rather than a public institution than if we were to compare all public institutions to all privates in a state (see Zumeta and Huntington-Klein 2017).

We then use estimates from the empirical literature about how strongly student enrollment responds to changes in net price (that is, the "price elasticity of demand") to simulate how students would respond to the change in grant funding. Consistent with our earlier studies (Zumeta and Huntington-Klein 2015; 2017), we assume that a 1 percent decrease in net price at a given institution would increase its enrollment of eligible students by between 1 percent and 1.53 percent, based on figures from Allen and Shen (1999) and Buss, Parker, and Rivenburg (2004). A review of the more recent empirical literature on student responsiveness to grant aid specifically finds similar response elasticities in the range between .86 percent and 1.66 percent (Hurwitz 2012). Since our original elasticity assumptions are reasonably within these bounds, we continue to use 1 percent and 1.53 percent as our two alternative elasticity assumptions.

Given the number of students predicted to change their enrollment sector because of the hypothetical increase in grant aid, we then simulate the impacts of the changes in sector of enrollment on graduation rates, time-to-degree, and state expenditures, using existing figures from the 2007–2017 IPEDS data files[22] on how those parameters differ between private and public colleges, by state. More methodological details are in Appendix B.

Results

Results are described in detail below and can also be seen in Tables 7a and 7b.

Tennessee

In Tennessee, the analysis matches 18 private colleges to nine comparable public institutions. Given this matching, comparisons show that the six-year graduation rate is 51 percent at the private colleges and 44 percent at the matched publics. It requires 6.0 enrolled student-years of education to produce one degree at these private colleges, versus 6.7 enrolled years for the matched publics.[23] Of these bachelor's degrees, STEM or health degrees, which most states seek to increase, make up 25 percent at both the privates and the matched publics. Average state student aid grant funding per degree produced is $29,386 at the private institutions and $31,162 at the matched public institutions. These basic facts foreshadow the results of our simulating the effects of hypothetical grant increases for students choosing private over public institutions.

We vary enrollment responsiveness to the hypothesized increase in aid using alternative elasticity values of -1 or -1.53 as described above. We find that the $1,000 grant increase would lead to between 635 and 972 students switching from public to private colleges, depending upon which of the two elasticity values is built into the simulation.

Taking into account the number of students switching sectors (and with estimates varying on the basis of the elasticity assumption made), this would result in an increase of between $2,697,693 and $4,127,471 in annual state grant spending. This increase is offset, however, by assumed savings in state appropriations

[22] IPEDS is the federal government's higher education database to which nearly all institutions report their data.
[23] Enrolled student-years include years attributable to students who drop out as well as to those who complete their degree.

TABLE 7a

Simulation Results—Tennessee and Oregon

	Tennessee		Oregon	
	Private	Public	Private	Public
Institutions	18	9	9	6
Six-Year Graduation Rate	51%	44%	65%	46%
Years per Degree	6	6.7	5.4	6.6
Percent of Degrees in STEM	25%	25%	17%	22%
State Student Aid Grant Funding per Degree Produced	$29K	$3K	$12K	$13K
	Simulation ($1K Grant)		Simulation ($1K Grant)	
Elasticity	-1	-1.53	-1	-1.53
Students Switching	635	972	23	35
State Grant Spending Increase	$2.7M	$4.1M	$101K	$155K
State Appropriations Reduction	$13.3M	$20.3M	$319K	$488K
Total Spending Change	-$10.6M	-$16.2M	-$218K	-$333K
BA Production Change	41	62	4	7

Note: M indicates "Millions" and K indicates "Thousands." See Section Two for more details on how simulation is performed.

to public institutions of between $13,280,305 and $20,318,868, using the conservative assumption that state spending could be reduced by half the amount now appropriated to public colleges and universities per student for the students no longer being served in the public sector. In total then, the net effect would be a decrease in annual state spending of between $10,582,612 and $16,191,397. Also, the number of bachelor's degrees awarded annually would increase by 41 to 62 awards (beginning six years after implementation).

Oregon

In Oregon, the analysis matches nine private colleges to six comparable public institutions. Given this matching, comparisons show that the six-year graduation rate is 65 percent at these private colleges and 46 percent at the matched publics. Overall, it requires 5.4 years of student enrollment to produce one degree at a private college versus 6.6 student-years for the matched publics. Of their bachelor's awards, STEM or health degrees make up 17 percent at these private colleges and 22 percent at the matched publics. Average state student aid grant funding per degree produced is $12,000 at the private colleges and $13,022 at the matched publics. These basic facts imply the results of our simulations of effects of the hypothetical increases in grants to students choosing a private over a similar public college.

We vary enrollment responsiveness to the hypothesized increase in aid using alternative elasticity values of -1 or -1.53 as described above. We find that the hypothesized $1,000 grant increase for private institution enrollment would lead to between 23 and 35 students switching to private colleges, depending upon which of the two elasticity values is built into the simulation.

Taking into account the number of students switching sectors (and with estimates varying on the basis

TABLE 7b

Simulation Results—New York and Washington State

	New York		Washington	
	Private	Public	Private	Public
Institutions	35	29	8	6
Six-Year Graduation Rate	57%	57%	73%	62%
Years per Degree	5.6	5.8	4.8	5.5
Percent of Degrees in STEM	28%	25%	25%	26%
State Student Aid Grant Funding per Degree Produced	$16K	$17K	$33K	$33K
	Simulation ($1K Grant)		Simulation ($1K Grant)	
Elasticity	-1	-1.53	-1	-1.53
Students Switching	719	1,100	40	62
State Grant Spending Increase	$3.3M	$5.1M	$197K	$301K
State Appropriations Reduction	$21.2M	$32.4M	$659K	$1M
Total Spending Change	-$17.9M	-$27.3M	-$462K	-$707K
BA Production Change	-2	-3	4	7

Note: M indicates "Millions" and K indicates "Thousands." See Section Two for more details on how simulation is performed.

of the elasticity assumption), there would be a modest increase of between $101,376 and $155,105 in annual student aid grant spending by the state. The changes in enrollment by sector also imply savings in state appropriations to public colleges and universities of between $318,993 and $488,059, assuming that the state reduces institutional support per student as previously described. Netting out the two spending effects of the hypothesized grant increase produces a net saving for the state of between $217,617 and $332,954 per year, as well as an increase in the number of degrees produced once students have completed (assumed to be six years from implementation) of four to seven bachelor's degrees annually.

New York

In the state of New York, the analysis matches 35 private colleges to 29 comparable public institutions. Given this matching, basic comparisons show that the six-year graduation rate is 57 percent at both the private colleges and at the matched publics; in total, however, it requires 5.6 years of student enrollment to produce one bachelor's degree at a private college versus 5.8 years for matched publics. Of these degrees, STEM or health degrees make up 28 percent at private colleges and 25 percent at the matched publics. Average state student grant funding per degree produced is $16,293 at private colleges and $17,239 at the matched publics. These basic facts imply the result of our simulations of effects of hypothetical grant increases for students induced to choose private colleges.

When we vary enrollment responsiveness to each 1 percent increase in state grant aid by 1 percent or 1.53 percent (that is, an elasticity of -1 or -1.53 as described earlier), and offer a hypothetical grant increase of $1,000 for students switching sectors, we find that this scenario would lead to between 719 and 1,100 students choosing private over public colleges annually.

Taking into account the number of students switching sectors (and with estimates varying on the basis of the two alternative elasticity assumptions), this would imply an increase between $3,336,192 and $5,104,373 in state grant spending. However, this increase is more than offset by assumed savings in state appropriations of between $21,193,350 and $32,425,826, again depending upon the elasticity assumption. The net effect is a decrease in state spending of $17,857,159 to $27,321,453. Since the degree productivity of the two sectors in New York is very similar, the effect on annual bachelor's degree production, once these students have reached the degree receipt stage after six years, is minimal (-2 to -3 bachelor's degrees per year).

Washington

In the state of Washington, the analysis matches eight private colleges to six similar public institutions. Given this matching, comparisons show that the six-year graduation rate is 73 percent at these private colleges and 62 percent at the matched publics. Overall, it requires 4.8 student-years of education to produce one bachelor's degree at a private institution, versus 5.5 student-years for the matched publics. Of these degrees, STEM or health degrees make up 25 percent at the privates and 26 percent at the matched publics. Average state student grant funding per degree produced is $32,782 at the privates and a very similar $32,716 at the matched public colleges. These basic facts imply the results of our simulations of the effects of the hypothesized grant increase for students choosing a private rather than a public college.

We vary enrollment responsiveness to the hypothesized increase in aid using alternative elasticity values of -1 or -1.53 as described above. We find that the $1,000 grant increase would lead to between 40 and 62 students switching from public to private colleges, depending upon which of the two elasticity values is built into the simulation.

Taking into account the number of students switching sectors (and with estimates varying on the basis of the elasticity assumption), there would be an increase of between $196,507 and $300,656 in annual state grant spending. This increase is more than offset, however, by assumed savings in institutional appropriations in the range of $658,599 to $1,007,656, depending on the elasticity assumption and using the previous assumptions about savings in appropriations to public institutions. The net effect would be a reduction in state spending of between $462,092 and $707,000 annually, as well as an increase in bachelor's degrees granted, beginning six years after implementation, of four to seven per year.

Section Three: A Capitation-Based Approach to Incentivizing More State Use of Private Higher Education Capacity

Student-aid-based policy approaches to incentivizing greater use of private higher education sector capacity have considerable potential in many states, as illustrated in the previous section and in Zumeta and Huntington-Klein (2017). Still, some states have traditionally made very limited investments in student aid and most of these have fairly small private sectors (Zumeta 1992; 1996). Thus, they are unlikely to be responsive to adding student aid funding specifically directed at students attending private colleges in the state. Even where states have a substantial commitment to student aid, targeting aid precisely to those students truly at the margin of choice between public and private colleges may prove logistically difficult.

An Alternative Approach

An alternative for states to more fully utilize private sector capacity would be a capitation-based approach that would avoid any potential problems with student-aid-based schemes. Here is how it could work. First, the state would identify levels or fields of study in which it wishes to increase enrollment capacity. At the broad undergraduate level such a need would be most likely to occur when a state judged it was nearing enrollment capacity at its public, four-year campuses and wanted to avoid the costs of expanding capacity at existing campuses or building new campuses. This is most likely in states with growing youth populations, such as Florida, Kansas, Texas, and Virginia, among

An alternative for states to more fully utilize private sector capacity would be a capitation-based approach that would avoid any potential problems with student-aid-based schemes.

others,[24] but it could also apply in states that simply sought to increase attainment in the adult workforce beyond the usual college entrance age. Another potential source of enrollment pressures on baccalaureate institutional capacity might theoretically arise in states that offer tuition-free community college and eventually as a result see more students seeking to transfer to complete a bachelor's degree.

A number of states have estimated that they have many thousands of adults with some college credits but no degree who might be induced to have said credits assessed and then enroll to complete a bachelor's degree, if sufficient targeted aid were provided (National Center for Higher Education Management Systems 2018). Similarly, some states, such as California, Florida, and Washington, have large community college populations but relatively limited additional enrollment capacity in public baccalaureate institutions, especially in regions closer to urban areas, where such institutions may be oversubscribed. Thus, financially incentivizing better utilization of more geographically accessible private colleges for transfers-in could be attractive to state policymakers. More states no doubt have public sector capacity shortfalls at the baccalaureate level in specific fields in demand that may match private sector capacity or willingness to expand.[25] Typical examples would include nursing and other health professions, computer science and related fields, engineering, some other specific STEM fields, and some K–12 teaching specialties. Other fields could also fit in particular states and sub-state regions. State needs not currently being adequately met by public higher education could also include increasing enrollment of students from underrepresented population groups.

Assuming recognized state need and matching private sector capacity (or willingness to expand to create it), a state could devise a program providing enrollment-based capitation payments to private nonprofit colleges and universities enrolling additional students in the targeted levels or fields[26] beyond the numbers enrolled in a baseline year. Counting from a baseline assures the state that it is "buying," or incentivizing, additional enrollments rather than subsidizing enrollments that would have occurred anyway.

Thinking about Costs

How much would a state be willing to pay for each additional enrollment beyond the baseline year at targeted levels or fields? Clearly, state policymakers would be unlikely to pay more than the per-student cost of similar expansion of capacity in the public sector. It would likely estimate this cost based on its current per-student subsidy (state operating appropriation per student), perhaps with some discounting for presumed economies of scale in expansion.[27] If such public sector expansion were deemed to require substantial capital costs, or even new campuses implying high expansion costs, the state would presumably be willing to pay on the high side for a more cost-effective alternative.[28]

[24] See Bransberger and Michelau (2016) for state-by-state projections of high school graduating classes through 2032.

[25] Similar shortfalls can occur at the master's level, although that is not the focus of this report.

[26] To designate fields at the baccalaureate level, the logical unit for counting students would be majors. At the master's level, counting should be more straightforward since students in targeted specialties can usually be identified at initial enrollment. In addition, states might choose to target enrollments of state residents rather than all students, although an argument can be made for importing students to a state to prepare them for available employment opportunities indicative of state needs.

[27] According to the State Higher Education Executive Officers *State Higher Education Finance Report, FY 2017,* state per-enrollment appropriations now range widely, by a factor of more than six, across the country (SHEEO 2019, Table 4, p. 29). The U.S. average is around $7,850 per FTE student.

[28] Indeed, a few states already regularly subsidize some capital costs in their independent sectors, notably Maryland and New York, and others have done so on occasion. So, it is not unthinkable that a state might be willing to share capital costs of desired targeted capacity expansion at private institutions if this were more economical for it than similar expansion in the public sector.

Design Considerations

Private institutions might be concerned about possible implications of taking state subsidies to enroll more students at targeted levels and/or fields. Would these students need to be charged different tuition rates, perhaps rates similar to those in relatively comparable public institutions? A differential tuition approach, where tuition charges varied among categories of students, would not likely be attractive to private colleges and universities. Rather, they might prefer the state to simply offer what it chose in per-student subsidies to private institutions that added targeted enrollments—presumably some sizable fraction of its current level of per-student appropriations in the public sector—to essentially test the waters and see how private institutions responded. The state would be ahead as long as it got some response for less than its alternative cost of expanding in the public sector. The subsidy levels would likely need to be adjusted over time to produce the desired level of response.

In order to motivate appropriate private institutions to consider responding to the state as a partial funder, there should be no formal constraint set on their tuition-setting. In order to attract students who would bring the state subsidy with them, private colleges would likely be motivated to offer attractive institutionally funded aid packages that would have the effect of reducing "net costs" paid by the targeted students and hence attract more of them. The college, of course, would not want to enroll more of these students than the state subsidies plus the net tuition revenue would allow it to adequately serve.[29] Larger state subsidies would be expected to produce greater gains in targeted enrollments up to the limits of student interest and any institutional considerations about balance across fields of study.

State Policy Considerations

In some states, private sectors with relevant capacity are either very small or virtually nonexistent. In such circumstances, this capitation approach (that is, payments per "head" of enrollment) is unlikely to be applicable. In some other states, powerful public higher education interests might be bitterly opposed to any private sector subsidies and have been ascendant in higher education policymaking in the past. This "political culture" that exists in some states around higher education policymaking might be hard to overcome (Zumeta 1992; 1996). One factor that could help would be private college willingness to accept considerably smaller per-student subsidies than public institutions normally receive, which should be feasible as long as the students can be charged reasonable tuition.

In order to attract students who would bring the state subsidy with them, private colleges would likely be motivated to offer attractive institutionally funded aid packages that would have the effect of reducing "net costs" paid by the targeted students and hence attract more of them.

Finally, in times of recession or turnover of supportive political leadership, support for state fiscal relationships with private institutions such as those described here could be threatened, at least until these relationships were solidly institutionalized. As a hopeful indicator of the possibilities for institutionalization, though, empirical research shows that state support of student aid programs that assist state citizens in private colleges has

[29] Note: This approach focuses primarily on operating costs and revenues associated with modest enrollment expansion. Institutions might seek to negotiate separately with the state any needed capital subsidies to expand more substantially, likely offering to share the costs in some fashion.

more than held its own over time, including in recession periods, particularly in states where these programs are well institutionalized (Li and Zumeta 2019).

Private Colleges' Concerns

Some private colleges, of course, may not wish to expand overall or specifically in the targeted fields, or they simply may not wish to take state money for philosophical reasons. Others might be concerned that the state could withdraw its subsidies in the future and leave private institutions overextended, although this risk could be mitigated by basing the subsidy program in statute. Finally, institutional leaders may be concerned about adding substantial capacity in a field in response to state subsidies before being sure that sufficient student demand will be present. This concern, however, seems actually less worrisome than an entirely self-financed expansion would be since the state subsidy helps to stimulate demand and reduce the risk. In any case, expansion would need to be preceded by careful market research and could proceed incrementally in order to test the market before making substantial institutional investments.

A Degree-Based Variant

Instead of paying for additional targeted enrollments as in the above design, given the recent state policy focus on increased degree production, some states might prefer an approach whereby the state paid for additional degrees rather than enrollments. The approach could be limited to targeted fields judged to be needed in the state. This might be more attractive than the enrollment-based capitation approach in states focused heavily on additional degrees produced rather than on enrollments per se since the state would pay only upon degree receipt. This could incentivize some efficiencies in graduating students. Also, the degree-based approach might induce private colleges to enroll more community college transfers and others with some prior college credits.

Private colleges and universities might be less responsive to the payment-for-additional-degrees approach than to the enrollment-based approach since they would need to invest in the additional students for several years before they were paid for them as graduates (and not all would graduate, leaving private colleges to shoulder the entire bill). To receive an equivalent response to the enrollment-based capitation approach, the state would likely need to increase the payments per degree to account for both reasonable attrition and the several years of enrollment needed to produce a degree in affected private colleges. We have shown in earlier studies, however, that in most states private colleges graduate a higher percentage of their students and do so in fewer years (Zumeta and Huntington-Klein 2015; 2017), which should make the approach more attractive in the many states where this is the case.

Conclusion

Our research and report provide two forms of analysis. First, in Section One, we presented findings from current empirical research on the effects of state tuition-free college and related policies in four states of particular interest for their range of initiatives in this area: Tennessee, Oregon, New York, and Washington. Tennessee and Oregon are notable for their relatively "early"—although only a few years ago—implementation of policies allowing for tuition-free community college for some state residents. In these states, the early findings suggest significant impact on community college enrollments (typically absorbed without much additional state support) and signs, at least in Tennessee, that more students will eventually earn credentials. In both states, in the first year of the free community college program some of the increased two-year enrollments came at the expense of four-year college enrollments, but these effects appear to be considerably moderated in later years. There is little sign that the four-year independent colleges were affected significantly.

In New York, the Excelsior Scholarship program, initiated by Governor Andrew Cuomo in 2017, broke new ground by offering income-eligible students who meet a range of stringent requirements tuition-free access to public four-year institutions as well as two-year colleges. The state's effort to provide something for its private college and university students, who make up about half the state's undergraduates, through the accompanying Enhanced Tuition Awards (ETA) program have been very limited and so cumbersome and expensive for private institutions to use that there has been only a relatively small take-up. Data on Excelsior's own impacts is so far quite limited. What is available suggests increased enrollments in the public baccalaureate sectors relative to prior trends but also high rates of student exclusion and termination from the program due to inability to meet its stringent requirements. Student take-up and state spending on Excelsior Scholarships have been well below initial projections. Perhaps because of this, there is no clear evidence of enrollment impacts on the private sector relative to

prior trends.[30] We suggest that a more cost-effective and equitable use of the resources now spent on Excelsior and ETA would be to reprogram them to expand the need-based state Tuition Assistance Program (TAP) by a like amount, increasing TAP income eligibility ceilings modestly and increasing long-stagnant award sizes. Importantly, this would better target aid resources according to need using TAP's long-established need determination methodology (not based crudely only on gross family income as with Excelsior) and would allow students more equitable opportunities to choose a private institution if it best suited them.

We suggest that a more cost-effective and equitable use of the resources now spent on Excelsior and ETA would be to reprogram them to expand the need-based state Tuition Assistance Program (TAP) by a like amount, increasing TAP income eligibility ceilings modestly and increasing long-stagnant award sizes.

Analysis of Washington State's policies provided us with some opportunity to consider other alternative approaches to the tuition-free college idea. Washington has had an "early commitment" tuition-free college program targeted at truly low-income students, the College Bound Scholarship, in place for more than a decade. It also has had a quite traditional need-based scholarship program (now called College Grants) in place for many years that has long been one of the nation's most generous.[31] Importantly, neither of these programs restricts student choice to two-year or public institutions. Grant sizes for four-year attendance at independent institutions are linked to the highest public university tuition in the state. The state government recently increased income ceilings for eligibility for College Grants all the way to the state's median income, increased appropriations substantially, and made grants an entitlement for eligible students for the first time. The state projects that the number of College Grant recipients will increase by around 30 percent when the new arrangements are fully phased in during 2020–2021. Grantees in private colleges are expected to expand in both programs, by about 1,200 for College Grants and by about 200 for College Bound Scholarships. If this occurs, all stakeholders will benefit in that students will have appropriate choice and more than would otherwise be the case will choose private colleges, where completion rates are generally higher and the state does not bear the other costs of supporting them. Nonetheless, public sector enrollments are still projected to rise as well.

In Sections Two and Three of the report we delve further into state policy alternatives to offering tuition-free college only in public institutions (or a subset of them). The analysis in Section Two demonstrates how our four focal states could save money and generally increase degree production by using existing student aid mechanisms to further incentivize some students on the margin of choice between a public and a similar private college to choose the latter.

Section Three sketches out possible designs for capitation-based (rather than student-aid-based) approaches for states to efficiently subsidize growth in private higher education utilization and capacity where there is a good match between state needs and this sector's capacity and interest. One possible program design would incentivize increased enrollments and another would instead reward additional degrees produced.

In sum, there are several promising avenues available to states for meeting higher education needs efficiently and equitably while preserving student choice. All are likely to be superior to offering tuition-free college only to some in a single sector.

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[30] We note, however, that no data is available yet on the effects of the increase in family income eligibility for Excelsior to $125,000 in 2019–2020, much less on potential impacts of the governor's recent proposal for a further increase to $150,000.

[31] The state's student aid agency administers the two programs so as to take account of how they interact for some students.

Appendix A

Simulation Results for an Assumed $2,000 Increase in Student Aid Grants for Students Choosing a Private Rather Than a Public Institution

Tennessee

Varying enrollment responsiveness to a 1 percent increase in aid between 1 percent and 1.53 percent (an elasticity of -1 or -1.53), and offering a grant increase of $2,000 to students choosing private over public institutions, the larger grant would lead to between 997 and 1,526 students switching to private colleges, depending on the elasticity assumed.

Taking into account the number of students switching (and with estimates varying on the basis of the elasticity assumption), this would cause an increase between $10,242,827 and $15,671,525 in state grant spending. It also implies savings in state appropriations to public institutions of between $20,850,956 and $31,901,962. In total, this scenario would thus result in a decrease in state spending of from $10,608,129 to $16,230,437, as well as an increase in the number of bachelor's degrees awarded six years later of from 64 to 97.

Oregon

Varying enrollment responsiveness to a 1 percent increase in aid between 1 percent and 1.53 percent (an elasticity of -1 or -1.53), and offering a grant increase of $2,000 for students choosing a private college over a public, the grant would lead to between 45 and 68 students switching to private colleges, depending on the elasticity assumed.

Taking into account the number of students switching (and with estimates varying on the basis of the elasticity assumption), this would result in an increase of between $438,739 and $671,271 in state grant spending. This scenario also implies savings in state appropriations to public institutions of between $618,427 and $946,193, using the previously stated assumptions. In total then, there would be a decrease in state spending of from $179,688 to $274,922, as well as an increase in the number of degrees six years later of between 8 and 13.

New York

Varying enrollment responsiveness to a 1 percent increase in aid between 1 percent and 1.53 percent (an elasticity of -1 or -1.53), and offering a grant increase of $2,000 for attendance at a private nondoctoral institution rather than a matched public institution, the grant would lead to between 1,297 and 1,984 students switching from public to private colleges, depending on the elasticity assumed.

Taking into account the number of students switching (and with estimates varying on the basis of the elasticity assumption), this would be a change of between $13,263,487 and $20,293,136 in state grant spending. This change, however, also implies savings in appropriations to public institutions of $38,233,000 or $58,496,492. In total then, this would result in a net decrease in state spending of $24,969,513 to $38,203,356, as well as a small change in the number of degrees six years later of -3 to -5.

Washington

Varying enrollment responsiveness to a 1 percent increase in student aid between 1 percent and 1.53 percent (an elasticity of -1 or -1.53) and offering a grant increase of $2,000 to students choosing a private over a public college, the grant increase would lead to between 78 and 119 students switching to private colleges, depending on the elasticity of response assumed.

Taking into account the number of students switching sectors (and with estimates varying on the basis of the elasticity assumption), this would cause an increase of between $756,556 and $1,157,530 in state grant spending. This scenario also implies savings in state appropriations to public colleges of from $1,276,490 to $1,953,030. In total then, there would be a decrease in state spending in the range of $519,934 to $795,500, while the number of bachelor's degrees granted (beginning six years later) would increase by nine to 13.

Appendix B

Methodological Notes for Simulation Analysis

This section repeats much of its content from Zumeta and Huntington-Klein (2015).

For each private nondoctoral (PND) college *i* and each non-PND college *j* in the same state, we calculate the Mahalanobis distance, which is a standard measure of multivariate distance between two observations that adjusts for differences in scale between matching variables and for the use of several matching variables that measure the same construct.

$$d_{ij} = (X_i - X_j)' \, S_x^{-1} \, (X_i - X_j)$$

where d_{ij} is the Mahalanobis distance and X_i is a vector of college characteristics including proportion of students who are undergraduates, undergraduate selectivity, undergraduate enrollment, the proportion of undergraduate students receiving federal or state grants, the proportion of undergraduates receiving student loans, the proportion of undergraduates receiving Pell Grants, and the proportion of undergraduate degrees produced that are in STEM or health fields. S_x^{-1} is the sample variance-covariance matrix of the variables in *X*.

For each PND college *i*, we select as a match the public institution *j* for which d_{ij} is the lowest. That is, the public institution which is most similar in terms of the matching variables used, as collapsed into a single measure by the Mahalanobis distance. We only count a match as successful if the closest match is less than .3 of a standard deviation of the Mahalanobis distance across the entire set of PND/non-PND pairs nationally, including states we did not use in analysis.

The result is a set of matched PND colleges, along with the set of non-PND colleges that match with them. The non-PND colleges may match to more than one PND college, and in these cases the non-PND colleges are weighted in estimation by the number of colleges they matched to. See Results (in Section Two) for the numbers of matched PND and non-PND institutions.

With the matches in hand, sector averages are taken to generate state- and sector-specific statistics such as six-year graduation rate, time to degree, and appropriations per student. In addition, enrollment size and net price by sector, combined with the assumed elasticities defined in the main text, are used to predict the number of students who would switch sectors in the presence of an additional grant.

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