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The Great Student Swap

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The Great Student Swap

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Abstract

Public flagship universities are engaged in a “Great Student Swap,” admitting more out-of-state students and relatively fewer of their own in-state students. For the last twenty years, nearly every flagship university we examine contributes to this exchange.¹ Why is this happening and what are the implications? The simple answer is that schools are doing this to increase tuition revenue. The implications are that more and more students leave school with more student debt, while society at large is no better off or better educated. This explains some of the increase in student debt. It also calls into question the narrative that an affordable in-state university experience is practical for many young adults. The deeper implications are troubling for students from low-income families, particularly those who are Latino and face greater roadblocks to achieving the American Dream.

We unpack this phenomenon and two accompanying trends that explain the Great Student Swap using data from the Integrated Postsecondary Education Data System (IPEDS). We examine every ‘flagship’ public university and find that the share of out-of-state students rose by an average of 55 percent since 2002. IPEDS data reveals that 48 out of the 50 flagships experienced a growth in their share of out-of-state students. Next, we focus on a subset of 16 states - those that begin with the letters M and N – to provide a sample designed to cross section the country. Within this sample, we find out-of-state student growth of 41 percent (in part because it includes one of the two states not engaged in the Great Student Swap). We conduct a deep dive in this sample, documenting the substantial growth in the gap between in-state and out-of-state tuition, and the decline in state and local governmental support. We find suggestive

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evidence that the drop is greater in states that have swapped their own students for out of states at a faster rate. Universities appear caught in a cycle where they compensate for the drop in state funding by filling their classrooms with more lucrative out-of-state students. This increased focus on out-of-state students likely leads to less local political support for schools and a further decrease in funding.

The Great Student Swap has been going on at least since 2002 and we find no evidence that the swapping will slow in flagships, although a few have found ways to stabilize their share of in-state students. The University of North Carolina, Chapel-Hill and the University of Texas, Austin stand out, although the stabilization at both schools is the result of state laws that effectively limit the extent of the Great Student Swap. The University of Nevada, Las Vegas (UNLV) also stands out. Nevada's original branch of the state university, now the University of Nevada, Reno (UNR), was founded in 1874, while UNLV was established in 1957. UNLV's share of in-state students has noticeably increased in the last 20 years, with no formal legislative mandate explicitly or implicitly requiring the vast majority of students to be in-state. Lastly, we look at financial aid data and racial composition data to understand changes in the socioeconomic characteristics of state school students. We find that Latino students remain underrepresented in our flagship schools, even though their share of the student body has grown over time.

Introduction

Public flagship universities in the U.S. are engaged in a “Great Student Swap” with one another and the result is that the share of out-of-state students has increased significantly in flagship schools across the country. In the end, society is no better educated, but student debt increases. This Great Student Swap is part of a broader context of skyrocketing tuition in America’s higher education institutions over the last 20 years. As a result a college degree is far more expensive for many Americans, and created \$1.7 trillion in student debt.² One overlooked aspect contributing to debt is the growth in out-of-state enrollment in public universities. Out-of-state tuition can be twice as high as in-state prices, driving up student debt and university tuition revenue.

Using data from the Integrated Postsecondary Education Data System (IPEDS) we explore trends in student body compositions, tuition costs, and appropriations for state schools across the country. We focus our analysis on public flagship universities. Flagships account for one in nine undergraduate students (11 percent).³ These institutions play a critical role in providing affordable, high-quality degrees, and promoting social mobility.⁴ Flagships are generally the leading four-year public institutions in their respective states⁵ and usually the oldest.⁶ Among the top 50 national universities in 2021, 10 are public flagship schools according to U.S. News & World Report annual “Best National University Rankings.”⁷ Attending a flagship university can improve lifetime outcomes. One study found that attending a flagship increased earnings by up to 20 percent.⁸ Flagships may offer student programs aimed at helping low-income students succeed, such as the University of Texas’ Longhorns Opportunity Scholars program, which has been shown to improve graduation rates and earnings for low-income students.⁹ For America’s higher education system to promote social mobility, its flagships need to be accessible to in-state, low-income students.

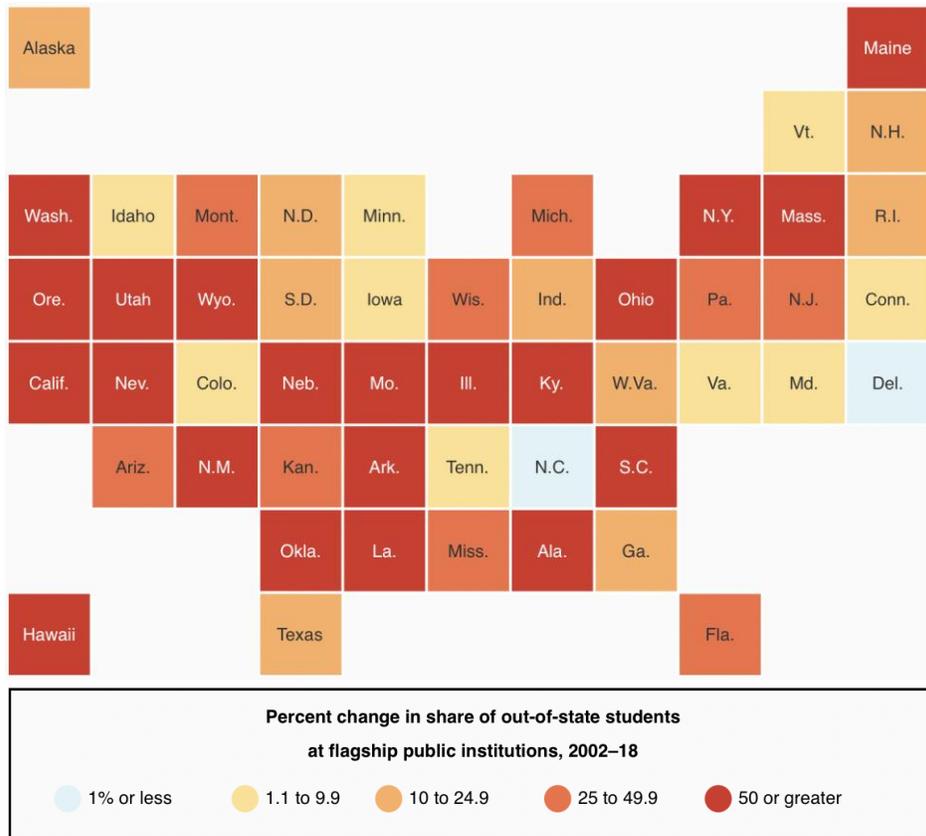
In our analysis, we categorize students as either being in-state or out-of-state. Out-of-state students include international students who make up a small but growing share of the population at some universities. We focus on undergraduate students, specifically first-time first-year students.

Flagship universities in 48 out of 50 states have experienced declines in their share of in-state students between the first-year classes of 2002 and 2018. The average decline was 15 percent and 5 states swapped more than 1 out of every 5 in-state students for an out-

of-state one. The University of Alabama had the largest decline during this period, reducing their share of in-state students by over 50 percent.

As the in-state share declined, the out-of-state share grew. The average growth of out-of-state state students was 55 percent. 33 flagship universities increased their out-of-state enrollments by more than 20 percent. The University of California, Berkeley had the largest increase at 197 percent and the University of Alabama grew by more than 150 percent. The percent increases are sharper for out-of-state shares as public universities exist to serve students of their own state. This is the flip side of the zero-sum game of admissions. Figure 1 shows the growth in the out-of-state student share for each state’s flagship school.

Figure 1: The Great Student Swap

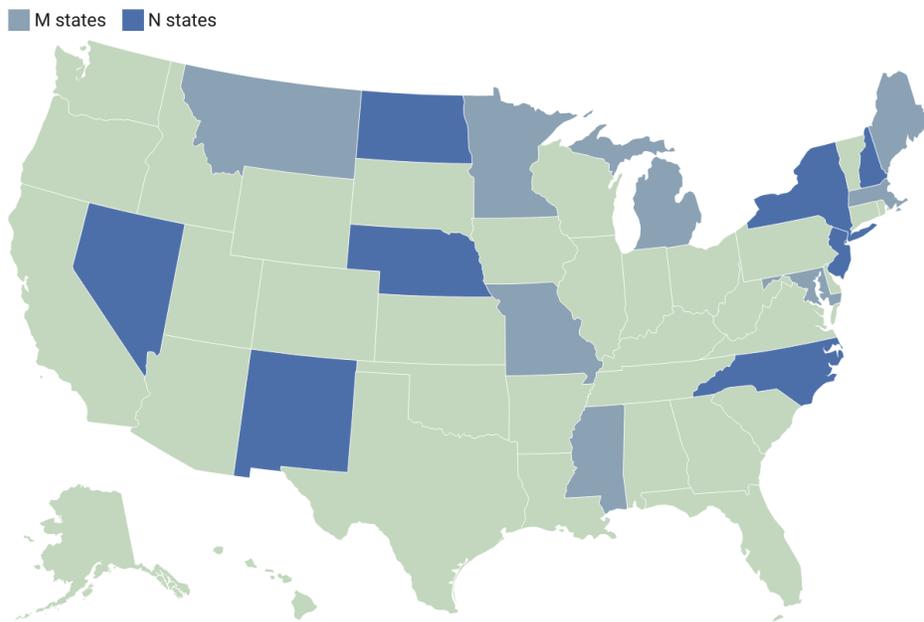


Source: Authors’ calculations using IPEDS 2002 and 2018 Fall Enrollment data for first-time freshmen.
Note: While not every state designates one of its public four-year universities as a flagship, many research studies use one flagship per state. The flagship is the leading four-year public institution in the state, usually also the oldest in the state. We use a list similar to the one used by Gerald and Haycock 2006.

In general, universities decide which students to admit and can choose in-state or out of state students. There are only two states that did not follow this trend. The University of North Carolina, Chapel-Hill remained consistent at 82 percent in-state students. As discussed in greater detail below, this is the result of a state law from the 1980s that requires all North Carolina public colleges and universities to be no less than 82 percent in-state. The other school is the University of Delaware, where the in-state student share grew slightly from 39.0 percent to 39.3 percent.¹⁰

For our in-depth analysis on tuition, appropriations, and student debt, we focus on flagships in states that begin with the letters M and N. This quasi-random group of states forms a representative sample of the country. Figure 2 shows a map of the country highlighting our sample states and Table 1 provides relevant descriptive statistics for our sample.

Figure 2: M- and N- States are Representative Samples of the U.S.



Created with Datawrapper

Table 1: Descriptive Statistics for M- and N- States in the U.S., 2002 and 2020

		M + N States	U.S.
Median household income	2002	\$78,309	\$73,657
	2020	\$86,239	\$82,700
Percent who attended college at least 1 year	2002	39%	38%
	2020	50 %	48%
Age	2002	36	36
	2020	40	39
Percent white	2002	71%	67%
	2020	64%	60%
Percent Black	2002	14%	12%
	2020	14%	12%
Percent Hispanic	2002	8%	13%
	2020	13%	19%

Source: Authors' calculations using Census Population Survey (CPS) 2002 and 2020

Flagship schools in our sample have experienced declines in state and local government funding as they increase the share of out-of-state students. A vicious cycle is at play here. Schools accept relatively fewer in-state students, reducing local political support and decreasing governmental funding. Faced with fewer funds, state universities respond by taking more profitable out-of-state students and fewer in-state ones. The cycle repeats.

We first present trends in student compositions and tuition costs. Then we discuss state and local government support and school financial aid trends. Finally, we offer policy approaches to stop the Great Student Swap.

Swapping In-State for Out-Of-State Students

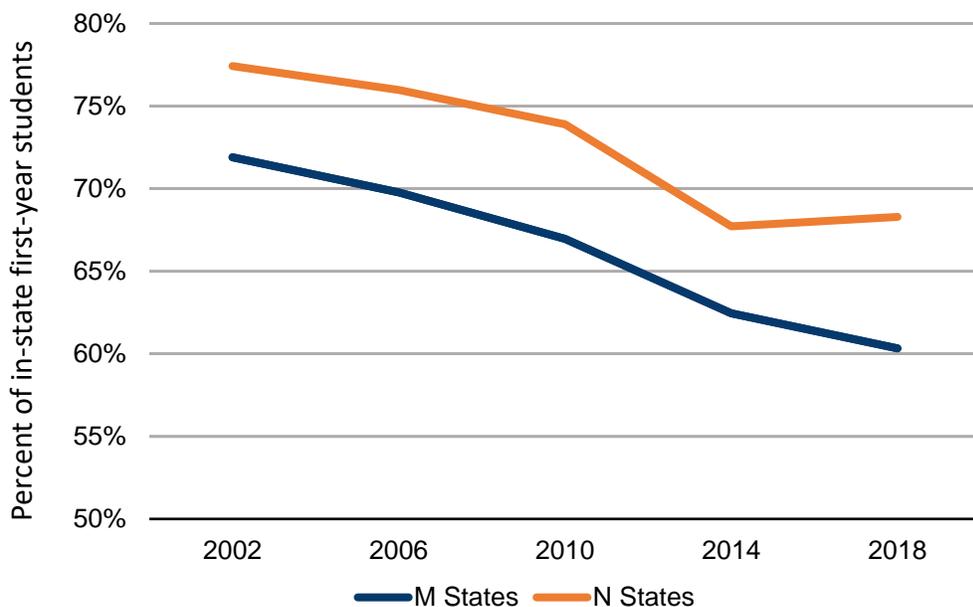
The share of in-state students at public colleges has dropped significantly over the last twenty years. Using data on the freshman class enrollment by four-year increments from 2002 to 2018, we find a consistent decline. On a combined basis our 16 sample states have seen a decline of in-state student shares from 75 percent to 64 percent. On the flip side, the share of out of state students has risen from 25 percent to 36 percent.

Within our sample schools, the total number of in-state students has remained relatively constant. The entire growth in the size of the student body has come from more out-of-state students. Among all 16 schools in 2002, there were a combined 52,672 first-year students, of whom 39,568 were in-state and 13,104 were out of state. By 2018 the schools enrolled 66,424 first-year students, of whom 43,896 were in-state and 22,528 were out-

of-state. The size of the student body at each school is subject to different constraints, but in general, as a state’s college-age population grows, one expects the number of spaces at universities to rise. One also expects university spots to grow as more and more Americans choose to attend college each year. In the context of these trends, the near-constant number of in-state students at flagship schools represents a diminishing opportunity for people to attend their home state’s flagship university. A study from 2017 found that increased out-of-state enrollment crowds out in-state enrollment at prestigious public universities.¹¹

Figure 3 shows the in-state share trends for both M and N states over time. In M states, the share of in-state students dropped steadily from 72 percent to 60 percent. This is equivalent to replacing one out of every six in-state students with an out-of-state student. Every M-state flagship school saw a decrease in in-state enrollment during this period. In N states, the share dropped from 78 percent to 68 percent, where it has remained since 2014. This is roughly equivalent to replacing one out of every eight in-state students with an out-of-state one.

Figure 3: In-State Student Share, 2002-2018



Source: The Integrated Postsecondary Education Data System (IPEDS) Fall Enrollment Survey.

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This is not just a trend in the aggregate but a process that is happening across the board. Table 2 shows the enrollment trends for each school in our sample. Not a single school increased its in-state student share from 2002 to 2018. The largest decline in the in-state share of students occurred at the University of Maine; the share of students who are Maniacs fell by nearly one-third from 80 percent in 2002 to 54 percent in 2018. At this rate, the University of Maine should be majority out-of-state students in a few years, a sharp contrast from 2002, when 80 percent of students were in-state students. The University of Mississippi experienced a decline of over 20 percent of in-state students and is now a majority out-of-state students. The University of Michigan may be the most competitive school in the sample, judging by college rankings and admissions acceptance rates¹², but it too has seen a sharp increase in out-of-state students, swapping 1 out of 6 Michiganders for a higher tuition paying out-of-state student between 2002 and 2018. The Universities of Maryland College Park and Minnesota experienced the smallest declines in our sample.

We next turned to states that begin with the letter N where we see similar changes. The University of North Dakota saw its share of in-state enrollment fall by 20 percent, which is similar to the University of New Hampshire Durham. The University of Nebraska, like the University of Maine, began at just over 80 percent in-state and had fallen to 69 percent by 2018, a decline of roughly one out of every six students, which is similar to the UNR. Some of the N states like University of New Mexico and Rutgers (the flagship for New Jersey) had smaller declines of around 1 out of every 14 in-state students being swapped.

Table 2: In-State Student Share, 2002 and 2018

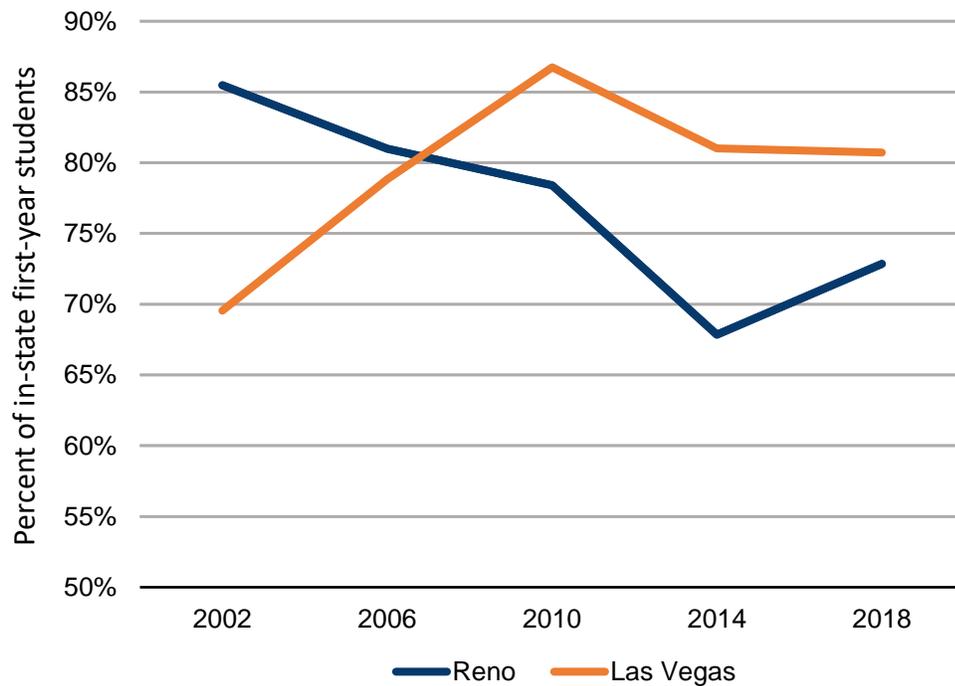
School	2002 (%)	2018 (%)	Percentage Point Change
M States			
University of Maine	80	54	-33
University of Maryland, College Park	66	64	-2
University Massachusetts, Amherst	87	70	-20
University of Michigan, Ann Arbor	65	53	-19
University of Minnesota	66	65	-2
University of Mississippi	55	43	-21
University of Missouri	82	68	-18
University of Montana	75	66	-11
N States			
University of Nebraska, Lincoln	82	69	-16
University of Nevada, Reno	85	73	-15
University of New Hampshire, Durham	52	42	-20
Rutgers University, New Brunswick	90	83	-7
University of New Mexico	89	83	-7
Stony Brook University	91	77	-15
University of North Dakota	47	37	-22
University of North Carolina, Chapel Hill	82	82	0

Source: The Integrated Postsecondary Education Data System (IPEDS) Fall Enrollment Survey.

University of North Carolina, Chapel Hill (UNC) stands out as the only school to not reduce its in-state student share. As we detail below, the explanation for UNC is simple: state rules mandated the university to have at least 82 percent in-state enrollment.¹³ We will go into more detail later as to why that rule is a good idea, noting that UNC has remained one the most competitive and elite public universities in the nation.

It is worth highlighting UNLV. UNLV significantly increased its share of in-state students from 70 to 81 percent. Figure 4 compares in-state trends for UNLV and UNR. While most other public schools were swapping in-state students for out-of-state ones, UNLV accomplished the reverse, swapping more than one out of three out-of-state students for a Nevadan. What UNLV is doing differently and why it is something that the rest of the schools should aspire to do is detailed below. It is worth noting that UNLV has increased in-state enrollments while obtaining “R1 status” as one the nation’s leading research universities, providing further evidence that a university can expand in-state enrollment without compromising its quality.

Figure 4: In-State Student Share for UNLV and UNR, 2002-2018



Source: The Integrated Postsecondary Education Data System (IPEDS) Fall Enrollment Survey.

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More Out-Of-State Students Means More Money

The Great Student Swap explains part of the increase in student debt; since out-of-state tuition is significantly higher than in-state tuition, more out-of-state students means more students who are paying higher prices. This challenges the idea that increased costs for college are part of a worthwhile trade-off for a more educated (and presumably more productive) society. Swapping students between schools does not increase total educational attainment. One of the main justifications for the rise in the cost of college is that the economic returns to education continue to grow. But, while an individual may be better off attending an out-of-state school for a higher tuition cost than not attending college at all, it is not clear that society collectively benefits from this more expensive education compared to the in-state alternative.

A back of the envelope calculation shows that among our sample states alone, the swap may have increased the total tuition costs of college by \$57 billion. Considering these are only 16 of the 50 public university flagship schools and that there are many more public

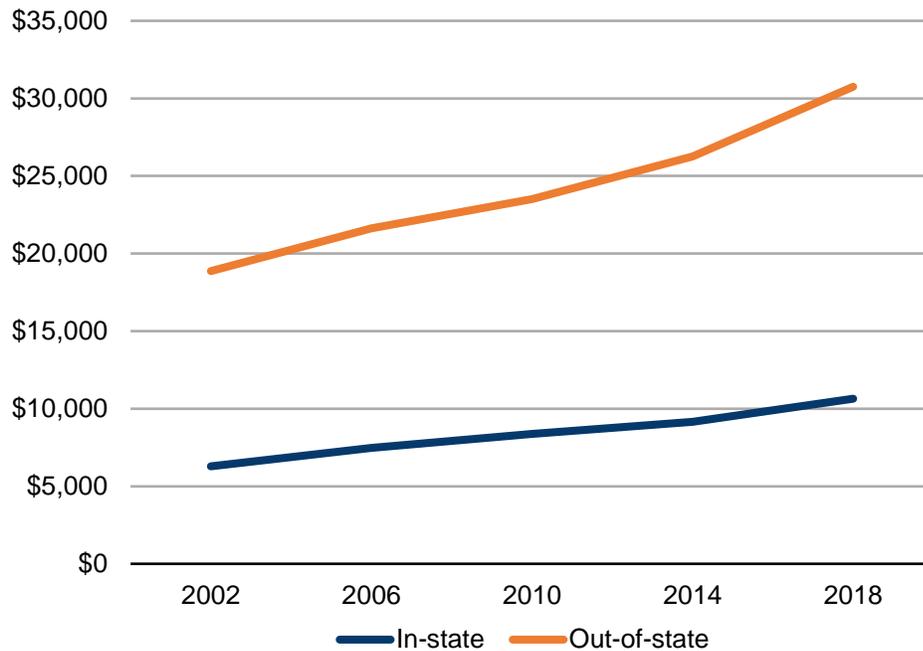
colleges and universities swapping students beyond flagships, the Great Student Swap plays a far larger role in the explosion of the cost of college than our data might suggest.¹⁴

While both in-state and out-of-state tuition has increased significantly across all schools in our sample, it is important to note that the gap between the two has grown over time. For example, in 2002, in-state tuition at the University of Montana was \$5,723. By 2018 in-state tuition jumped 32 percent to \$7,534. During that same period, out-of-state tuition increased at twice the rate (64 percent) rising from \$ 15,628 to \$ 25,583. Put another way, in 2002 an out-of-state student paid 2.7 times as much tuition as an in-state student, but in 2018 that figure was 3.4.

The University of Montana is representative of a ubiquitous trend. Figure 5 shows the average in-state and out-of-state tuitions for our schools across time. In 2018, average out-of-state tuition in our sample was almost 3 times as high as the average in-state tuition. In other words, an out-of-state student pays in one year what many of her classmates pay over three years for the same college education.

Even in schools where both tuitions have grown at similar rates, the difference between the costs have compounded to shocking levels. From 2002 to 2018, in-state and out-of-state tuition at the University of North Dakota grew at the same exact rate – 74 percent. But because of the different initial base levels, out-of-state students paid over \$12,000 more in tuition than in-state students by 2018. In 2002, they paid around \$7,000 more. Out-of-state students are more and more profitable for schools relative to their in-state peers. The incentive to swap students is growing.

Figure 5: In-State and Out-of-State Tuitions, 2002-2018



Source: The Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics Survey. Inflation-adjusted to 2020 dollars using the Bureau of Labor Statistics CPI.

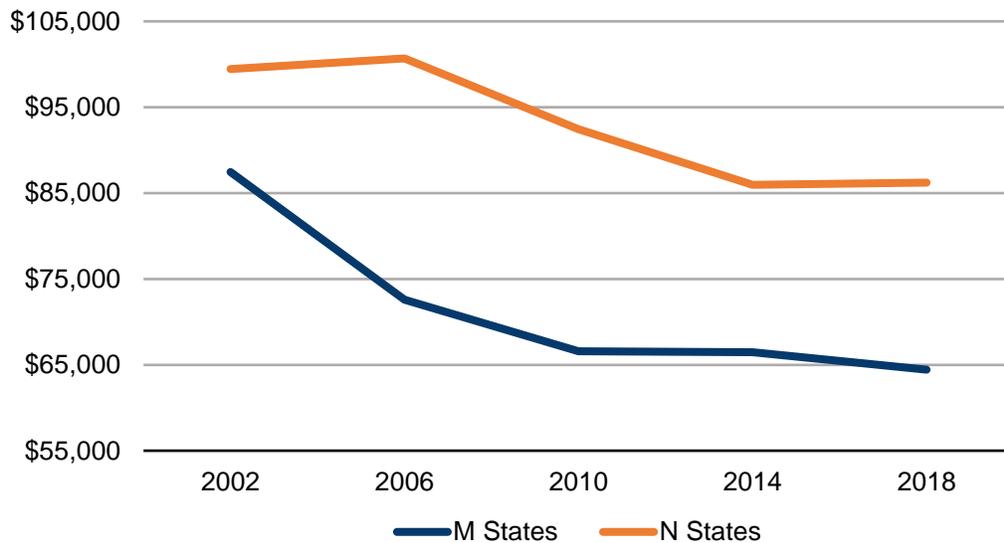
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State and Local Appropriations Decline

State schools are intended to educate their own state’s students. State and local governments subsidize their universities as a form of providing benefits to their residents. As state schools become more focused on out-of-state students, they may undermine local political support for their own funding. State and local funding for these schools has substantially decreased in the last twenty years, as their student bodies have become more out-of-state.

We measured state spending for public universities using average state appropriations per student. Figure 6 shows the average state appropriations per student at flagship universities received by M-state and N-state schools from 2002 to 2018. Across the 16 states we examined, state government support fell on average by \$18,111 (19 percent) per student from 2002 through 2018. Separating the sample, we see that in M states, state government support has fallen by \$23,016 (26 percent) per incoming freshman while in N states support has declined by a smaller amount of \$13,207 (13 percent).

Figure 6: Appropriations Per Incoming Freshman, 2002-2018



Source: The Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics Survey. Inflation-adjusted to 2020 dollars using the Bureau of Labor Statistics CPI.

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It is interesting to note that M-state schools experienced a steeper decline in state government support than N-state schools, as M-state schools also had a greater increase in their share of out-of-state students during that time period. This is not dispositive proof, but evidence that the magnitude of the decline in state support is related to the magnitude of the Great Student Swap. This feeds into the vicious cycle that state schools find themselves in: their student body is increasingly out-of-state, which undermines local political support and reduces the appropriations they receive. Schools then rely more heavily on their tuition to cover their costs and turn to more profitable out-of-state students.

Our data does not make clear which of the trends we outline above initiated the cycle. However, the answer to that question is not directly relevant to solving the problem. State schools need to return to their mission of educating students from their own state. State governments need to prioritize higher education and ensure their residents have the ability to obtain a college degree from an in-state school at a reasonable cost. However, absent policy intervention, this cycle is poised to continue.

In the next sections, we show how this cycle is disadvantaging both students, who are graduating with more debt, and society overall, which is investing more money in higher education without increasing its total educational attainment.

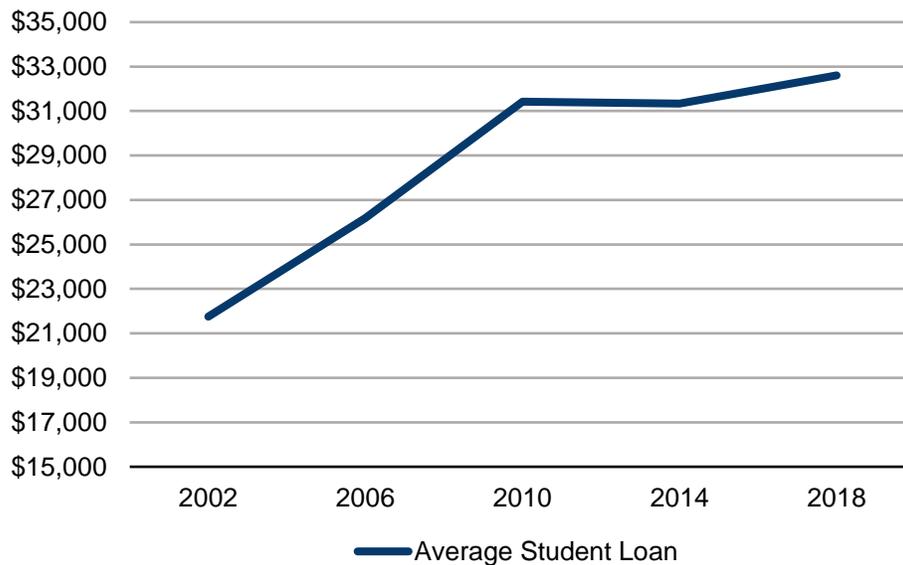
College Has Left More Students with Crippling Debt – Especially Latino and Black Students

The Great Student Swap makes higher education more expensive without making society better off. Students, their families, and the federal government are left to foot the bill. Swapping students drives up total tuition paid by students, which then forces students to increasingly rely on student loans to cover the cost of higher education.

As tuition becomes a more important source of funding for schools, families are left with greater burdens to cover costs; and this burden disproportionately effects Black and Latino families. Among our sample states, the average net price of attendance at a public four-year school as a share of median household income for white families is 22 percent.¹⁵ For Black and Latino families it's 35 percent and 29 percent, respectively.

The rise in federal student loans is well-documented.¹⁶ Among our sample of flagship universities, the average amount of federal student loans has increased sharply. As Figure 7 shows, students in our sample went from borrowing a little under \$22,000 over 4 years starting in 2002 to nearly \$33,000 by 2018. After adjusting for inflation, average student loans grew nearly 60 percent over 16 years.

Figure 7: Average Student Loan Taken Out Over Four Years, 2002-2018



Source: The Integrated Postsecondary Education Data System (IPEDS) Student Financial Aid Survey. Inflation-adjusted to 2020 dollars using the Bureau of Labor Statistics CPI.

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Students and families have had to borrow more to pay for their education. Higher education becomes less accessible for low- and moderate-income families, which disproportionately impacts students of color.¹⁷ Existing racial wealth disparities cause Black and Latino families to rely more heavily on student loans to pay for increasingly expensive educations than white families. This can have dire, long-lasting consequences for Black and Latino students.

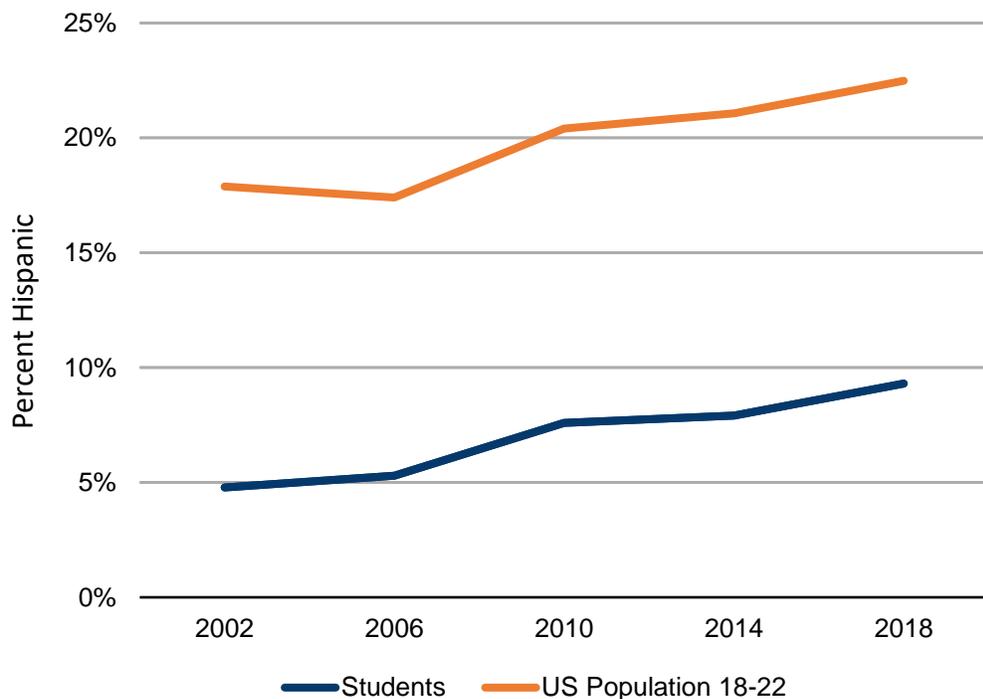
Differences in student loan amounts compound over time and lead to even larger differences in student debt amounts. In 2019, 75 percent of Black borrowers and 60 percent of Latino borrowers¹⁸ had student debt balances that exceeded their original loan amount. For white borrowers, it was 51 percent. Those numbers are concerning for all borrowers, but the racial differences are clear. A study from 2016 found that the Black-white disparity in student loan debt more than triples a couple years after graduation. A separate study from the Washington Center for Equitable Growth found that student debt delinquencies are highly concentrated in Black and Latino communities.¹⁹

The evidence tells a clear story; the rising cost of higher education is disproportionately burdening Black and Latino students. A third of all Hispanic borrowers – more than any

other race/ethnicity - reported that they put off getting married or delayed having children because of student debt.²⁰

Latinos are still disproportionately underrepresented in higher education institutions, although recent growth has helped close the gap. In our sample, Hispanic students made up just 4.8 percent of students in 2002 even though 17.9 percent of all Americans between the ages of 18 and 22 were Hispanic that year (Figure 8). By 2018, the Hispanic student share nearly doubled, but Latinos still remained underrepresented in flagship colleges. If the number of in-state slots stays roughly constant over-time as the college-age population grows, relatively fewer and fewer opportunities exist for in-state students to attend their home state's flagship. As the share of college-age Latinos has grown disproportionately, they have borne a greater share of the consequences. The Great Student Swap is yet another factor compounding difficulties that disproportionately impact people of color.

Figure 8: Percent of Students Who Are Hispanic, 2004-2018



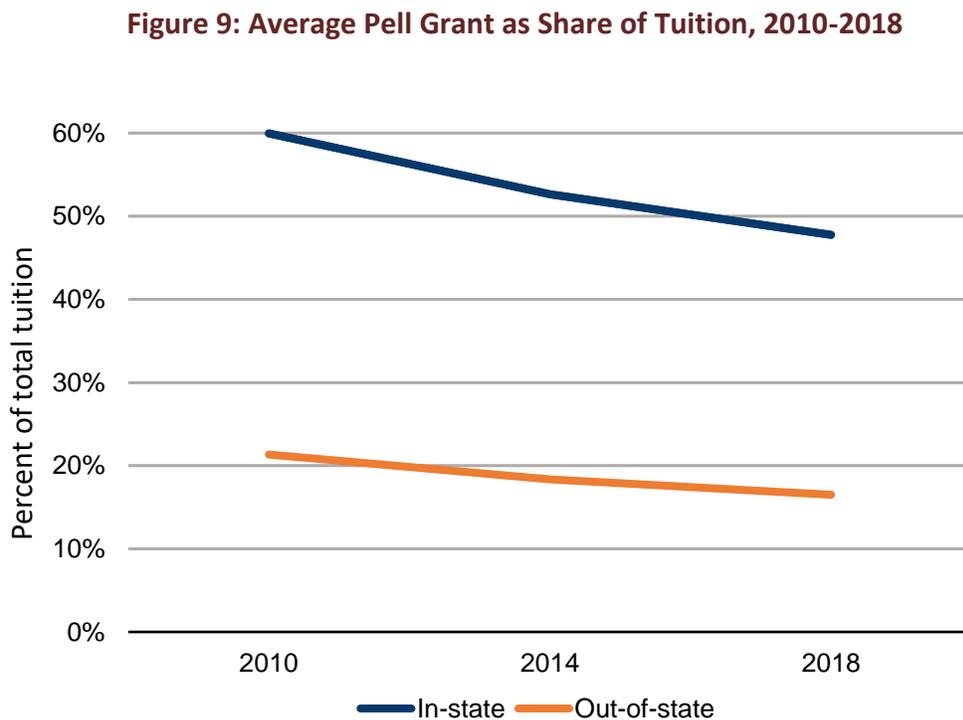
Source: The Integrated Postsecondary Education Data System (IPEDS) Fall Enrollment Survey and Census Population Survey (CPS).

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The Great Student Swap Undermines the Efficacy of Higher Education Funding

The rising cost of higher education does not just affect students and their families; it burdens federal and state governments as well. Since 2002, federal and state governments have spent more to help students afford college. Government spending and loan support has been more than offset by the Great Student Swap taking place.

To see how rising tuition costs have undermined the efficacy of government funding for higher education, consider Pell grants, the primary form of federal government aid. In 2010, the average Pell grant was around \$4,200. By 2018, it was just over \$4,800. However, that increase is basically equal to the rate of inflation. Adjusting for inflation the average Pell grant has been flat from 2002 through 2018 at approximately \$5,000. But as Figure 9 shows, the share of tuition covered by Pell grants has declined steadily – especially for in-state students.



Source: The Integrated Postsecondary Education Data System (IPEDS) Student Financial Aid Survey.

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For out-of-state students, Pell grants never covered much more than 20 percent of tuition, a sharp contrast to the 60 percent of in-state tuition Pell once covered. The idea that the federal government's Pell grant would cover the majority of expenses for students from a lower-income family attending their in-state public university remains mostly true. However, once you leave the state, that ceases to be true. Out-of-state students have never been able to rely solely on Pell funds to cover tuition costs. The Great Student Swap further weakens the Pell grant's ability to cover a significant portion of tuition costs for low-income students. As long as in-state tuition continues to rise faster than Pell Grants, increased government spending will have a diminished impact on alleviating students' financial burdens.

Turning from federal aid to state-level aid, we find that state aid increased in net as well. Figure 10 shows the average amount of aid given to each student over time broken down by aid type. The increases in federal and state aid combined do not keep up with the growth in tuition cost over the same time period.

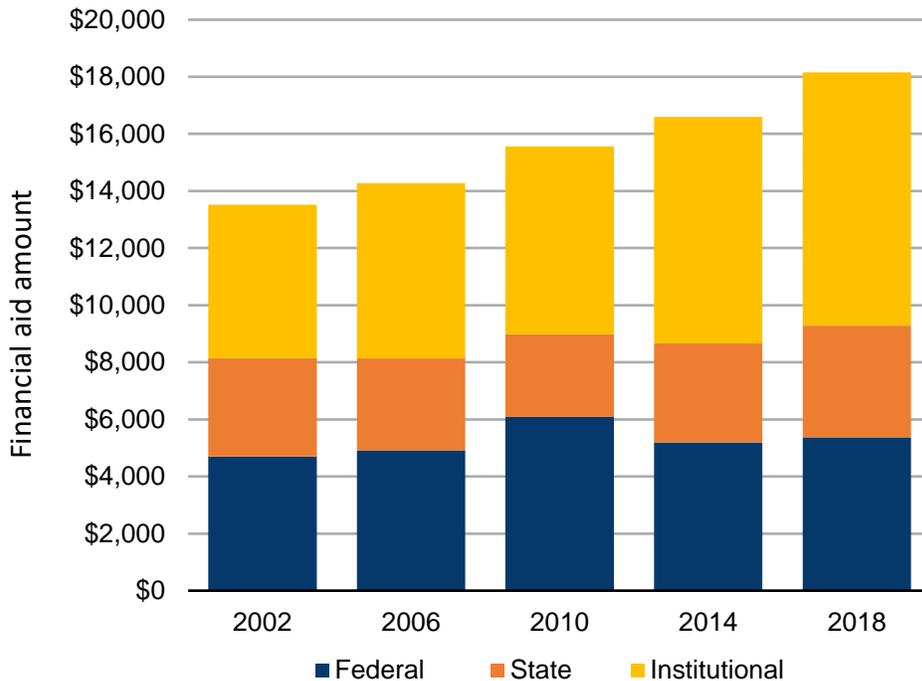
The third type of aid, which comes from the educational institutions themselves, has become increasingly important. Universities provide a growing amount of their student's costs with financial aid. While the average student in 2002 only received \$3,680 from their institution, by 2018, schools provided \$8,534. While these figures portend good news, there are good reasons to question whether they are real or imaginary support.

There is a 'sticker price' phenomenon where higher education costs are somewhat similar to buying a car in that the stated cost is not what most people pay. Given the substantial increases in tuition prices, particularly for out-of-state students, it is not clear how much of this increase in educational institution assistance is illusory. Further research using data on net cost would help answer this question and give greater insights into the consequences of the Great Student Swap.

Furthermore, high sticker prices can deter low-income, Black, and Latino students from applying to schools even if substantial amounts of tuition aid are provided. It is well known that high-achieving, low-income students attend selective colleges at far lower rates than well-off students with similar levels of achievement. There is evidence that part of that gap can be explained by the complexity and uncertainty of college prices. [A recent study](#)²¹ found that when low-income, high-performing students received a letter pledging four years of free tuition at a flagship university, application and enrollment rates more than doubled. Notably, the students in the study already qualified for free tuition; the letter

simply highlighted this aid and reduced uncertainties about the costs of attending. High sticker prices deter people from higher education, even when institutional aid is offered after enrollment. The presentation of the cost of higher education matters.

Figure 10: Average Amounts of Aid per Student by Aid Type, 2002-2018



Source: The Integrated Postsecondary Education Data System (IPEDS) Student Financial Aid Survey. Inflation-adjusted to 2020 dollars using the Bureau of Labor Statistics CPI.



Policies That Work

Requiring Schools to Admit In-State Residents

In 1986, the University of North Carolina’s Board of Governors enacted a rule²² capping the freshman class as no more than 18 percent out-of-state students. Although not a state law, the rule has been actively enforced. When UNC, Chapel Hill slightly exceeded its permitted rate²³ of out-of-state students, the Board of Governors fined UNC Chapel Hill \$1 million. As a result, UNC, Chapel Hill is an institution focused on educating North Carolinians.

UNC, Chapel Hill is an elite academic institution. It is regularly ranked among the top public universities²⁴ for undergraduate education and among the top overall universities²⁵ for undergraduates in the nation. As a highly selective school with a 23 percent acceptance rate with admitted students achieving high test scores, UNC, Chapel Hill is able to fill its student body with high-performing students through a highly competitive process that relies heavily on in-state candidates.

North Carolina is not alone in mandating its state universities to accept in-state students. Texas passed legislation in 1997 that guaranteed admission²⁶ to every Texas public university for every Texas high school student that graduated in the top ten percent of their high school class. Rather than setting a requirement among admissions decisions, Texas' law required admissions to every public state university, which had a major impact on Texas' flagship university, the University of Texas, Austin (UT, Austin).

From 2002 to 2018, the freshman class at UT, Austin remained almost entirely in-state (91 percent and 89 percent for 2002 and 2018, respectively). Despite increasing the freshman class size by 1,000 students, the 10 percent law admitted too many students relative to the number of available slots. Therefore, as of 2017, UT, Austin automatically admits the top 6 percent²⁷ of students in each high school class. The 6 percent standard has been extended until the fall of 2022. The result has been a relatively constant and high share of in-state students at UT, Austin.

Like UNC Chapel Hill, UT, Austin has remained an elite academic institution that is both selective and competitive. Roughly one-third of Texans applying for admission²⁸ are accepted compared to about one-seventh of out-of-state students. However, because both pools of students are highly competitive and there is evidence of a preference by applicants to stay in-state, it is not necessarily 'easier' for Texans to be admitted. As one college admissions company stated, "The middle 50 percent test score range for non-automatically admitted Texas residents was 28-33 on the ACT similar to OOS admitted students, 29-33."²⁹

These two mandates have worked. They keep each major state university focused on educating students from their state. These universities have maintained their elite status, high rankings, and selective student body despite requirements that have effectively kept the schools over eighty percent in-state students. The argument often made by highly selective schools that they need more out-of-state students to maintain their competitive status is simply false.

Has focusing on in-state students held off state budget cutbacks? The UNC, Chapel Hill has maintained the same level of state government support, adjusted for inflation as it did in 2002. In fact, for many of the years between 2002 and 2018 state support rose, even after adjusting for inflation. Thus, over the 16 years covered in this study, there was generally more state government support for UNC, Chapel Hill students than at the outset. Quite a difference from most of the schools in this study, which on average saw a 20 percent decline in state appropriations per freshman.

The same is not the case at Texas. Although on a non-inflation adjusted state government support rose, once adjusted for inflation support fell by 12 percent, or approximately 0.67 percent per year. That however, is far better than the University of Michigan where state support, adjusted for inflation, fell by more than three times as much (38 percent). It is hard to observe counterfactuals in this context, but given the general anti-government spending push in Texas state politics, it is conceivable that the decision in the 1990s to effectively require UT, Austin's freshman class to be almost 90 percent Texas residents increased UT, Austin's political clout and reduced pressure to further cut state government subsidies.

A final note about Texas' 10 percent policy is that it may also be successful in promoting racial diversity. The law was originally passed in 1997, one year after a federal appeals court barred Texas public universities from considering race in admissions.³⁰ Lawmakers designed the 10 percent plan to ensure that its top public universities remained diverse despite the ban on affirmative action policies. Guaranteeing admissions to the same share of top students at each high school in the state means that the top students at every school, whether in a largely white or heavily minority district will have an opportunity for admission. Since many high schools unfortunately remain racially segregated in Texas³¹, the 10 percent plan provides a pipeline of potential students from heavily minority communities to attend Texas' flagship university. Studies show that while the 10 percent plan may not be as effective at promoting racial diversity as race-based policies³² (i.e. affirmative action), it still improves access for Black and Latino students significantly.

Multi-State Exchanges

Many states have formed multi-state agreements creating different consortia providing some level of benefits for students to attend schools not in their state but as part of the consortia. These agreements allow eligible students to choose from hundreds of undergraduate programs outside their home state, and pay no more than 150 percent of

that institution's in-state tuition rate. The three large consortia among our sample states are The Western Undergraduate Exchange³³ (WUE), the New England Regional Student Program³⁴ (RSP), and the Midwest Student Exchange Program.³⁵ In addition to these, the Universities of Minnesota and North Dakota have created a bi-state reciprocity agreement.³⁶

These exchanges require students to be admitted through the regular process before they qualify for reduced tuition, and they do not necessarily apply to every public college or university in a participating state.

The Western Undergraduate Exchange bills itself as the largest exchange system in the country, featuring over 160 public colleges and universities in 16 states and territories. Participating schools pledge to offer tuition breaks to eligible students from other states that are no more than 150 percent of their own in-state tuition. Students who qualify for the WUE program pay less than regular out-of-state students.

WUE claims to have saved students \$411 million³⁷ in reduced tuition through the 2020-2021 academic year. Evaluating this claim is challenging because it is not clear they are using the correct counterfactual.³⁸

WUE is a significant player in the out-of-state student world within our sample. At the University of New Mexico, 204 out-of-state students³⁹ were part of WUE in the 2019-2020 academic year. Given that the school averages around 450 out-of-state students per class and that roughly half of all University of New Mexico students graduate within six years⁴⁰ it seems reasonable to estimate that between 10 to 15 percent of out-of-state students at the University of New Mexico are part of WUE. That figure may be low if WUE students are more likely to graduate on-time, or if WUE students who take longer to graduate eventually become New Mexico residents and can transition to in-state status. That figure may also be an underestimate if WUE students have higher drop-out rates after the first year and return to their home state. These are topics that a future study more focused on multi-state exchanges should examine.

For our study, it is useful to note that at the University of New Mexico, the majority of WUE students are from California (110). Only two other states have even ten percent of WUE students, Arizona (24) and Washington State (20). Nevada only sends 4 students to the University of New Mexico through WUE. California students comprise an astounding

92 percent of WUE students at UNR; 1,509 out of 1,635. The next highest state is Washington State at 28 (less than 2 percent of WUE enrollment).

California exports the most WUE students, at 17,893, but imports very few. Only 878 students from all other WUE states enter one of the 16 participating California Schools, which are almost exclusively California State University (CSU) schools. The only participating University of California school is UC, Merced which has only 4 total WUE students. On net, the WUE system exports 17,015 California students to participating schools. The next largest state participating in WUE is Washington State, which was far more balanced, exporting 4,619 students and importing 3,862.

Table 3 shows the number of students going to and from the four states in our sample that participate in WUE. California is included because it plays a major role in the exchange, fundamentally exporting an extremely large number of students that make their way to other state schools. We also highlight the school in each state that takes in the most students through the exchange, which is often, but not always the flagship.

Table 3: Number of Students Exported and Imported in WUE States, 2019-20

State	Export	Import	Net Import	Main Participating School
Nevada	1,849	3,603	1,754	University of Nevada, Reno
New Mexico	928	620	-308	University of New Mexico
North Dakota	515	1,889	1,374	University of North Dakota
Montana	1,031	2,567	1,536	Montana State University, Bozeman
California	17,893	878	-17,015	Humboldt State University

Source: Western Interstate Commission for Higher Education (WICHE) enrollment data, 2019-20

Whether this is a good or bad system for reducing the cost of college largely depends on assumptions about whether local students would have stayed in-state to attend a local public school or whether they would have gone out-of-state without the exchange. This is particularly true for California, which constitutes 42 percent of all WUE students but creates the major imbalance by being almost exclusively a net exporter of students. Many of the implications from the trends we highlight in this paper depend on how students

make their decisions regarding in-state versus out-of-state schools. Future research should aim to better understand prospective students' price sensitivities as well as other factors that affect the in-state versus out-of-state choice.

Two other multi-state exchanges are prevalent in our sample, the New England Regional Student Program (RSP) and the Midwest Student Exchange (MSE). Similar to WUE, the MSE offers students a hybrid tuition price of 150 percent of in-state tuition if you are a resident of one of the qualified states. MSE also offers a 10 percent tuition discount for some participating private universities. RSP is more complex with differing tuition 'discounts' applied by each school for qualifying students from fellow New England states. For example, the University of Massachusetts, Amherst offers a 'discounted' out-of-state tuition that is 182 percent of what in-state students pay, while at the University of Maine the tuition 'discount' is 170 percent of in-state tuition.⁴¹

Bilateral tuition reciprocity agreements exist between many states. Minnesota has such agreements with North Dakota, South Dakota, Wisconsin, Iowa, and even the Canadian province of Manitoba. These agreements go back over 50 years, well before the Great Student Swap started and before the explosion of tuition costs. The prevalence of these bilateral exchanges is somewhat idiosyncratic and the universities involved can vary substantially between flagships and community colleges. For example, Minnesota trades around 200 students in total with Iowa under the program but has more than 10,000 participating Minnesotans in North Dakotan schools while receiving more than 8,000 students from Wisconsin.

Table 4: Minnesota Student Export and Import, 2018-19

State	Export to MN	Import from MN	Net Import
Iowa	75	131	56
Manitoba*	34	152	118
North Dakota	3874	10332	6458
South Dakota	1100	3322	2222
Wisconsin	8257	13362	5105

*Manitoba is a Canadian province

Source: Minnesota Office of Higher Education Tuition Reciprocity Annual Report 2020
<https://www.leg.mn.gov/docs/2020/mandated/200328.pdf>

The unresolved question is whether these exchange programs are reducing total educational costs. This depends on the assumption of their impact on both marginal school decisions by students and admissions decisions by universities. If lower tuition revenue for neighboring states out-of-state tuition incentivizes colleges to increase the total number of out-of-state students, it is possible that these programs could exacerbate the Great Student Swap. One way to better test the impact of these exchanges would be if states participating in them were required to accept a fixed share of in-state students (like in North Carolina). It would then be interesting to see if admissions officers would consider whether out-of-state students who could participate in these exchanges as they target admissions for a fixed number of out-of-state slots.

One conclusion that can be drawn from these programs is added complexity. Qualification for exchange participation generally requires knowledge the program exists, an affirmative application by the student or their family, and varying overlay requirements. It would be interesting to know what share of eligible students do and do not participate in these exchanges, what share of applications are rejected, and what the racial breakdown is for each. There are reasons to suspect that added complexity in receiving aid has disparate outcomes racially and is more challenging for lower income students and students from homes with less family support. Bureaucracy can be challenging for anyone, parent or child.

Our recommendation is that all multi-state exchanges be made more transparent, with application processes eliminated (streamlining is a secondbest alternative). Schools generally know where their students are from and reducing the burden to qualify for discounted tuition matters, particularly if the goal of the exchange is lowering the cost of college, not helping universities better market to and increase their out-of-state enrollment. The allure of offering students ‘more choices’ and ‘better prices’ is powerful. However, in the context of the cost of college, discounted out of state tuition is almost always more expensive than full-price in-state.

Be More Like UNLV

UNLV stands out as the only school in our sample that significantly increased its share of in-state students over the last twenty years. Beginning in 2002 with an already high base of 70 percent, UNLV added 1,605 more students from Nevada, ending at 2018 with 81 percent of its first year class hailing from home. Over our sample time period UNLV swapped one-third of its out-of-state students with in-state students instead.

UNLV's ability to recruit local and in-state students is likely enhanced by the university's consistent ranking as one of the most diverse public universities in the nation. "UNLV's fall 2019 enrollment of nearly 26,000 students was 31 percent Latino, 16 percent Asian and 8 percent Black. White students accounted for 28 percent of the student body and 10 percent of students identified as multiracial."⁴² This diversity closely matches the makeup of the Las Vegas-Henderson-Paradise metropolitan statistical area. As demographic analyses show, "the place to see the future is Las Vegas, whose demographics today look most like what the U.S. overall will look like in 2060."⁴³

In addition, UNLV and UNR both achieved coveted R1 (very high research status) from the Carnegie Classification of Institutions of Higher Education in December 2018, placing them among the top 130 research universities in the nation.⁴⁴ Both universities promote this achievement in recruiting materials. UNLV also launched a new medical school in 2014, now the Kirk Kerkorian School of Medicine at UNLV. In 2017 the inaugural class of students enrolled on full scholarship and in 2021 UNLV graduated 50 students. In 2021 the medical school also received full accreditation from the Liaison Committee on Medical Education.⁴⁵

UNLV and UNR also continue to improve their rankings and performance in undergraduate and graduate programs in a variety of disciplines.⁴⁶ Southern Nevada, home to approximately three-quarters of the state's population, is an essential recruiting area for both universities and the State Legislature allocates a line item in the budget to UNR, located almost 400 miles away, to underwrite UNR's Las Vegas Office for Prospective Students.⁴⁷

UNLV's decision to focus more on educating Nevadans came at a cost. Unlike almost every other school that chose to increase tuition revenue by engaging in the Great Student Swap, UNLV went the other way. We calculate that had UNLV remained only 70 percent in-state they would collect \$7.3 million more in tuition from their freshman class, which is over \$29 million per year when looking at all four years of students (even more if you consider a longer time period for students to graduate).

UNLV's achievement is particularly notable compared to the other large public university in the state, University of Nevada, Reno. As noted earlier UNR engaged in the Great Student Swap, moving from 85 percent Nevadan first year class to 73 percent. (See Figure 4).

UNLV remains a more selective school than UNR by some metrics. In 2019 UNLV admitted 81 percent of applicants, UNR 88 percent. However, UNR's test scores among admitted students are slightly higher: UNR's ACT range is 21 to 26 while UNLV's is 19 to 25. UNLV's

selectivity remains relatively constant from 2002, when it admitted 79 percent of students. Given how dominant in-state students have always been at UNLV it seems fair to conclude that the rise in-state students has not triggered an overall decline in school selectivity.

UNLV also houses more low-income students than UNR. In 2010, a quarter of UNLV undergraduates (25 percent) and almost a quarter of UNR undergraduates (24 percent) received Pell grants. By 2018, that number remained nearly unchanged for UNR (26 percent), while it increased substantially to 37 percent for UNLV. This suggests that over time, UNLV has increased its share of low-income students; all while sustaining its academic rigor and increasingly serving its in-state population.

UNLV's commitment in state is beyond just acceptance and opportunity but they are also increasing institutional aid in a targeted manner to Nevadans. In 2020 UNLV created a new Tuition+ Award program⁴⁸ to give eligible Nevadan students a grant toward 12 credit hours and fees per semester plus \$1,000 toward books for the year. The University set aside \$12 million for this program which importantly covers some costs that Pell Grants do not.

UNLV's decision to focus more in helping Nevadans is particularly important given its geographic location. UNLV is in the heart of the state's biggest city. The Las Vegas metro area has 74 percent of the state's population. Reno has only 15 percent in comparison. For this reason alone, the potential for students to live at home, saving on room and board, while attending college is greater at UNLV.

Conclusion

The Great Student Swap appears ubiquitous among flagship schools. 48 out of 50 flagship public universities have decreased their share of in-state students between the entering classes of 2002 and 2018. By swapping in-state students for out of state students, universities gain more revenue. The result is more debt for kids, higher costs for parents, and no greater educational attainment for society. A back-of-the-envelope estimate suggests that the student swap accounts for \$57 billion in greater tuition costs from 2002 through 2018 in our 16 sample schools alone.

A vicious cycle has developed between state governments and their flagship universities. Universities feel budget-constrained and are shifting enrollment away from in-state

students to get higher tuition revenue from out-of-state students. State legislators presumably see lower support for the state school as their constituents' kids are not being accepted. Political support falls and university budgets are cut. The cycle repeats.

To end this cycle, state universities need to focus on serving their own state students. State legislatures can force this in two ways:

- A direct mandated percentage of accepted students, like North Carolina
- A requirement for acceptance of top performing high school students in their state, like Texas

State legislatures need to realize that unwinding the Great Student Swap will require a prioritization of higher education in state budgets. They should expect that with greater in-state enrollment, public support for public higher education will also rise. Leadership is necessary to reverse both the trend in enrollment and in governmental support for higher education.

Universities need not wait on legal mandates to change their admissions policies and prioritize more in-state students. UNLV offers an excellent example of a major university that has focused on serving the needs of Nevadans, precisely when its counterpart, UNR, moved in the opposite direction. Hopefully such a change will be rewarded with greater political support coming from the state capital. Either way, the notion that school quality will suffer by prioritizing in-state students is easily rebutted by the experiences of UNC Chapel Hill, UT, Austin, and UNLV.

Endnotes

¹ The definition of a “flagship” university varies, sometimes leading to instate debates, and the Chronicle of Higher Education offer this explanation: “...typically a state’s flagship is its land-grant institution. It is likely to be the university with the highest research profile and the most doctoral programs. It may house the state’s medical school, law school, or both. And it may be the largest and best endowed university in the state. Membership in the prestigious Association of American Universities may be yet another factor, and NCAA Division I athletics is a must.”

² Perry, A. M., & Romer, C. (2021, July 12). *Student debt cancellation should consider wealth, not income*. Brookings. <https://www.brookings.edu/essay/student-debt-cancellation-should-consider-wealth-not-income/>.

³ Jaquette, O. (2017, May). *State University No More*. Jack Kent Cooke Foundation. https://www.jkcf.org/wp-content/uploads/2018/06/Cooke_Foundation_State_University_No_More.pdf.

⁴ Ibid.

⁵ Gerald, D., & Haycock, K. (2013, October). *Engines of Inequality: Diminishing Equity in the Nation's Premier Public Universities*. The Education Trust. <https://edtrust.org/wp-content/uploads/2013/10/EnginesofInequality.pdf>.

⁶ While not every state designates one of its public four-year universities as a flagship, many research studies assign one flagship per state. For this paper, we use a list of 50 flagships similar to the one used by Gerald and Haycock (2006) and others.

⁷ U.S. News & World Report. (2021). *The Best National Universities in America*. U.S. News & World Report. <https://www.usnews.com/best-colleges/rankings/national-universities>.

⁸ Hoekstra, M. (2009). The effect of attending the flagship State University on earnings: A discontinuity-based approach. *Review of Economics and Statistics*, 91(4), 717–724. <https://doi.org/10.1162/rest.91.4.717>

⁹ Andrews, R. J., Imberman, S. A., & Lovenheim, M. F. (2020). Recruiting and supporting low-income, high-achieving students at flagship universities. *Economics of Education Review*, 74, 101923. <https://doi.org/10.1016/j.econedurev.2019.101923>

¹⁰ There is no obvious reason why Delaware is an outlier, but one possibility is that it is a small state whose student body was already majority out-of-state in 2002 so it did not have much room to fall.

¹¹ Curs, B. R., & Jaquette, O. (2017). Crowded out? the effect of nonresident enrollment on resident access to public research universities. *Educational Evaluation and Policy Analysis*, 39(4), 644–669. <https://doi.org/10.3102/0162373717704719>

The authors found no causal effect for non-prestigious schools. They define prestigious schools as the 17 public schools in the US News & World Reports’ top 50 schools ranking for 2004. Among the flagships identified in this study, 10 are among the US News top 50 schools for 2021. To determine if out-of-state enrollment had a direct causal effect on crowding out in-state enrollment among our sample schools, a separate analysis like the one in Curs and Jaquette (2017) would have to be conducted.

¹² U.S. News & World Report. (2021). *How does University of Michigan--ann arbor rank among america's best colleges?* U.S. News & World Report. <https://www.usnews.com/best-colleges/university-of-michigan-ann-arbor-9092>.

¹³ Pennington, B. (2016, July 1). *The admissions ratio: The UNC System's 82-18 split*. UNC Media Hub. <http://mediahub.unc.edu/university-ratio-unc-systems-82-18-split/>.

¹⁴ This calculation sums total tuition costs for every student in our sample of M and N flagship public universities had each school kept the same share of in-state students that they had in 2002. The figure assumes that every student paid full tuition (both in- and out-of-state). In this regard the figure is an overstatement. However, this figure does not include the cost of room and board, which all out-of-state students pay, nor does it include

interest payments on the amount that was borrowed, which makes the full cost borne by the students even higher.

¹⁵ Mitchell, M., Leachman, M., & Saenz, M. (2019, October 24). *State Higher education funding cuts have pushed costs to students, worsened inequality*. State Higher Education Funding Cuts Have Pushed Costs to Students, Worsened Inequality. <https://www.cbpp.org/research/state-budget-and-tax/state-higher-education-funding-cuts-have-pushed-costs-to-students>.

¹⁶ Center for Responsible Lending, The Leadership Conference Education Fund, NAACP, National Urban League, and UnidosUS. (2019, September). *Borrowers of Color & the Student Debt Crisis*. Responsible Lending. https://www.responsiblelending.org/sites/default/files/nodes/files/research-publication/crl-quicksand-student-debt-crisis-jul2019.pdf?mod=article_inline.

¹⁷ Ibid.

¹⁸ Perry, A. M., Steinbaum, M., & Romer, C. (2021, July 12). *Student loans, the Racial Wealth Divide, and why we need full student debt cancellation*. Brookings. <https://www.brookings.edu/research/student-loans-the-racial-wealth-divide-and-why-we-need-full-student-debt-cancellation/#1>.

¹⁹ Vaghul, K., & Steinbaum, M. (2016, February 17). *How the Student Debt Crisis Affects African Americans and Latinos*. Washington Center for Equitable Growth. <https://equitablegrowth.org/how-the-student-debt-crisis-affects-african-americans-and-latinos/>.

²⁰ Hanson, M. (2021, July 10). *Student loan debt by race*. Education Data. <https://educationdata.org/student-loan-debt-by-race>.

²¹ Dynarski, S., Libassi, C. J., Michelmore, K., & Owen, S. (2018). Closing the gap: The effect of a targeted, tuition-free promise on college choices of high-achieving, low-income students. *NBER Working Paper Series*. <https://doi.org/10.3386/w25349>

²² Pennington, B. (2016, July 1). *The admissions ratio: The UNC System's 82-18 split*. UNC Media Hub. <http://mediahub.unc.edu/university-ratio-unc-systems-82-18-split/>.

²³ Ibid.

²⁴ U.S. News & World Report. (2021). *The Best Public National Universities in America*. U.S. News & World Report. <https://www.usnews.com/best-colleges/rankings/national-universities/top-public>.

²⁵ Poppett, E. (2019, September 5). *Carolina ranked the third best public school in the nation: UNC-chapel hill*. The University of North Carolina at Chapel Hill. <https://www.unc.edu/posts/2019/09/05/carolina-ranked-the-third-best-public-school-in-the-nation/>.

²⁶ The University of Texas at Austin. (2021, April 27). *Top 10 percent law*. UT News. <https://news.utexas.edu/key-issues/top-10-percent-law/>.

²⁷ The University of Texas at Austin Office of Admissions. (2021). *Admission decisions*. Admission Decisions | Undergraduate Admissions | The University of Texas at Austin. <https://admissions.utexas.edu/apply/decisions#:~:text=Automatic%20admission%20to%20UT%20Austin,fall%202021%20and%20spring%202022>.

²⁸ Martin, K. (2021, April 27). *Are Ut-Austin out-of-state (OOS) applicants at a disadvantage?* Tex Admissions. <https://texadmissions.com/blog/are-out-of-state-oot-applicants-at-a-disadvantage>.

²⁹ Ibid.

³⁰ Jaschik, S. (2021, January 19). *Who Benefits From 10% Plans?* Inside Higher Ed. <https://www.insidehighered.com/admissions/article/2021/01/19/report-questions-benefits-10-percent-admissions-plans>.

³¹ Sakian, J. R. P. (2019, January 2). *Segregation still exists in Texas schools*. Texas Public Radio. <https://www.tpr.org/show/the-source/2019-01-02/segregation-still-exists-in-texas-schools>.

³² Long, M. C. (2007). Affirmative action and its alternatives in public universities: What do we know? *Public Administration Review*, 67(2), 315–330. <https://doi.org/10.1111/j.1540-6210.2007.00715.x>

³³ Western Interstate Commission for Higher Education. (2021, July 19). *Western Undergraduate Exchange (WUE)*. Western Interstate Commission for Higher Education. <https://www.wiche.edu/tuition-savings/wue/>.

³⁴ New England Board of Higher Education. (2021). *Tuition break*. New England Board of Higher Education. <https://nebhe.org/tuitionbreak/>.

³⁵ Program of the Midwestern Higher Education Compact. (2021). *Midwest Student Exchange Program*. Midwest Student Exchange Program | . <https://msep.mhec.org/>.

³⁶ University of North Dakota. (2021). *Residency information: Tuition & Fees*. Tuition & Fees | University of North Dakota. <https://und.edu/one-stop/tuition-fees/residency.html>.

³⁷ Western Interstate Commission for Higher Education. (2021, July 19). *Western Undergraduate Exchange (WUE)*. Western Interstate Commission for Higher Education. <https://www.wiche.edu/tuition-savings/wue/>.

³⁸ It appears the WUE savings estimate is based on the assumption that every student who went through WUE would have chosen to go to the same out-of-state school and instead pay the full out-of-state tuition price. This is unlikely for several reasons. First, many students are price sensitive when it comes to selecting schools and would have not chosen to go out-of-state absent WUE. As WUE prices are generally higher than in-state tuition, deciding to go out-of-state through WUE is still generally more expensive for tuition than in-state.

Furthermore, tuition alone is not the only cost of attending college. Room and board is a significant expense, sometimes greater than tuition at many public colleges and universities. Going out-of-state usually means that you cannot live at home and students have to pay more for room and board, relative to the option of living at home and attending a local in-state public option. Granted that is not always an option for everyone, particularly for those attending flagship universities, but it is for some and the WUE savings do not account for the extra cost of living expenses. Finally, public universities offer both merit and need-based aid packages to out-of-state students. WUE reflects savings off the full tuition (sticker) price for out-of-state schools. It is not clear how much student aid would have been offered to qualifying WUE students absent the WUE program.

³⁹ Western Interstate Commission for Higher Education. (2020, July). *WUE Enrollment by State and Institution (2019-20)*. Western Interstate Commission for Higher Education. https://www.wiche.edu/wp-content/uploads/2020/07/WUE_Enrollment_by_State_and_Institution_2019-20.pdf.

⁴⁰ College Factual. (2021, July 28). *University of New Mexico Graduation Rate & Retention Rates*. College Factual. <https://www.collegefactual.com/colleges/university-of-new-mexico-main-campus/academic-life/graduation-and-retention/>.

⁴¹ New England Board of Higher Education. (2021). *Participating Colleges and Universities 2020-21 Annual Full-Time Undergraduate Tuition Rates*. New England Board of Higher Education. https://nebhe.org/info/pdf/tuitionbreak/2020-21/2020-21_RSP_TuitionBreak_TuitionRates-UNDERGRAD&GRAD.pdf.

⁴² Associated Press. (2020, September 17). *UNLV ranks near top in campus diversity ranking*. U.S. News & World Report. <https://www.usnews.com/news/best-states/nevada/articles/2020-09-17/unlv-ranks-near-top-in-campus-diversity-ranking>.

⁴³ Kolko, J. (2017, June 22). *40 years from now, the U.S. could look like Las Vegas*. FiveThirtyEight. <https://fivethirtyeight.com/features/40-years-from-now-the-u-s-could-look-like-las-vegas/>.

⁴⁴ UNLV Media Relations. (2018, December 19). *UNLV attains highest status as Research University*. University of Nevada, Las Vegas. <https://www.unlv.edu/news/release/unlv-attains-highest-status-research-university>.

⁴⁵ University of Nevada, Las Vegas. (2021). *History*. Kirk Kerkorian School of Medicine at UNLV | University of Nevada, Las Vegas. <https://www.unlv.edu/medicine/history>.

⁴⁶ Frazee-Bench, M., Falcone, M. A., Saladino, C. J., & Brown Jr., W. E. (n.d.). *2022 Graduate Program Rankings, UNLV & UNR*. 2022 Graduate Program Rankings, UNLV & UNR | Data Hub | University of Nevada, Las Vegas. <https://www.unlv.edu/news-story/2022-graduate-program-rankings-unlv-unr>.

⁴⁷ University of Nevada, Reno. (2021). *Las Vegas students: Office for Prospective Students*. University of Nevada, Reno. <https://www.unr.edu/prospective-students/vegas>.

⁴⁸ Casey, J. V. (2019, September 9). *UNLV to offer new tuition+ award program for Nevada residents*. University of Nevada, Las Vegas. <https://www.unlv.edu/news/release/unlv-offer-new-tuition-award-program-nevada-residents>.

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