## Geography of Opportunity Series | Brief #1 How Many Students Go Out-of-State for College?

October 2023 🤇

The first brief in a two-part series on the geography of opportunity by TICAS senior fellow Dr. Nick Hillman.

### Introduction

Despite an increasingly digital world, geography remains a critical factor shaping educational opportunity and pathways in the United States. Students often need and want to stay close to home because of work responsibilities, family commitments, and maintaining important ties to their communities.<sup>1</sup> As a result, most students do not "shop around" far and wide for colleges; instead, they tend to stay close to home and only apply to one or two institutions.<sup>2</sup> Our analysis underscores this reality further, showing that only 1 in 5 undergraduates travel outside of their home state for college. Despite this, media outlets, college rankings, and even policy conversations often place outsized attention on selective institutions that draw from national (or even global) markets.

In reality, and described in this brief, most colleges attract students from within their own state boundaries and serve relatively small geographic areas or "markets." By viewing higher education through the "geography of opportunity" lens, researchers and policymakers can find new ways to develop policy frameworks and proposals that reflect the reality of college choice in the United States, and that contextualize colleges according to the local contexts in which they operate. For example, upward mobility rates in the United States are highly dependent on local economic forces, so any measure of a college's return on investment or upward mobility will be driven in large part by local contexts.<sup>3</sup>

The geography of opportunity lens also helps amplify the role colleges play in serving and being shaped by their local/ regional communities. Public community colleges and universities are often the only option students consider; these institutions provide critical pathways toward upward mobility and are incredible assets to regional economic, social, and cultural wellbeing.<sup>4</sup> These same institutions also serve the lion's share of the nation's students of color, first-generation students, and students from lower-income backgrounds.<sup>5</sup> But in many parts of the country there are few -- and in some cases no -- colleges nearby, resulting in "education deserts" where prospective students have exceedingly limited opportunities.<sup>6</sup> The geography of opportunity lens can help explain why these deeply-rooted inequalities exist and how they can be addressed.

### **Purpose**

Part I of this series provides baseline trends of the number and percentage of U.S. based students who enroll in colleges out-of-state, disaggregated by institutional sector. This brief finds only 1 in 5 undergraduates travel out-of-state for college and, when they do, they tend to enroll in public research universities or non-profit institutions.<sup>7</sup> The vast majority of students stay in-state for college (attending community colleges or broadly accessible institutions focused on bachelor's/master's degrees rather than selective research universities), suggesting most colleges operate in relatively local markets for prospective students. While these findings may not be surprising at face value, they are surprisingly not well documented in policy or academic research literature. A goal of this series is to simply build a public record of these trends to highlight the vital role geography plays in shaping higher education opportunity in the United States.

### **Data Source**

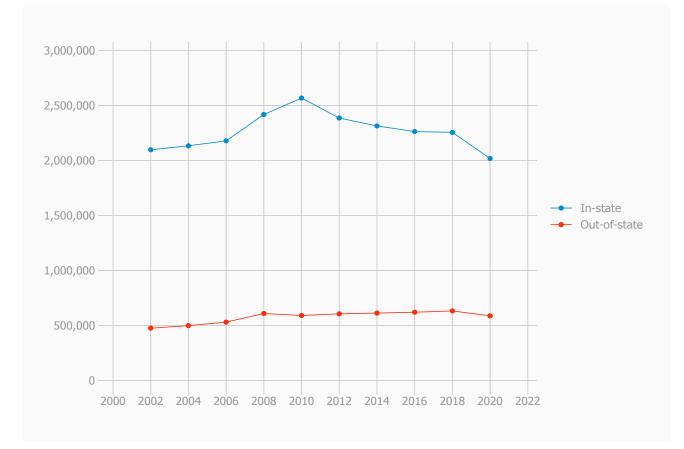
This analysis uses data from the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS).<sup>8</sup> It includes all degree-granting institutions participating in federal Title IV financial aid programs between 2002 and 2020.<sup>9</sup> In even-numbered years, colleges report the number of first-time degree/certificate-seeking undergraduate fall enrollment by students' state and jurisdiction of residence.<sup>10</sup> Using this data source, Figure 1 shows the number of incoming students by their residency status where students either attended college in-state or out-of-state; international students are excluded from this analysis.

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In 2020, approximately 2 million incoming students attended college in their home state while around 570,000 attended out-of-state (Figure 1).<sup>11</sup> At the time of this publication, 2020 is the most recent IPEDS residence and migration enrollment data available at the national level; therefore, this analysis only accounts for the beginning of the COVID-19 pandemic. When 2022 and subsequent data years become available, researchers will be able to assess whether post-pandemic patterns hold or return to pre-pandemic trends.

## FIGURE 1. Number of Domestic Students Entering College as First-Time Degree/Certificate-Seeking Undergraduates by Residency Status, Fall 2002 to 2020

The vast majority of incoming students stay in-state for college. In-state enrollments surged during the Great Recession (2007-2009), largely in the community college sector, and subsequently fell in its wake. Out-of-state students account for a small share of the total student population and enrollments have remained relatively stable over time.



### Which colleges enroll out-of-state students?

Surprisingly few studies focus on descriptive trends of students who go out-of-state for college. Among those that have, Dr. Roman Ruiz has developed an interactive data tool to explore student migration over time.<sup>12</sup> Drs. Ozan Jaquette, Karina Salazar, and Bradley Curs have a series of studies exploring how public universities recruit out-of-state students for enrollment and revenue management purposes.<sup>13</sup> And Dr. Manuel González Canché has explored how colleges compete and set prices for out-of-state students.<sup>14</sup> These studies inspired the current brief and provide important context for understanding how and why students go out-of-state for college. One key finding from the prior work is that not all colleges have equal market power to recruit and retain out-of-state students. In fact, most colleges enroll students from relatively nearby, so the idea of recruiting out-of-state students is not central to the mission of most colleges.<sup>15</sup> One budgetary implication is local colleges cannot simply tap into out-of-state markets to generate tuition revenue as many research universities have done in recent years.<sup>16</sup> Additionally, some states and systems have policies limiting the number (or percentage) of incoming students from out-of-state or tuition reciprocity agreements where out-of-state students from neighboring states pay in-state rates.<sup>17</sup> These are important policy issues that could be explored in further research and are not the subject of this brief.

To explore differences across types of institutions, Table 1 and Figure 2 disaggregate higher education sectors into six categories based on control and Carnegie Classification.<sup>18</sup> One benefit of using these six categories is it differentiates "four-year universities" into two distinct groups where the "bachelor's and master's" category includes four-year liberal arts colleges and comprehensive institutions while the "research" category only includes four-year research universities.<sup>19</sup>

Using these six sectors, Table 1 shows 22 percent of incoming students (n=570,384) attended college out-of-state in fall 2020. This table also shows stark differences in the marketplace for out-of-state students. On one hand, public research universities and non-profit institutions enroll the vast majority of out-of-state students (n=429,455) yet these sectors account for less than half of all incoming students. On the other hand, community colleges and public bachelor's/master's institutions account for half of all incoming students and a minority of out-of-state students (n=104,226). Table 1 starts to illustrate a tale of two markets: the market for out-of-state students is dominated by selective research universities and non-profits while the market for in-state students is dominated by broadly accessible public institutions.

# **TABLE 1.** Number and Share of Domestic Out-of-State First-Time Degree/Certificate-Seeking Undergraduates by Sector, Fall 2020

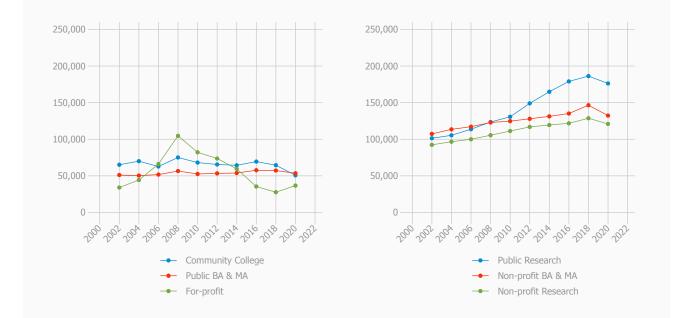
In fall 2020, approximately one in five students entering college enrolled out-of-state. Most out-of-state students attend public research universities or non-profit institutions. Most in-state students attend community colleges and public bachelor's/master's institutions.

	Number of degree-granting institutions	Number of incoming students			Percent
		In-state	Out-of-state	Total	Out-of- State
Community College	938	842,923	50,718	893,641	6%
Public Bachelor's/Master's	382	327,649	53,508	381,157	14%
Public Research	210	546,198	176,218	722,416	24%
Non-profit Bachelor's/Master's	793	151,726	132,307	284,033	47%
Non-profit Research	181	77,495	120,930	198,425	61%
For-profit	704	52,158	36,703	88,861	41%
Total	3,208	1,998,149	570,384	2,568,533	22%

Figure 2 shows how these two markets have changed over time. On the left, community colleges and public bachelor's/ master's ("BA & MA") institutions have not expanded their out-of-state enrollments over time: in 2020, they enrolled approximately the same number of out-of-state students as they have any other year in the past two decades. The for-profit sector, however, was more volatile (driven in large part by closures and conversions) where out-of-state enrollments surged during the Great Recession and declined until an uptick in 2020.<sup>20</sup> On the right, we see steady growth in out-of-state students attending public research universities and non-profits until 2020. While the 2020 decline is sizable these sectors still have increased out-of-state enrollments since 2002.

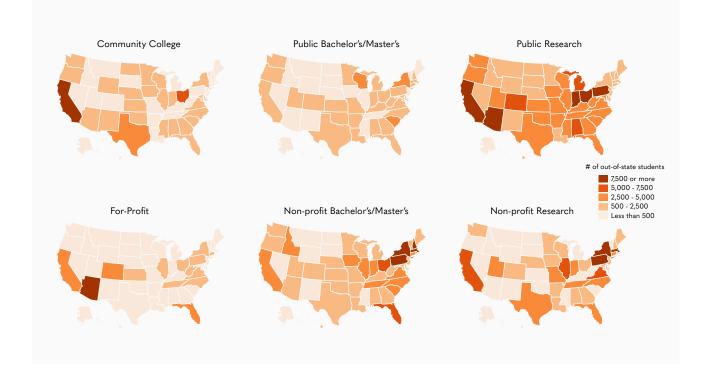
# FIGURE 2. Trends in the Number of Domestic Out-of-State First-Time Degree/Certificate-Seeking Undergraduates by Sector, Fall 2002 to 2020

The left panel shows flat or declining out-of-state enrollment among public bachelor's and master's degree-granting institutions, community colleges, and for-profits. The right panel highlights steady growth until 2020 among non-profit institutions and public research universities.



#### FIGURE 3. Number of Domestic Out-of-State First-Time Degree/Certificate-Seeking Undergraduates by Sector, 2020

Public research and non-profit institutions enroll the majority of out-of-state students. Most out-of-states students are concentrated in a handful of states while most states (particularly in the community college and public bachelor's/master's sectors) enroll relatively few out-of-state students.



Building on the six sectors described in the previous figure, Figure 3 shows where out-of-state students enrolled in fall 2020. Not only are public research universities and non-profit institutions the primary colleges where out-of-state students attend, but there is considerable variation across the U.S. For example, the largest number of out-of-state students attend public and private research universities in only a handful of states (California, Indiana, Ohio, Pennsylvania, and New York). Similarly, non-profit bachelor's/master's institutions in New England tend to enroll large numbers of out-of-state students. Despite some states having large numbers of out-of-state students, the majority of students stay in-state for college due in large part to public institutions with the mission of serving their local and regional needs.<sup>21</sup> Appendix A provides a list of in-state and out-of-state student enrollments by state.

### What share of students are from out-of-state?

The prior analyses focus on the sheer *number* of students, so Figure 4 adds context by showing the *proportion* of students in each sector who are from out-of-state. For example, the prior analyses showed how public research universities enroll larger numbers of out-of-state students than any other sector; however, public research universities also enroll large numbers of in-state students, so it is useful to use proportions to gain further insights across sectors.

# FIGURE 4. Trends in the Share of Domestic Out-of-State First-Time Degree/Certificate-Seeking Undergraduates by Sector, Fall 2002 to 2020

The solid line represents the median and the blue band includes the 25th and 75th percentiles, showing how colleges cluster around the median. Non-profit institutions enroll considerably larger shares of out-of-state students than publics; public research universities are slowly increasing their out-of-state shares while community colleges and public bachelor's/master's remain flat.

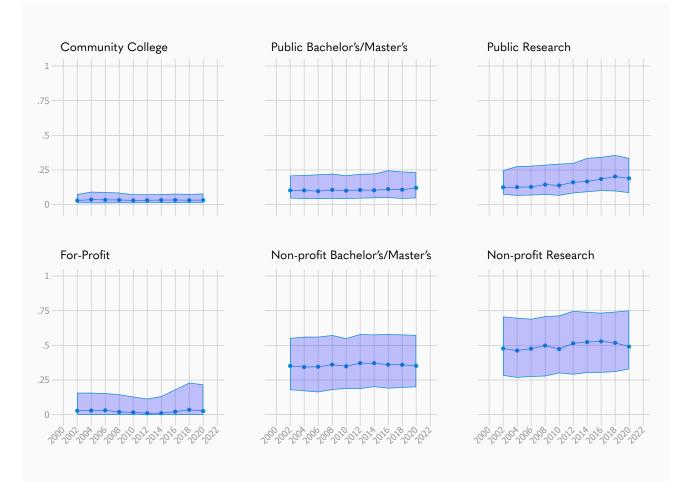
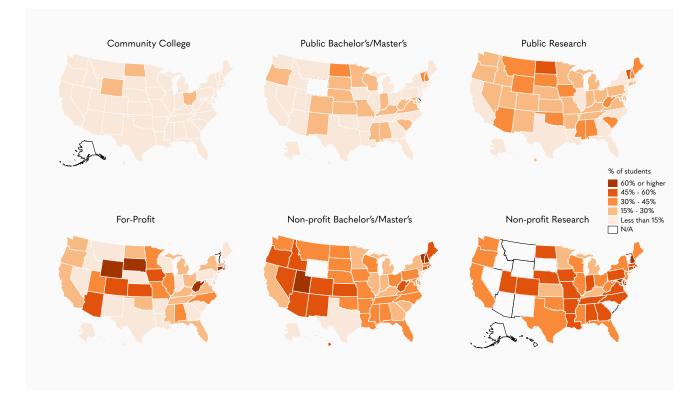


Figure 4 shows the median (solid line) along with the 25<sup>th</sup> percentile and 75<sup>th</sup> percentiles (blue band) to gain a sense of how tightly colleges cluster near one another. The median community college enrolls 3 percent of its incoming student body from out-of-state and this pattern is steady over time. The median public bachelor's/master's institution enrolls 12 percent of its incoming students from out-of-state and, like community colleges, is holding steady over time. Public research universities are slowly increasing the share of out-of-state students, rising from 13 percent in 2002 to 19 percent in 2020. The two non-profit sectors have remained stable over this period, where the median non-profit bachelor's/master's institution had 35 percent of incoming students from out-of-state and the median non-profit research university had 50 percent.

#### FIGURE 5. Percentage of Domestic Students from Out-of-State by Sector, 2020

When compared to for-profit and non-profit sectors, public institutions tend to enroll smaller shares of out-of-state students. States differ considerably with respect to the proportion of incoming students enrolling from out-of-state.



Finally, Figure 5 shows the state-level variation in the share of incoming students from out-of-state. In the public sector, community colleges in nearly every state enroll fewer than 15 percent of incoming students from out-of-state. Similarly, public bachelor's/master's institutions and research universities in most states (including many large states like California, Florida, Illinois, New York, Ohio, and Texas) have fewer than 15 percent of their incoming class from out-of-state. To some extent, tuition reciprocity policies and out-of-state enrollment quotas likely play a role in explaining state-level variation in out-of-state enrollments. In the non-profit sector, several states have higher proportions of out-of-state students, illustrating the pattern found above where the market for out-of-state students is driven in large part by private non-profit institutions competing for a relatively small (and in some cases declining) number of students.<sup>22</sup> There is likely to be a high degree of variation within the sector and further research should explore these markets in much more detail.

## **Conclusions and Next Steps**

This brief provides baseline enrollment trends for out-of-state undergraduate students. While many public policy and research conversations focus on helping students "shop around" for college, this brief shows relatively few students cross state lines when attending college. The vast majority of students stay close to home (and stay in their home state) for college. Among the students who travel out-of-state for college, they tend to concentrate in public research universities or non-profit institutions.

There are several more ways researchers and policy analysts can explore the inter-state migration of students. For example, Minority Serving Institutions including Historically Black Colleges and Universities and Tribal Colleges and Universities likely draw students from far distances and across state/tribal boundaries. Similarly, states have tuition reciprocity agreements and enrollment quotas shaping how many students cross state lines for college. Further research can explore these issues in greater detail through the lens of "geography of opportunity" where place – and people's connection to it – significantly affect where students attend college.

For example, most colleges *do not* draw a large share of students from out-of-state and are likely to face different market pressures than those drawing from across the country. However, many research and policy conversations are framed around the notion that students shop far and wide for college. This framework also assumes all colleges have similar market power and resources to recruit and retain students regardless of where they live. The findings in this brief present a different view, where a small share of colleges (largely non-profit institutions and public research universities) enroll the lion's share of out-of-state students. Meanwhile, most colleges (particularly community colleges and public bachelor's/ master's) enroll large shares of students from within their own state and, as a result, operate in highly localized markets.

Public policy conversations may use the "geography of opportunity" framework to help design policies that acknowledge the vital role colleges play in meeting their local (or statewide) markets. The image of students traveling far away for college is a luxury relatively few experience and, as a result, public policies based on the assumption that students can "shop around" for college need to be updated to better reflect the lived experiences of today's college students as well as the colleges that serve them.<sup>23</sup>

## **Acknowledgements**

The Institute for College Access & Success (TICAS) is a trusted source of research, design, and advocacy for studentcentered public policies that promote affordability, accountability, and equity in higher education. To learn more about TICAS, visit ticas.org and follow us on Twitter and Instagram: @TICAS\_org.

Dr. Nick Hillman is the primary author of this brief. Dr. Hillman would like to sincerely thank Dr. Marshall Anthony Jr., the TICAS staff, and Dr. Roman Ruiz for thoughtful reviews and feedback on this brief. All errors or omissions are his alone.

## **Appendix A**

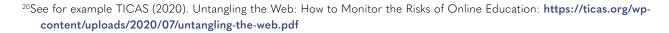
Number of domestic incoming students entering college as first-time degree/certificate-seeking undergraduates by state and residency status, 2020.

	In-state	Out-of- State	Total	%Out- of-State
AK	2,025	185	2,210	8%
AL	29,957	13,020	42,977	30%
AR	18,253	5,461	23,714	23%
AZ	36,471	23,316	59,787	39%
CA	295,137	34,835	329,972	11%
со	29,741	14,599	44,340	33%
ст	16,678	11,618	28,296	41%
DC	646	8,910	9,556	93%
DE	4,903	3,672	8,575	43%
FL	116,244	22,147	138,391	16%
GA	68,654	11,777	80,431	15%
ні	5,876	2,402	8,278	29%
IA	21,623	10,774	32,397	33%
ID	9,066	6,296	15,362	41%
IL	68,353	14,455	82,808	17%
IN	41,381	17,477	58,858	30%
ĸs	19,441	8,160	27,601	30%
KY	27,819	7,778	35,597	22%
LA	30,308	6,783	37,091	18%
MA	35,930	23,495	59,425	40%
MD	31,601	9,177	40,778	23%
ME	6,661	3,824	10,485	36%
MI	62,795	10,240	73,035	14%
MN	30,735	7,835	38,570	20%
мо	34,278	10,681	44,959	20%
MS	19,780	5,670	25,450	24 %
MT	4,778	3,035	7,813	39%
NC	66,239		81,228	18%
ND		14,989	-	48%
NE	4,132	3,879	8,011 1775 2	
	13,403	4,350	17,753	25%
NH	5,946	19,327	25,273	76%
NJ	50,089	5,281	55,370	10%
NM	12,206	2,456	14,662	17%
NV	13,810	1,843	15,653	12%
NY	125,862	38,519	164,381	23%
ОН	69,999	25,136	95,135	26%
OK	24,702	7,352	32,054	23%
OR	20,008	7,829	27,837	28%
PA	71,927	31,835	103,762	31%
RI	6,080	8,070	14,150	57%
SC	30,747	10,573	41,320	26%
SD	4,780	2,730	7,510	36%
TN	40,586	11,876	52,462	23%
тх	202,884	14,785	217,669	7%
UT	23,950	12,711	36,661	35%
VA	56,704	17,027	73,731	23%
VT	1011	4,272	6,138	70%
V I	1,866			
WA	1,866 35,074	7,456	42,530	18%
	-	7,456 11,895	42,530 47,225	18% 25%
WA	35,074			
WA WI	35,074 35,330	11,895	47,225	25%

## **End Notes**

- <sup>1</sup>See for example A. Daché-Gerbino (2018). College Desert and Oasis: A Critical Geographic Analysis of Local College Access. Journal of Diversity in Higher Education. 11(2), 97-116. https://psycnet.apa.org/doiLanding?doi=10.1037%2Fdhe0000050 and H. Jabbar, J. Sánchez, & E. Epstein (2017). The Urban Review. Getting From Here to There: The Role of Geography in Community College Students' Transfer Decisions. The Urban Review. 49, 746-776. https://link.springer.com/article/10.1007/ s11256-017-0420-2 and M. Reyes, A. Daché-Gerbino, C. Rios-Aguilar, M. González Canché, & R. Deil-Amen (2018). The "Geography of Opportunity" in Community Colleges: The Role of the Local Labor Market in Students' Decisions to Persist and Succeed. Community College Review. 47(1), https://journals.sagepub.com/doi/full/10.1177/0091552118818321
- <sup>2</sup>See for example N. Hillman & W. Boland (2018). Geography of College Choice. In Contemporary Issues in Higher Education https://www.taylorfrancis.com/chapters/edit/10.4324/9780429438127-2/geography-college-choice-nicholas-hillmanwilliam-casey-boland and R. Seltzer (2022). High-scoring Students Applying to Selective Colleges Drive up Applications. Higher Ed Dive https://www.highereddive.com/news/common-app-high-sat-private-school-application-increase/638459/ and C. Avery, J. Howell, & L. Page (2014). A Review of the Role of College Applications on Students' Postsecondary Outcomes. College Board Research Brief: https://files.eric.ed.gov/fulltext/ED556466.pdf
- <sup>3</sup>See Chetty, R.; Hendren, N.; Kline, P.; & Saez, E. (2014). Where is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States. The Quarterly Journal of Economics, 129(4), 1553-1623 https://academic. oup.com/qje/article/129/4/1553/1853754
- <sup>4</sup>See for example See for example M. Desmond & R. López Turley (2009). The Role of Familism in Explaining the Hispanic-White College Application Gap. Social Problems, 56(2), 311-334 https://academic.oup.com/socpro/article/56/2/311/1616228 and G. Crisp, C. Horn, M. Kuczynski, Q. Zhou, & E. Cook. (2019). Describing and Differentiating Four-Year Broad Access Institutions: An Empirical Typology. The Review of Higher Education, 42(4), http://doi.org/10.1353/rhe.2019.0069 and C. Orphan & K. McClure (2022). An Expanded Vision of the Value of Postsecondary Education: Regional Public Universities as Broadly Accessible Anchor Institutions. Change: The Magazine of Higher Learning, Vol. 54 https://doi.org/10.1080 /00091383.2022.2128013 and M. Harris & K. Holley (2016). Universities as Anchor Institutions: Economic and Social Potential for Urban Development. Higher Education: Handbook of Theory of Research, Vol. 31 https://link.springer.com/ chapter/10.1007/978-3-319-26829-3\_8
- <sup>5</sup>See for example K. McClure, C. Orphan, & G. Crisp (2021). Unlocking Opportunity: Toward a Counter-Narrative of Broadly Accessible Institutions. In Unlocking Opportunity Through Broadly Accessible Institutions https://doi. org/10.4324/9781003097686
- <sup>6</sup>See N. Hillman (2016). Geography of College Opportunity: The Case of Education Deserts. American Educational Research Journal. 53(4), https://journals.sagepub.com/doi/10.3102/0002831216653204 and R. López Turley (2009). College Proximity: Mapping Access to Opportunity. Sociology of Education. 82(2), https://journals.sagepub.com/ doi/10.1177/003804070908200202
- <sup>7</sup>Additionally, out-of-state students tend to concentrate in states that are adjacent to their home states. See for example Roman Ruiz (2019) "The Geography of College Choice" here: https://www.romanhighered.com/archive/2019/3/18/ dp9cqex96rwsrh0vnn0ffa16m54wnw
- <sup>8</sup>This analysis uses three IPEDS survey components: Fall Enrollment (EF); Admissions (ADM); and Institutional Characteristics (IC). For more detail of each component, see https://nces.ed.gov/ipeds/use-the-data/survey-components
- <sup>9</sup>This analysis uses the IPEDS variables "deggrant" to identify degree-granting institutions and "pset4flg" to identify federal Title IV financial aid participating institutions. It excludes "specialty" institutions that have a high concentration of degrees in a single field or set of related fields (e.g., health professions, technical professions, and arts & design) and small enrollment sizes.

- <sup>10</sup> For shorthand, I refer to these students as "incoming students" in this brief. This analysis uses the IPEDS variable "efres01" which includes all new first-time degree/certificate-seeking students; an alternative variable "efres02" is a subset of "efres01" that focuses on recent high school graduates.
- "The National Center for Education Statistics reports similar trends here: https://nces.ed.gov/ipeds/TrendGenerator/app/ trend-table/11/150?trending=column&rid=175
- <sup>12</sup>See for example R. Ruiz (2020). Going With the Flow: Following Student Out-Migration to College. https://www. romanhighered.com/archive/2020/11/29/out-migration-to-college
- <sup>13</sup>For examples see: B. Curs & O. Jaquette (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://journals.sagepub.com/ doi/10.3102/0162373717704719 Also see O. Jaquette & B. Curs (2015). Creating the Out-of-State University: Do Public Universities Increase Nonresident Freshman Enrollments in Response to Declining State Appropriations? Research in Higher Education, 56, 535-565. https://link.springer.com/article/10.1007/s11162-015-9362-2 and K. Salazar, O. Jaquette, C. Han (2021). Coming Soon to a Neighborhood Near You? Off-Campus Recruiting by Public Research Universities. American Educational Research Journal, 58(6) https://journals.sagepub.com/doi/abs/10.3102/00028312211001810
- <sup>14</sup>See for example M. González Canché (2017). The Heterogeneous Non-resident Student Body: Measuring the Effect of Out-Of-State Students' Home-State Wealth on Tuition and Fee Price Variations. Research in Higher Education, 58(2), 141-183. https://www.jstor.org/stable/26451497 and M. González Canché (2018). Geographical Network Analysis and Spatial Econometrics as Tools to Enhance Our Understanding of Student Migration Patterns and Benefits in the U.S. Higher Education Network. Review of Higher Education, 41(2), 169-216 https://muse.jhu.edu/article/679331
- <sup>15</sup>N. Hillman (2016). Geography of College Opportunity: The Case of Education Deserts. American Educational Research Journal, 53(4), 987-1021 https://www.jstor.org/stable/24751621 and N. Hillman (2017). Geospatial Analysis in Higher Education Research. Higher Education: Handbook of Theory and Research, Vol. 32. https://link.springer.com/ chapter/10.1007/978-3-319-48983-4\_11
- <sup>16</sup> See for example M. González Canché (2014) Localized Competition in the Non-Resident Student Market. Economics of Education Review, 43, 21-35: https://www.sciencedirect.com/science/article/abs/pii/S027277571400079X and Jaquette, O.; Curs, B.; & Posselt, J. (2016). Tuition Rich, Mission Poor: Nonresident Enrollment Growth and the Economic and Racial Composition of Public Research Universities. Journal of Higher Education, 87(5): https://www.tandfonline.com/doi/ abs/10.1080/00221546.2016.11777417
- <sup>17</sup>Studies of tuition reciprocity include, for example, S. DesJardins (1999). Simulating the Enrollment Effects of changes in the Tuition Reciprocity Agreement Between Minnesota and Wisconsin. Research in Higher Education, 40(6), https://www.jstor. org/stable/40196900 and S. Hemelt & D. Marcotte (2016). The Changing Landscape of Tuition and Enrollment in American Public Higher Education. Russell Sage Foundation Journal of the Social Sciences, 2(1) 42-68 https://doi.org/10.7758/ RSF.2016.2.1.03 and N. Chairassamee & O. Hean (2023). Financing and Enrollments in Public Universities. Applied Economics, https://www.tandfonline.com/doi/abs/10.1080/00036846.2023.2173362
   The residency measure in IPEDS is based on the student's home residency, not whether they were charged in-state or out-of-state tuition.
- <sup>18</sup>Since this analysis focuses on domestic migration, it excludes international students from both the numerator and denominator of this calculation. Additionally, given the analysis focuses on U.S. states, all analyses exclude U.S. territories. It does not use the "sector" variable from IPEDS, but instead is generated using the variable "control" and the 2018 Carnegie Classification with Tribal Colleges coded based on the variables "tribal" and "iclevel."
- <sup>19</sup>Community colleges primarily offer associate's degrees or lower. Non-profits that primarily offer associate's degrees or lower are included as "bachelor's/master's" (n=27). For more information, see American Council on Education's Carnegie Classification of Institutions of Higher Education https://carnegieclassifications.acenet.edu/carnegie-classification/ classification-methodology/basic-classification/



<sup>21</sup>See footnotes 1 through 6.

<sup>22</sup>See for example New England Board of Higher Education https://nebhe.org/newslink/from-the-high-schools-more-troublingdemography-news-for-new-england/

<sup>23</sup>For more information on the link between geography and college-going, see Ruiz, R. (2020). Spatial Preference and Spatial Choice: Class-Based Differences In How U.S. High School Students Choose College. University of Pennsylvania dissertation https://repository.upenn.edu/edissertations/3799/