MAPPING RURAL COLLEGES AND THEIR COMMUNITIES

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December 2021

Rural colleges and universities are vital assets to their local communities. They provide educational opportunities to people living nearby and they contribute to the overall economic and social wellbeing of their regions. These colleges – and the rural communities where they are located – have been the focus of national attention, as rural areas experienced some of the nation's most significant job loss and demographic shifts since the Great Recession.[1] Today, many rural areas are still affected by COVID-19 and its economic fallout, resulting in growing economic gaps between rural and non-rural communities.[2]

This report provides new insights into rural colleges and their communities. In addition to providing several updated demographic and economic indicators on rural areas (e.g., educational attainment levels, unemployment rates, migration rates) it provides new insights into rural college enrollment trends. For example, it finds steady enrollment declines among many rural community colleges and both public and non-profit Bachelors/Masters institutions. However, rural-located Doctoral universities have (at least until COVID-19) experienced steady enrollment gains. It also uses a novel dataset to identify branch campuses and "additional locations" of colleges that often go overlooked or undocumented in policy conversations and research studies. By identifying these locations, we provide a more comprehensive view of rural higher education and add valuable context to ongoing conversations about the future of rural communities and their colleges.

Rural places vary widely across the United States both in terms of their local demographic/economic contexts and the availability of colleges nearby. This report aims to help researchers and policymakers pinpoint these differences in order to inform, expand, and ultimately improve educational opportunities and outcomes in rural areas. It also provides a public and interactive data tool (mappingruralcolleges.wisc.edu) to explore, download, use, and generate new insights into rural communities and their colleges.

A Brief Overview Of The Geography Of College Opportunity

When deciding where to go to college, most students stay relatively close to home. In fact, most undergraduates attend college within just 50 miles of their permanent home address.[3] This is made possible by the extensive network of public community colleges and regional comprehensive universities many states have developed over the last several decades.[4] How-

ever, many rural places have no – or very few – colleges nearby and have been classified as "education deserts" due to the limited opportunities available.[5]

With limited college options nearby, people living in rural places often face a significant dilemma when considering postsecondary options. On one hand, they might consider moving away to college and – after earning a degree – find employment far away from home. On the other hand, they might decide to forego college altogether and pursue employment that does not require a college degree and is close to home.[6] Regardless of the reasons for staying close to home or going far away, researchers have found that students from rural areas tend to have similar college-going aspirations to non-rural students yet rural students tend to have lower college-going rates.[7] Researchers are finding that rural high school schools tend to have unequal resources and unequal academic opportunities than non-rural schools, making it difficult for rural students to transition into college.[8] Researchers are also finding that "rural students" is not a monolithic group; for example, rural students of color and rural low-income students sometimes face greater challenges in the college-going process than white and more affluent rural peers. [9]

In addition to the roadblocks and inequalities that exist in rural educational opportunity, several studies have examined the assets rural students bring to higher education. For example, researchers have characterized rural students as having extensive social capital based on their strong connections to community and family.[10] Rural students bring great strengths and diversity to colleges, serving to enrich the experiences of all on campus. Researchers and policymakers are exploring which colleges tend to reciprocate this contribution and serve rural students well.[11]

Just as rural students bring assets to higher education, colleges located in rural areas are often major assets to their communities. Rural colleges are "anchor" institutions that play a central role in their region's economic and social wellbeing.[12] They educate many of the teachers, farmers, business owners, healthcare staff, and other workers that enhance regional quality of life. And they do so at a relatively lower price than other colleges and universities because many rural institutions are public and broadly accessible to all who apply.[13] Just like rural students, rural colleges are not a monolithic group – they include a wide array of institutional types with varying missions and sizes. Rural communities are home to religiously affiliated non-profit private colleges, Historically Black Colleges and Universities, Hispanic Serving Institutions, and Tribal Colleges. [14]

Rural communities have undergone significant changes over the past several decades. For example, rural places generally faced greater rates of net "out-migration" than urban or suburban places.[15] This means people from rural communities, particularly those with a college education, are moving into more urban places and staying there. Although rural places tend to have large populations of non-Hispanic white residents, this is changing as well. Rural places are becoming increasingly diverse, both in terms of race/ethnicity and immigration status.[16] The population in rural communities is also aging: the median age in rural places is higher than urban or suburban places.[17] Rural communities are likely to have a greater and rapidly changing need for basic health care and social services as their populations age.[18] This is especially true in the wake of COVID-19, during which rural communities have faced disproportionate and negative effects that have seriously strained their health care systems.[19]

Taking what we know of rural communities and the postsecondary institution that operate in them, we aim to contribute to these conversations in four key ways. First, we offer our own definition of rurality that captures socio-economic community interactions. Second, we use new data to update our understanding of the demographics of rural communities and how these characteristics interact with postsecondary

landscapes. Third, we examine enrollment trends of rural-located postsecondary institutions since the Great Recession. And fourth, we use a novel dataset to generate new insights into rural postsecondary opportunity. Through these contributions, we hope to not just update existing conversations with new data, but broaden how rural postsecondary education is viewed and spark new questions (and answers) for researchers and policymakers alike.

Defining "Rural" Areas

Rural-Urban Continuum Codes

The U.S. Department of Agriculture's Economic Research Service (ERS) classifies each of the 3,142 counties in the U.S. into one of nine rurality categories, shown in Table 1. These Rural-Urban Continuum Codes are based on whether a county is located in a metropolitan or non-metropolitan area, using the Office of Management and Budget's 2013 statistical definitions.[20] After differentiating counties by metropolitan/non-metropolitan areas, Rural-Urban Continuum Codes define counties by their population size and proximity to urban areas.[21] For this report, "rural" counties are those with codes of four or higher, representing all non-metropolitan counties in the United States.

Table 1: Rural-Urban Continuum Codes

Metropolitan:	
1	Counties in metro areas of 1 million population or more
2	Counties in metro areas of 250,000 to 1 million population
3	Counties in metro areas of fewer than 250,000 population
Non-metropolitan:	
4	Urban population of 20,000 or more, adjacent to a metro area
5	Urban population of 20,000 or more, not adjacent to a metro area
6	Urban population of 2,500 to 19,999, adjacent to a metro area
7	Urban population of 2,500 to 19,999, not adjacent to a metro area
8	Completely rural or less than 2,500 urban population, adjacent to a metro area
9	Completely rural or less than 2,500 urban population, not adjacent to a metro area

Rurality has many dimensions and can be understood through multiple measures including proximity to metropolitan areas (as these codes measure), population size/density, land-use and natural resources, types of local industries, and several other cultural, economic, environmental, and historical features that shape rural identities.[22] Researchers have long debated what counts as a rural place and Rural-Urban Continuum Codes are commonly applied and useful measures for identifying rural counties.[23] As described in more detail below, county-level data can also be clustered into commuting zones and even linked to other county-level datasets to help classify and measure the "rurality" of local areas and describe their socio-economic profile.

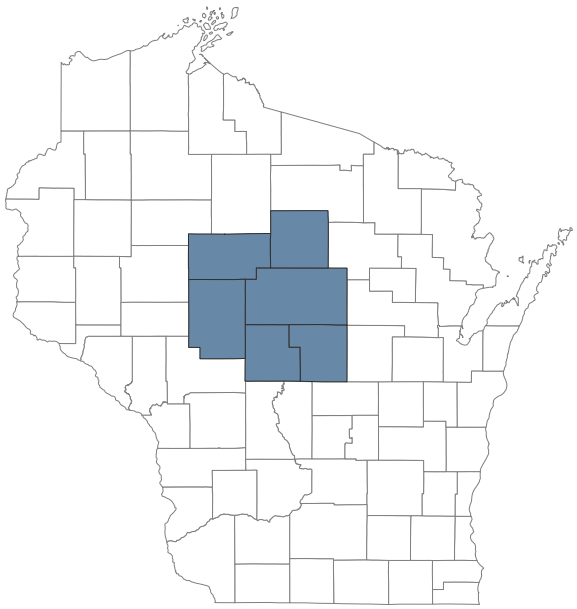
Commuting Zones

Each of the 3,142 counties in the United States clusters into one of 625 distinct "commuting zones."[24] Recognizing that

people often cross county lines to live, work, and commute, the U.S. Department of Agriculture's ERS used U.S. Census Bureau's journey-to-work data to measure the integration of social and economic activity between counties.[25] By clustering counties together in meaningful ways, these "commuting zones" can be a useful measure of local labor markets.[26] They can also serve as a useful geographic measure for determining which colleges are nearby or at least within typical commuting distance.

The average commuting zone in the United States consists of five counties. Atlanta, Georgia, has the largest number of counties in its commuting zone (20) while there are several commuting zones that only have one county. Figure 1 illustrates how six counties cluster together to form a commuting zone around the area of Wausau, Wisconsin.

Figure 1: Commuting Zone Example (Wausau, Wisconsin)



Rurality of Commuting Zones

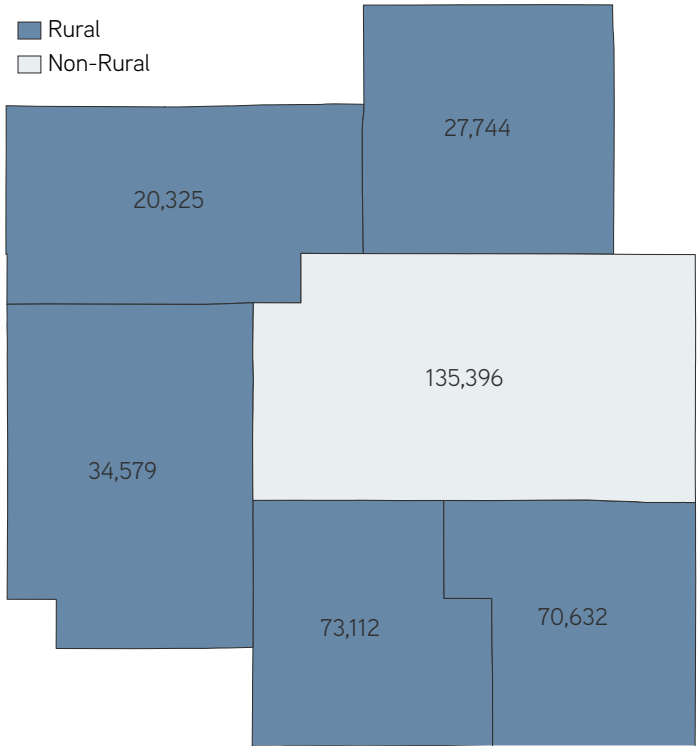
To measure the rurality of each commuting zone, we use data from the U.S. Census Bureau's American Community Survey (ACS) and Rural-Urban Continuum Codes from the ERS.[27] With these data, we create a population-weighted measure that first sums the total population of each commuting zone living in rural counties and divides that value by the commuting zone's total population:

$$\frac{\text{commuting zone rural population}}{\text{commuting zone total population}} = \text{commuting zone rurality}$$

Building on the Wausau, Wisconsin example, Figure 2 shows how this measure captures the rurality of any given commuting zone. Here we can see five of this six-county commuting zone are coded as "rural." Accordingly, we sum the total population of these five rural counties into the numerator and divide by the commuting zone's total population, 361,788, resulting in a commuting zone rurality of 63%.

$$\frac{226{,}392}{361{,}788} = 63\%$$

Figure 2: Calculating Commuting Zone Rurality (Wausau, Wisconsin)

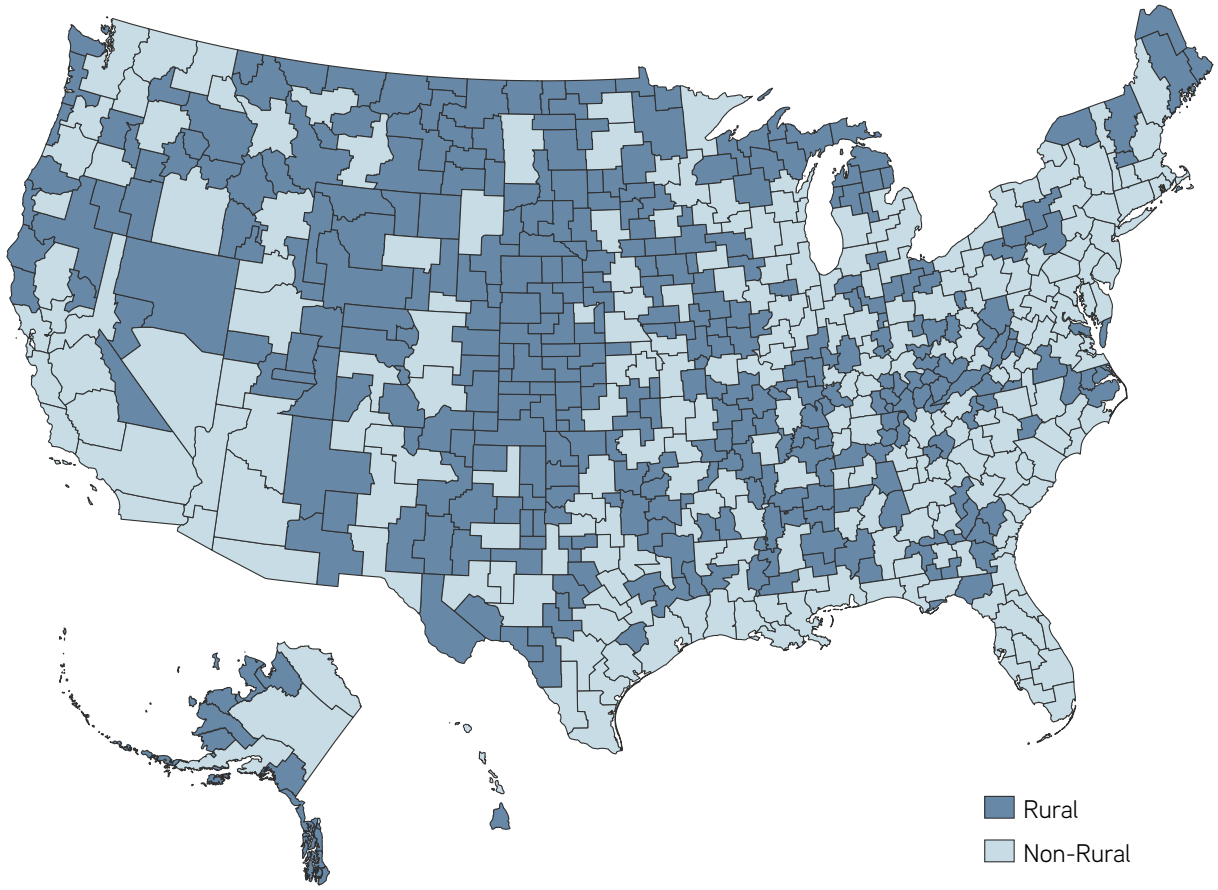


Defining Rural Commuting Zones

This report defines "rural" commuting zones as those with rurality rates of 50% or higher. In these places, the majority of people live in rural counties. (Those interested in exploring different rurality thresholds can do so though our interactive tool). Using the 50% threshold, 364 of the nation's 625 commuting zones (58%) are rural. As described below, these rural places account for approximately 32 million people. They differ from non-rural commuting zones on several key metrics, including educational attainment, racial/ethnic make-up, and total income per capita, as explored below.

Figure 3: Rural Commuting Zones in the United States, 2019[28]

Demographics of Rural Commuting Zones



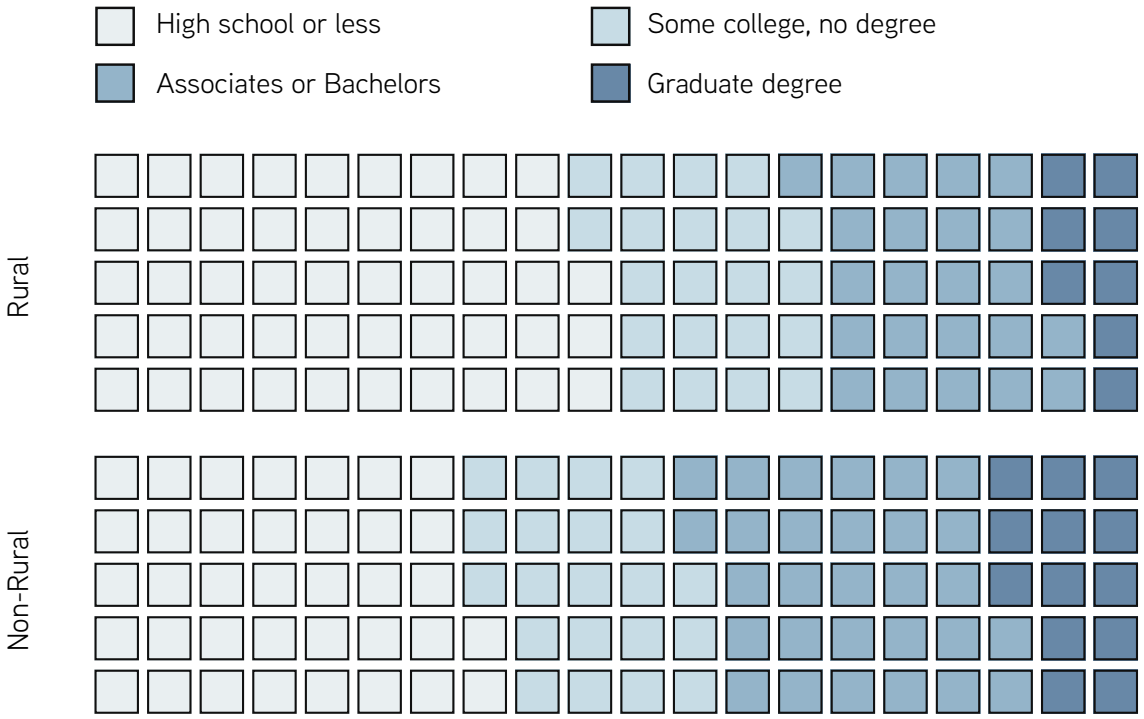
This section uses data from the U.S. Census Bureau's ACS and Mobility Surveys to explore demographic shifts in rural places. Unless otherwise noted, these figures use the most recent year of available data.[29] Trends from 2005 through 2019 are reported in Appendix A.

Educational Attainment

Figure 4 shows educational attainment for the population age 25 and older using ACS data. Each square represents 1% of the population and each color gradient represents a different educational attainment level. Approximately 30%

of adults in rural commuting zones have at least an Associates degree or higher, compared to 42% in non-rural commuting zones. Appendix A shows that this gap has slowly grown over time. One of the more important disparities shown in Figure 4 is that rural commuting zones have a higher rate of individuals who have not attended college at all (48% versus 37%), possibly indicating opportunity gaps driven by education deserts.[30]

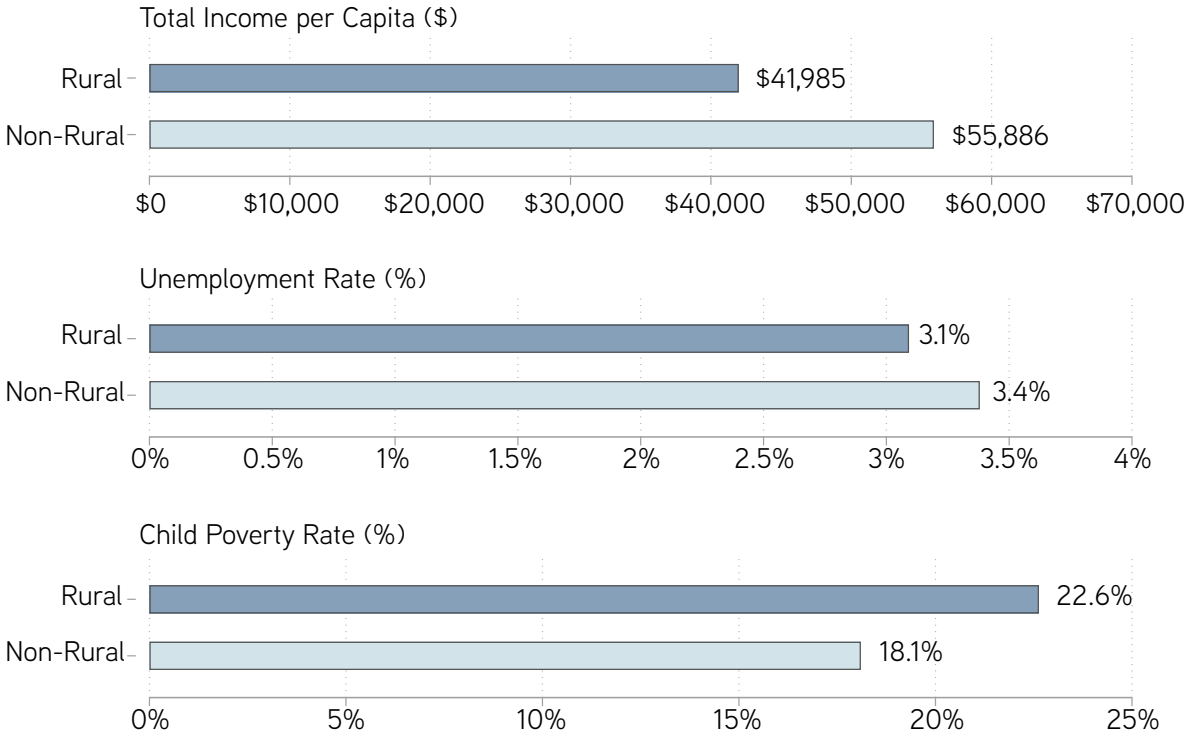
Figure 4: Educational Attainment by Rurality, 2019



Unemployment, Poverty, and Income

Figure 5 shows how rural and non-rural commuting zones differ on key indicators of economic wellbeing. In addition to unemployment and child poverty rates from ACS, this figure includes an inflation-adjusted measure of per-capita income based on the U.S. Bureau of Economic Analysis' Local Area Personal Income estimates.[31] While unemployment rates in rural and non-rural commuting zones are similar, child poverty rates tend to be higher in rural commuting zones. Rural places also have lower per-capita income than non-rural places, which is possibly related to lower educational attainment rates in rural commuting zones.[32]

Figure 5: Trends in Unemployment, Poverty, and Income by Rurality, 2019

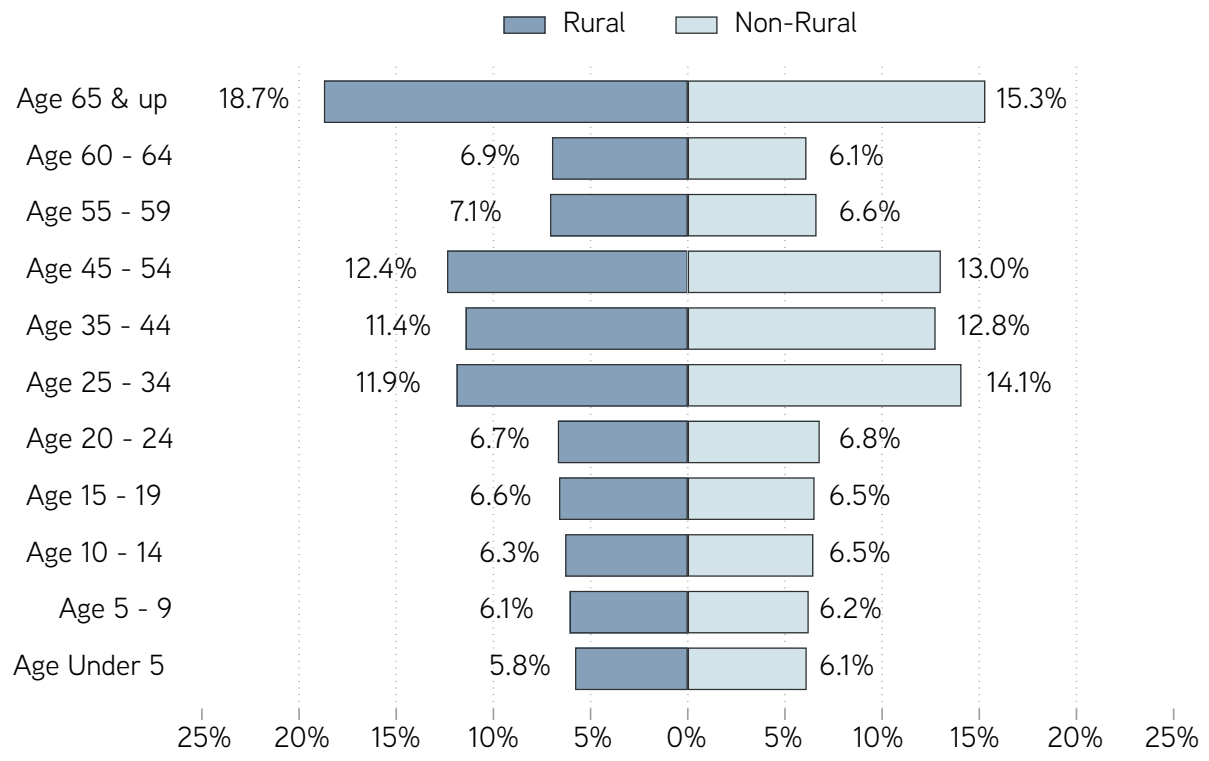


Note: Income is inflation-adjusted to 2019 using the Consumer Price Index.

Age Distribution

Figure 6 shows the age distribution of rural and non-rural areas. Approximately 28% of the population in non-rural commuting zones is 55 or older, compared to 33% in rural commuting zones. In contrast, rural commuting zones have a smaller share of working age adults 25-34. Regardless of the factors behind these differences, colleges located in rural places are likely to have a local population that is older than non-rural places and likely face unique opportunities and challenges related to recruiting and educating working age adults.

Figure 6: Age Distribution by Rurality, 2019

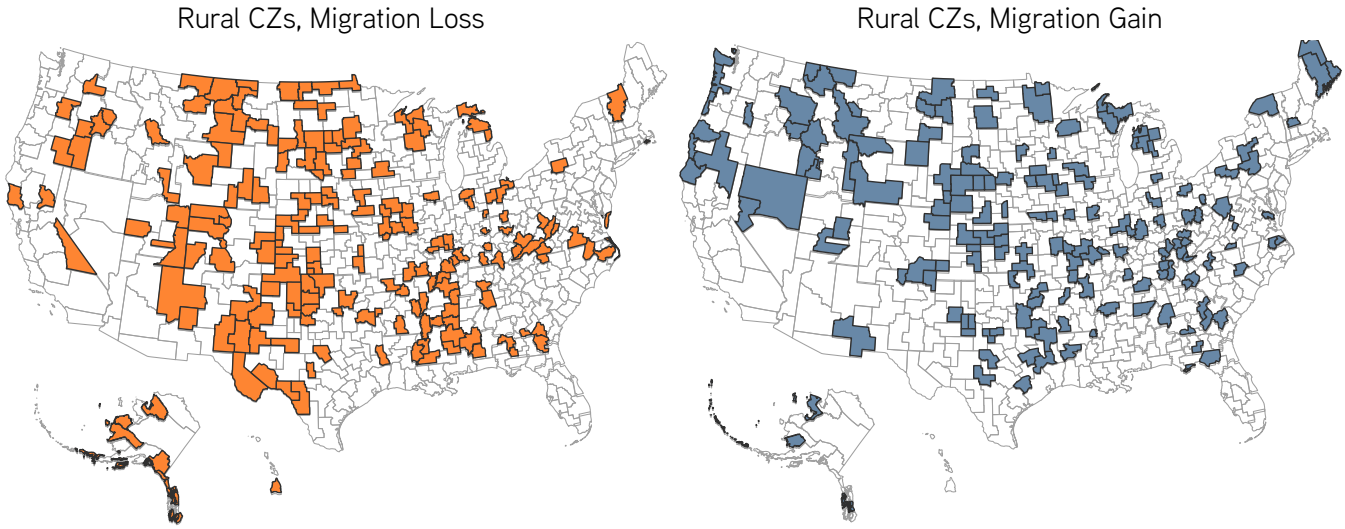


Moving and Migration

Nationwide, domestic migration (e.g., moving from one county or state to another) has slowed over time. The share of the population moving, particularly moving long distances, is at its lowest point in recorded history.[33] Using county-to-county migration flow tables from the U.S. Census, we calculate the net migration of each commuting zone by subtracting the number of people who moved into a commuting zone from the number moving out.[34] To standardize this number, we divide each commuting zone's net migration by the commuting zone's total population to calculate a net migration rate. For example, a commuting zone with a -2.0% net migration rate indicates it lost 2.0% of its population after accounting for total in- and out-migration and dividing by the total commuting zone population.[35]

Figure 7 shows rural commuting zones by net migration rate. Those with positive rates (i.e., growing) are blue and those with negative rates (i.e., shrinking) are orange. Among the 364 rural commuting zones, 195 have negative migration rates while 169 have positive rates. The average rate for rural commuting zones who have a net loss is -1.5%, while the average rate for rural commuting zones with a net gain is 1.2%. While it is true that there are more rural commuting zones losing population than gaining, these changes are relatively small and are likely a function of declining domestic migration overall.

Figure 7: Net Migration in Rural Commuting Zones, 2019



Despite the small average gains or losses among rural commuting zones, the distribution of migration shows some outliers. Figure 8 shows the number of rural commuting zones according to their net migration rate. We do not detect any clear or systematic patterns in this Figure because most of these zones are clustered around zero. (see Figure 8 below). Some of the commuting zones experiencing the greatest net migration loss are found primarily in three regions of the United States: the plains (e.g., Montana, South Dakota, and North Dakota), the Southwest (e.g., New Mexico and western parts of Texas), and parts of Alaska. Commuting zones experiencing the greatest growth tend to be along the Eastern and Western coastal regions, though further research is necessary to explore these patterns in depth.

Figure 8: Distribution of Net Migration in Rural Commuting Zones, 2019

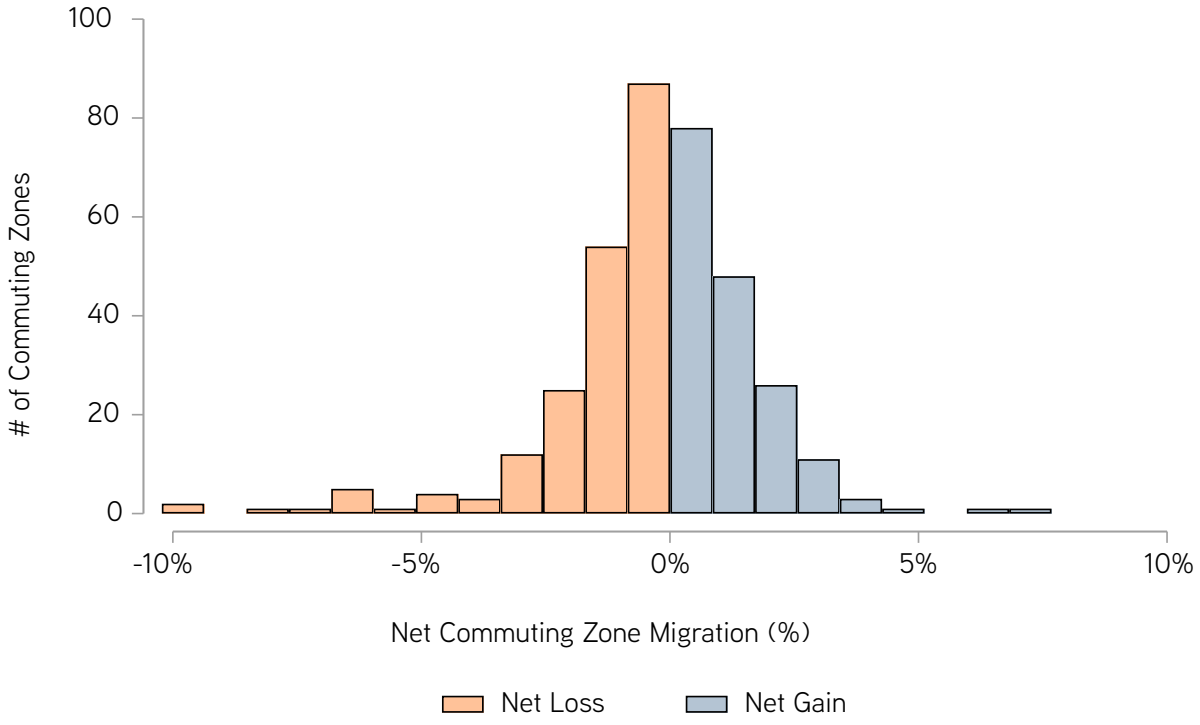
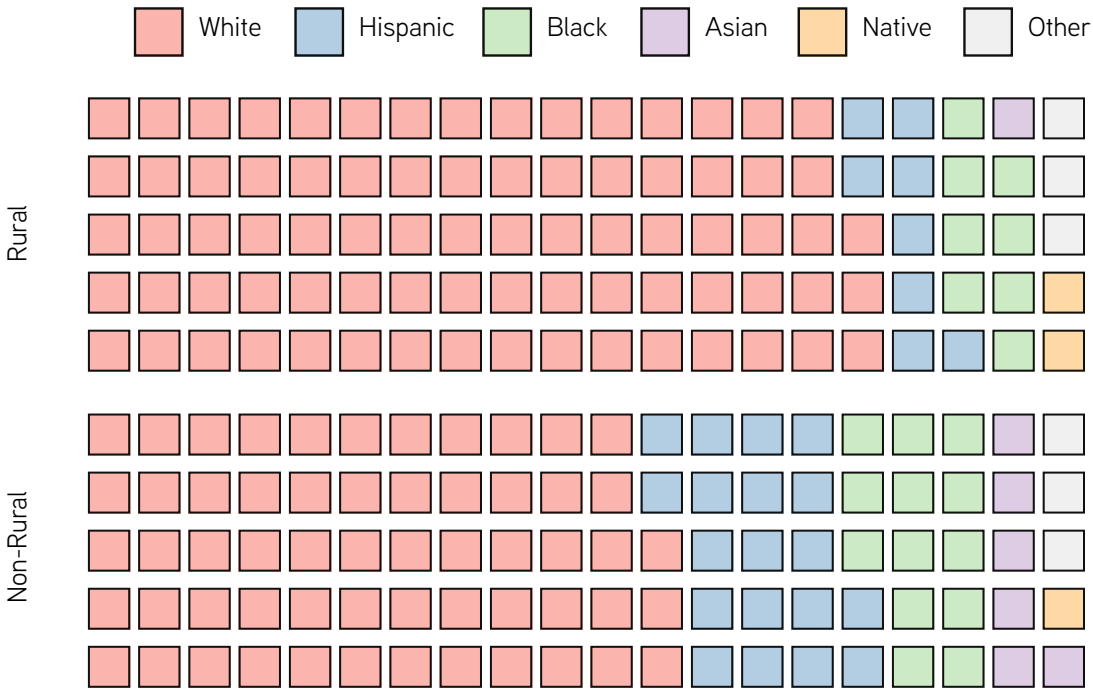


Figure 9 displays 100 squares, where each square represents one person or 1% of the population. It shows that rural commuting zones tend to have larger proportions of non-Hispanic populations than non-rural commuting zones (93% compared to 81%). Additionally, white non-Hispanic populations tend to make up the majority in both rural and non-rural commuting zones, though the difference in proportion is notable. Among rural commuting zones, white non-Hispanic residents make up more than three quarters of the total population, while in non-rural commuting zones they represent just over half (59%). Figure 9 suggests that the narrative of rural commuting zones being homogenous in terms of race and ethnicity holds much less truth than sometimes portrayed.[36]

For example, nearly a quarter of the rural population identifies as a race or ethnicity other than white non-Hispanic. Colleges located in these places are likely to serve an increasingly diverse array of students as these demographics change over time. Appendix A shows the change in racial/ethnic composition over time.[37] Overall, the Hispanic population has grown and is the fastest-growing ethnic group in both rural and non-rural places. The growth in rural Hispanic population represents a 30% increase between 2005-09 and 2015-2019, which outpaces the 18% growth in non-rural commuting zones.

Figure 9: Race and Ethnicity by Rurality, 2019



Summary

Most commuting zones (58%) in the United States are rural. Rural commuting zones differ from their non-rural counterparts in important demographic and economic characteristics. Compared to non-rural commuting zones, rural com-

muting zones tend to have lower educational attainment, lower income per capita, and higher child poverty. The racial and ethnic composition of rural commuting zones is also different, consisting of higher shares of white non-Hispanic and Native American residents. There are also more rural commuting zones losing population due to outmigration than rural commuting zones with net positive migration. Pushing back on the notion that rural America is "hollowing out,"[38] however, the magnitude of net migration rates in either direction is quite small. Insights into the character of these rural commuting zones, as well as how they compare to their non-rural peers, help inform analyses about the rural postsecondary institutions that inhabit and participate in these communities.

College Enrollment Trends in Rural Commuting Zones

Considering that colleges tend to draw students from their local geographic areas, those located in rural areas are acutely affected by local demographic changes. For example, some researchers warn about the looming "enrollment cliff" in higher education with particular concern about declining enrollment in rural postsecondary institutions.[39] The following analysis brings new data to bear on these conversations, highlighting enrollment trends by sector and various student characteristics.

This analysis uses the U.S. Department of Education's Integrated Postsecondary Education Data System's (IPEDS) 12-month enrollment data to measure the total headcount of undergraduate students enrolled during the academic year. It uses the basic Carnegie Classification and institutional control data to identify public, non-profit, and for-profit colleges at three levels of Carnegie Class: Associates (two-year or community colleges); Bachelors/Masters (four-year institutions that predominantly issue Bachelors or Masters degrees); and Doctoral (research-intensive institutions that primarily issue Doctorates). We have restricted the sample to institutions located in the U.S. and in operation between 2005 and 2019.

Profile of Rural-Located Colleges

Table 2 shows the number of IPEDS institutions and the total undergraduate 12-month headcount enrollment disaggregated by Carnegie Classification and commuting zone rurality.[40] It shows that among the 1.6 million students enrolled in rural-located institutions, 86% are in the public sector. Public associate's-granting institutions, the largest sector by enrollment, constitute more than one-third (39%) of all rural postsecondary enrollment and a similar share of non-rural enrollment (40%).

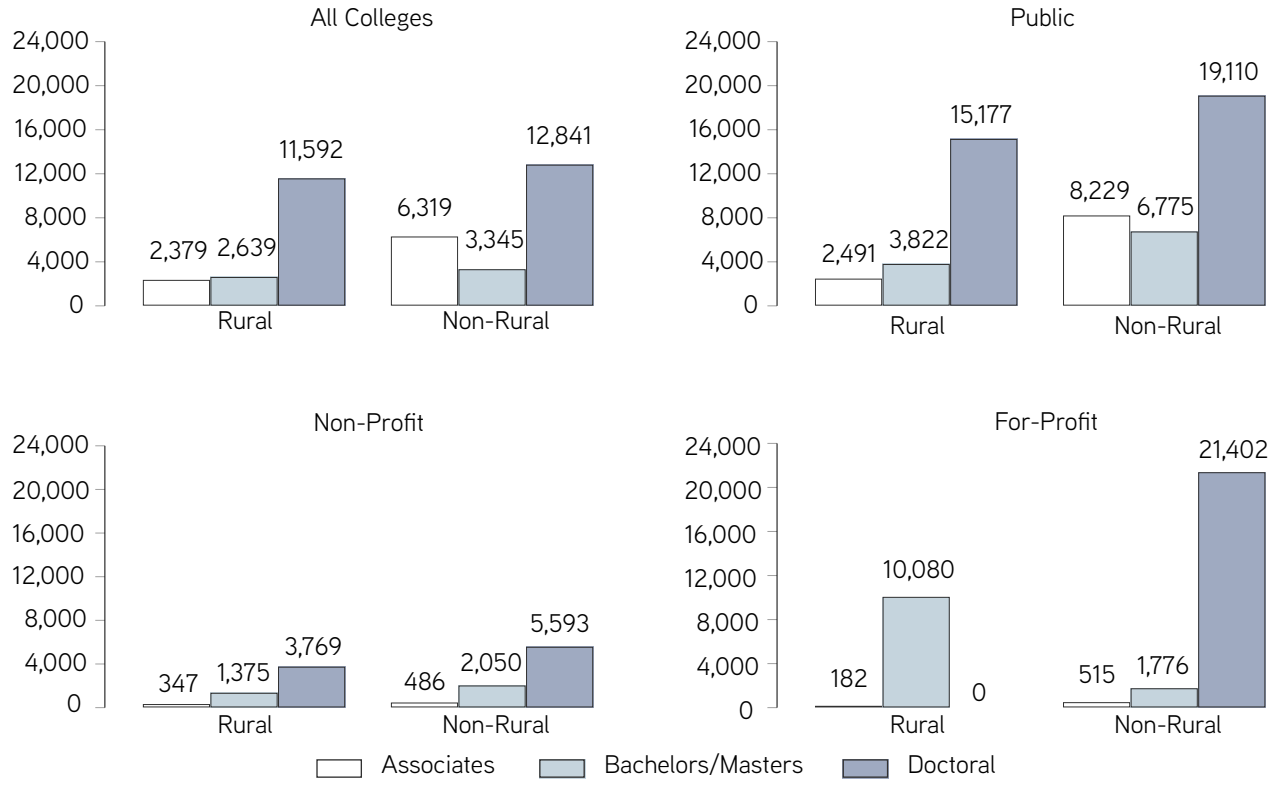
Table 2:Total Headcount Enrollment in 2019 by Carnegie Class and Rurality[41]

	Rural		Non-Rural	
	# of Colleges	Total Undergraduate Enrollment	# of Colleges	Total Undergraduate Enrollment
Public				
Associates	250	622,801	709	5,834,643
Bachelors/Masters	102	389,807	315	2,134,056
Doctoral	24	364,258	190	3,630,987
Non-profit				
Associates	3	1,041	73	35,442
Bachelors/Masters	113	155,363	685	1,404,375
Doctoral	11	41,456	175	978,828
For-profit				
Associates	10	1,822	160	82,384
Bachelors/Masters	3	30,239	123	218,416
Doctoral	-	-	9	192,618
Total	**516**	**1,606,787**	**2,439**	**14,511,749**

Figure 10 expands upon this profile by showing the average undergraduate headcount enrollment for 2019 across Carnegie groups. Most of the rural-located public Associates and Bachelors/Masters institutions are relatively small, enrolling an average of approximately 2,500 to 4,000 students. In non-rural areas, public Associates and Bachelors/Masters institutions are much larger, averaging between approximately 6,800 and 8,200 students.

In both rural and non-rural places, Doctoral institutions tend to be the largest, and in both places non-profit institutions are relatively small.

Figure 10: Average Undergraduate Enrollment in 2019 by Carnegie Class, Institutional Control, and Rurality



Using preliminary Fall 2020 enrollment data, we examine how these rural-located colleges fared early in the COVID-19 pandemic compared to their non-rural peers. Figure 11 shows the percent change in Fall enrollment from 2019 to 2020 by Carnegie Class and Institutional control. There was a general decline in enrollment in 2020, except among rural Associates colleges. The top-left panel shows rural Associates colleges have increased their enrollments during COVID-19. However, this growth is not coming from the public sector (top-right panel) but instead from the private non-profit (bottom-left) and for-profit (bottom-right) sectors. Public Associates institutions, regardless of rurality, saw a decline in enrollment of approximately 10%. Doctoral institutions, however, have weathered the pandemic effects differently, with public rural institutions experiencing a steeper decline in enrollment compared to their non-rural peers.[42]

Figure 11: Percent Change in Fall Enrollment Between Fall 2019 and Fall 2020 by Carnegie Class, Institutional Control, and Rurality

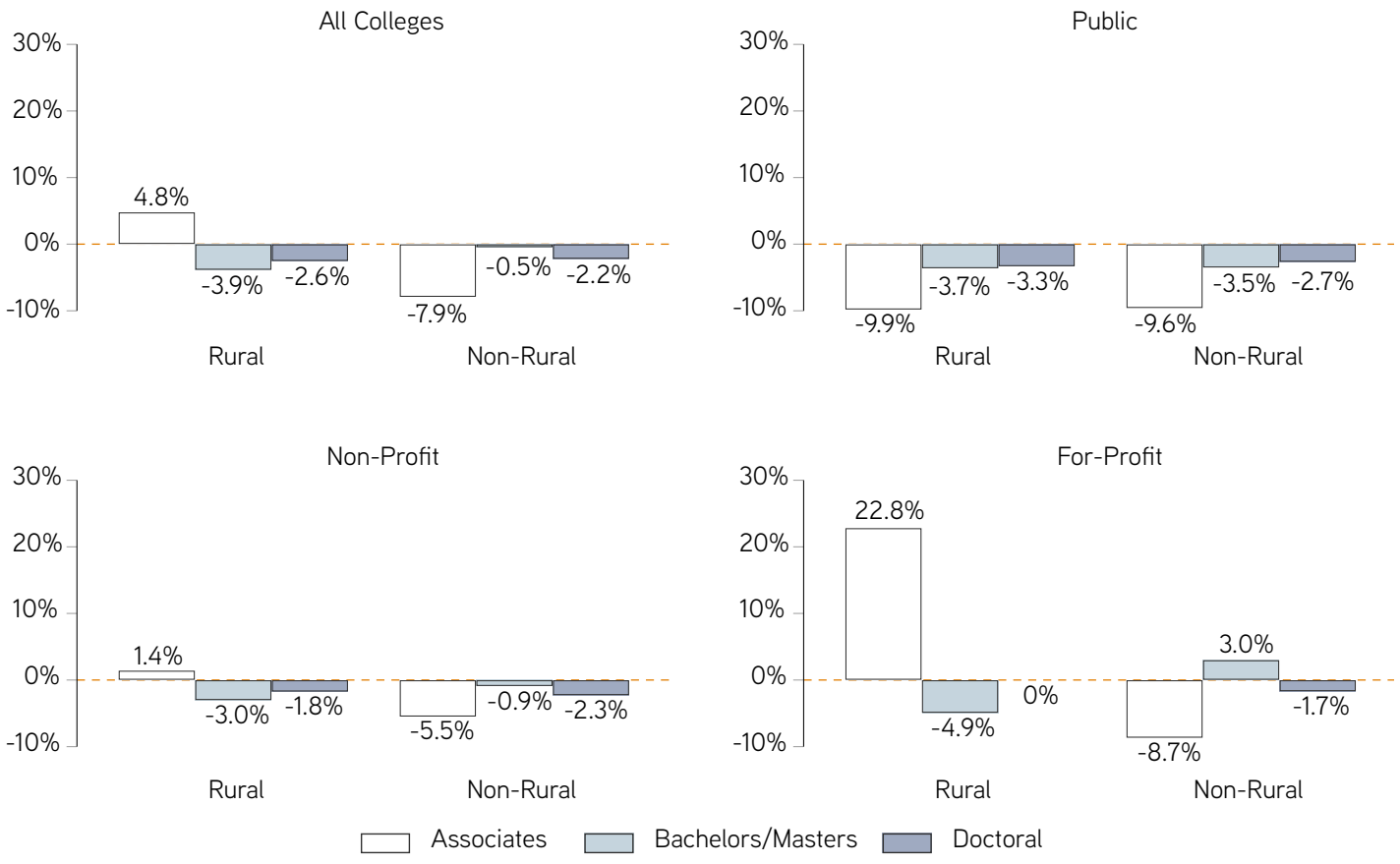


Figure 12 completes the profile of rural-located colleges by outlining the admission rate among the Carnegie groups. For these rates, we draw from IPEDS and recode institutions with open admissions policies as 100%. Across both rural and non-rural places, Associates institutions have higher admission rates than Bachelors/Masters and Doctoral, remaining close to 100% for both public and for-profit sectors. Non-profit institutions are more selective than their public peers across rurality and Carnegie Class, though the difference between public and non-profit rural institutions is particularly pronounced. Among Bachelors/Masters institutions, rural non-profits have a 13.2 percentage point

lower admission rate than their rural public peers, compared to the 6.1 percentage point difference between non-rural public and non-profit Bachelors/Masters institutions. This difference speaks to the importance of rural-located regional public universities in serving their communities, as the non-profit options in rural commuting zones are likely not broadly accessible.

Figure 12: 2019 Admission Rate by Carnegie Class, Institutional Control, and Rurality

Cross-sectional data like those outlined in the previous figures illustrate that differences in enrollment profiles, responses to external enrollment shocks, and admission selectivity exist across rural categories and Carnegie Classification. The next section builds on these findings by exploring enrollment trends over time disaggregated by institutional characteristics and locale. Doing so provides a historical context into the different forces at play in determining a postsecondary landscape and the responses of different types of rural-located colleges.

Enrollment Trends by Carnegie Class

Figure 13 shows the cumulative change in undergraduate 12-month headcount enrollment, where the vertical axis scale is uniform across all groups except for-profits. As documented elsewhere, enrollments surged among public Associates and for-profit institutions during the Great Recession.[43] Figure 13 shows that surge has subsided, and enrollments are now approximately at or below their pre-Recession levels for both rural and non-rural community

colleges. Aside from public Associates, only non-rural colleges in the for-profit sector have returned to those levels. Figure 13 also shows how public four-year (Bachelors/Masters and Doctoral) and non-profit institutions located in rural commuting zones have started to decline in enrollment while non-rural colleges in have either grown or plateaued. Similarly, for-profit colleges located in rural commuting zones doubled in enrollment during the Great Recession and have been experiencing steady declines in subsequent years.

Figure 13: Cumulative Change in Enrollment by Rurality and Institutional Sector (2005-2019)

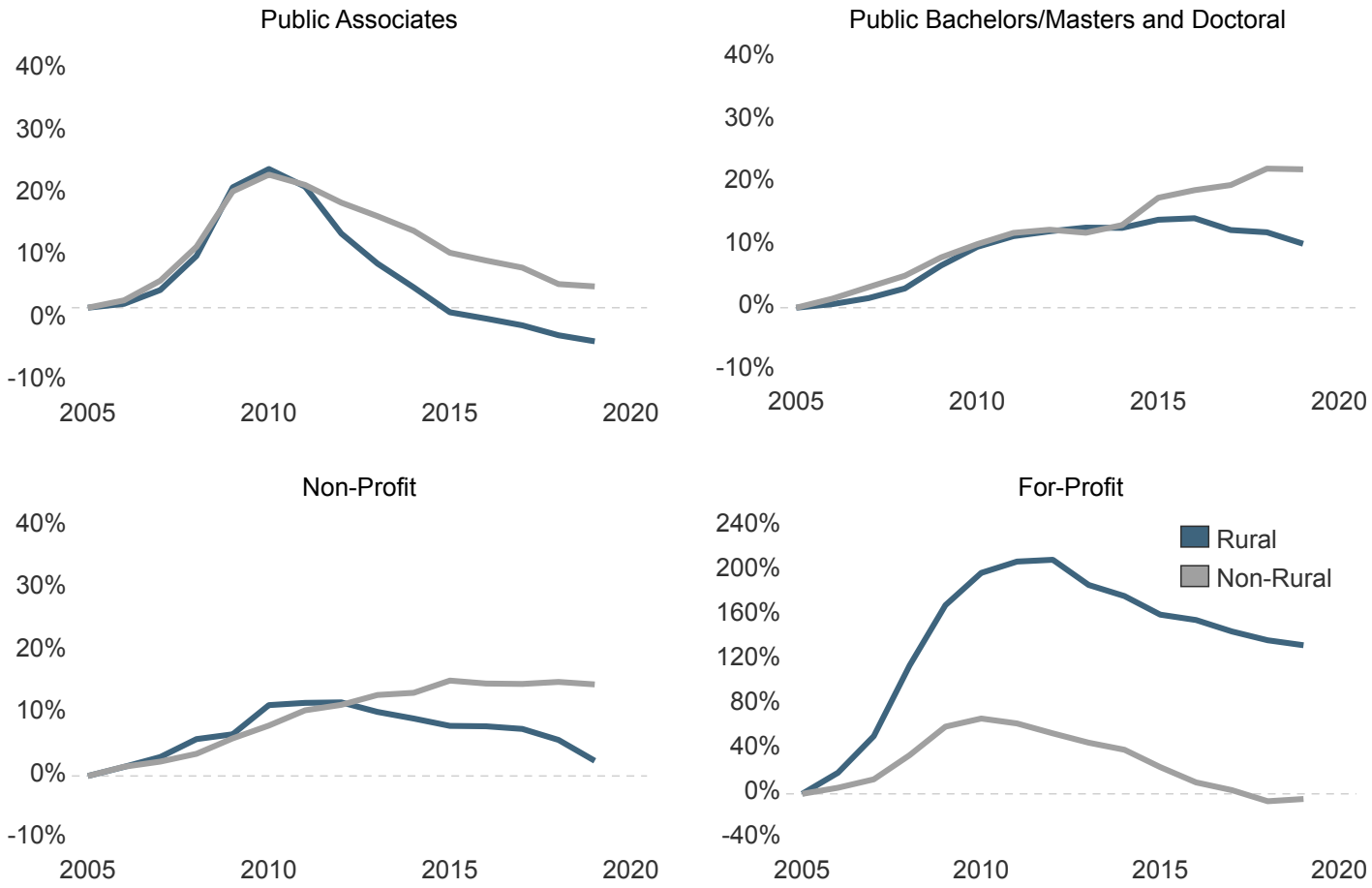
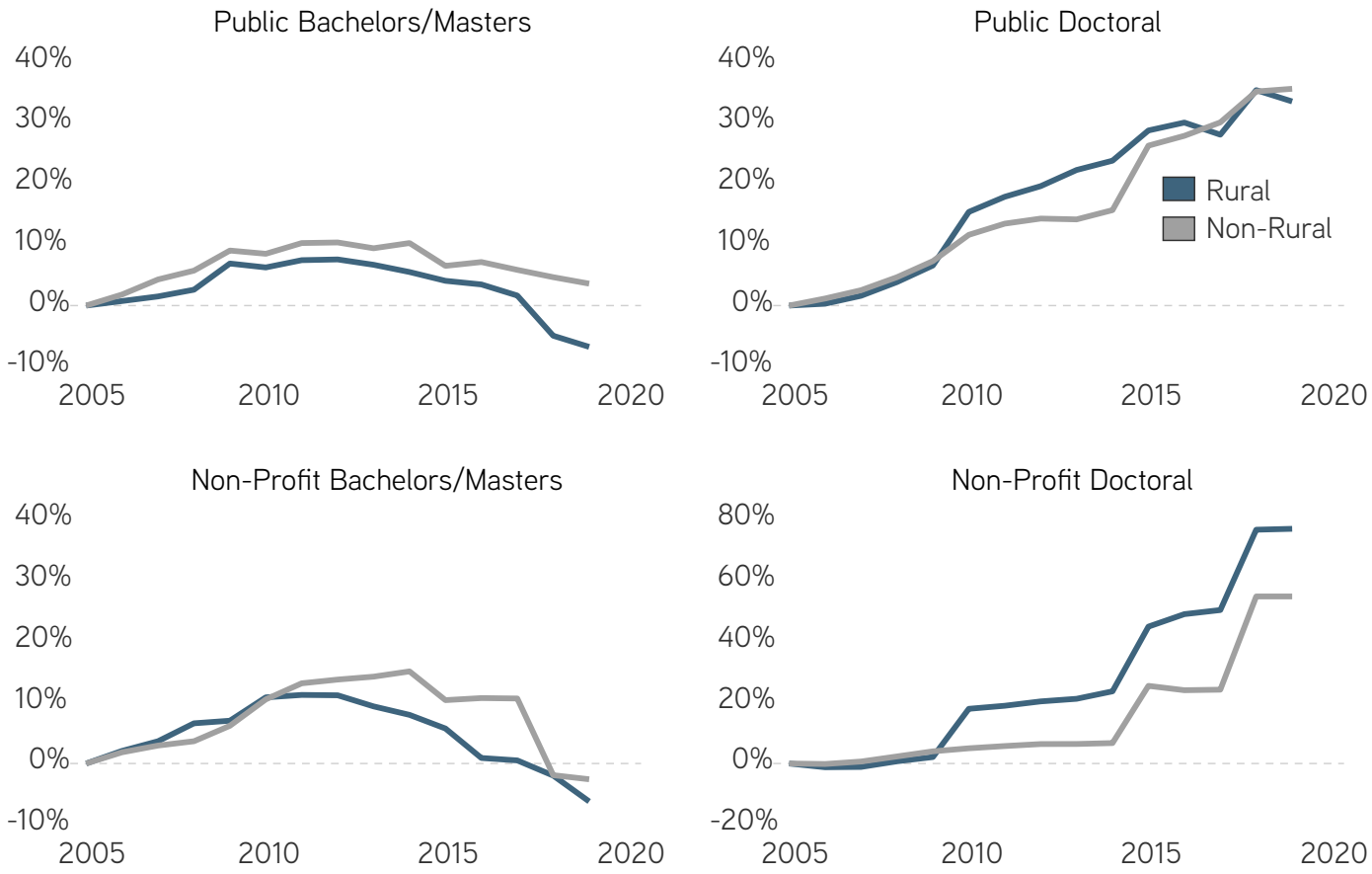


Figure 14 further disaggregates the enrollment trends among four-year institutions. The two charts on the left show how Bachelors/Masters institutions have been experiencing enrollment declines as far back as 2015, with rural Bachelors/Masters institutions now enrolling fewer students than before the Great Recession (top-left figure). Among rural public Bachelors/Masters institutions, enrollments have fallen nearly 5% below their 2005 level. Meanwhile, the chart on the right show how Doctoral institutions have been largely insulated from these enrollment declines – in fact, they have experienced sustained and relatively uninterrupted growth in enrollment across sector and rurality. In the public sector (top-right) rural Doctoral institutions have kept pace with non-rural Doctoral institutions, while among non-profits (bottom-right) rural institutions have outpaced their non-rural peers in growth.

Given the importance of public Bachelors/Masters institutions, often acting as "anchors" in their communities, these declines signal future difficulties for rural communities in terms of public infrastructure and workforce development.[44] Additionally, this chart helps show that not all colleges have been (or will be) affected by the looming enrollment "cliff" and rural Bachelors/Masters institutions are likely to be most affected by these shifts. Given the importance of being broadly accessible to serve local communities, these enrollment trends raise concerns about disparities in postsecondary opportunity.[45]

Figure 14: Cumulative Change in Enrollment Among Public and Non-Profit Four-Years, by Rurality and Carnegie Classification (2005-2019)



Lastly, Table 3 disaggregates commuting zones by the types of colleges located in rural and non-rural places. In rural commuting zones, there are 516 institutions (according to IPEDS) and most (250) are Public Associates institutions. This table also shows the average size and rurality of commuting zones among zones that contain institutions. Rural commuting zones that contain a public Associates institution tend to be more rural (93%) than rural commuting zones

that contain public Doctoral institutions (85%). This trend holds across institutional controls and among non-rural commuting zones, illustrating pockets of rurality (e.g., 3% to 12% rural). This table also shows there is, on average, 0.7 rural public Associates institutions for every rural commuting zone. The fact that these measures are less than one indicates that there are several rural commuting zones with no institution of that type whatsoever. Comparatively, there are 2.7 public Associates institutions per "non-rural" commuting zone. If students intend or need to remain close to home while pursuing postsecondary education, those in rural commuting zones have a substantially smaller college market than in non-rural places.

Table 3: Number of Rural-Located Colleges by Commuting Zones (CZ), 2019

	Rural				Non-rural			
	# of colleges	Colleges per CZ[46]	Avg. CZ pop. (1k)[47]	Avg. CZ rurality	# of colleges	Colleges per CZ	Avg. CZ pop. (1k)	Avg. CZ rurality
Public								
Associates	250	0.7	142	93%	709	2.7	3,479	9%
Bachelors/ Masters	102	0.3	156	92%	315	1.2	2,706	12%
Doctoral	24	0.1	193	85%	190	0.7	2,430	9%
Non-profit								
Associates	3	0	87	100%	77	0.3	3,900	7%
Bachelors/ Masters	113	0.3	182	87%	685	2.6	3,079	9%
Doctoral	11	0	236	83%	175	0.7	4,841	4%
For-profit								
Associates	10	0	261	79%	160	0.6	3,151	7%
Bachelors/ Masters	3	0	255	72%	123	0.5	3,815	5%
Doctoral	n/a	n/a	n/a	n/a	9	0	5,197	3%
Total	**516**	**1.4**	**160**	**91%**	**2,439**	**9.4**	**3,297**	**9%**

Summary

This section points to a bifurcated landscape of rural higher education. On one hand, we found colleges that offer the greatest access point for many students (e.g., Public Associates and Public Bachelors/Masters) are experiencing enrollment declines. On the other hand, we found Doctoral institutions, which often operate selective admissions or otherwise are not broadly accessible, have experienced enrollment growth since the Great Recession. This finding points to the need to understand the different experiences, responses, and contexts of rural places to understand how – and how well – rural-located institutions are responding to local needs and demographic shifts. These findings are exploratory in nature and are aimed to develop a research agenda around what makes these rural places unique and how their institutions of higher education are faring over time. There are many additional indicators and measures to explore, but these findings point to the need to distinguish among institution "types" when discussing rural higher education and the colleges located in rural places.

Expanding the View of Rural Postsecondary Opportunities

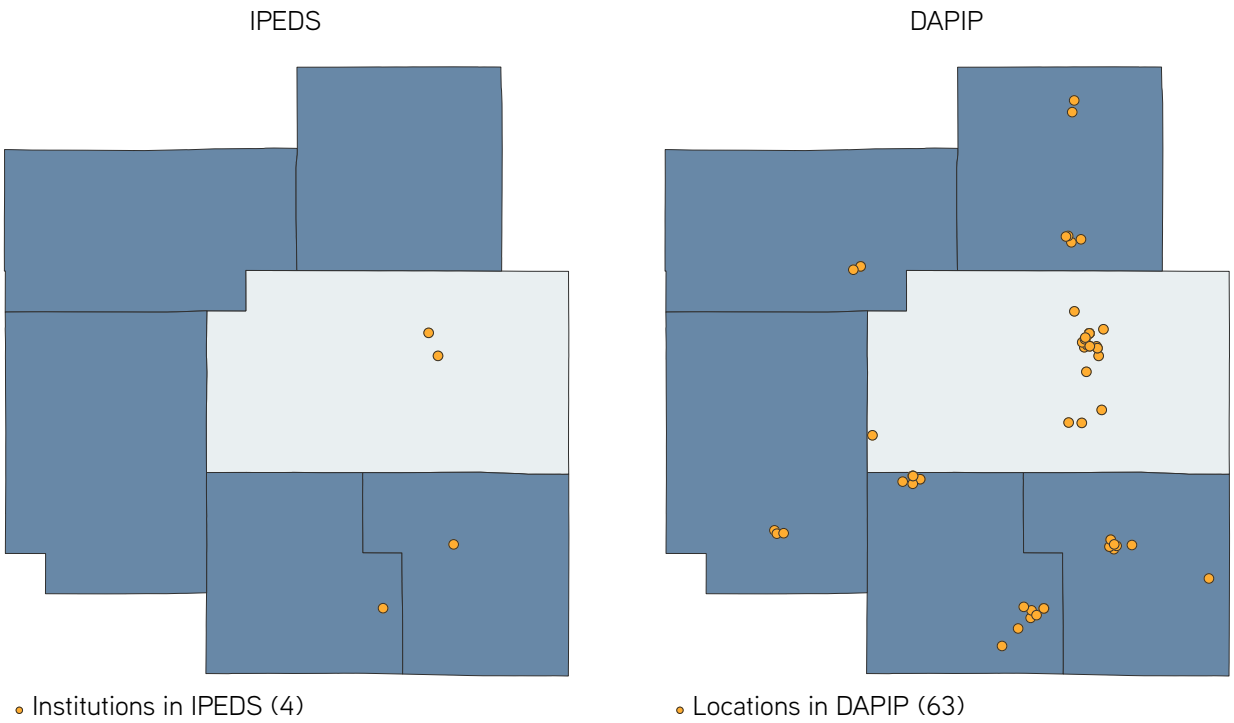
To gain new insights into rural educational opportunity, this section expands the traditional view of what counts as an institution of higher education. Typically, a college is defined according to what is reported in IPEDS. IPEDS will include the main ("parent") location of a college and, depending on its U.S. Department of Education Program Participation Agreement (PPA), may also include branch ("child") locations.[48]

While this level of detail is useful for measuring key enrollment, finance, and college completion outcomes, it does not provide enough detail on the location of colleges. For example, IPEDS reports the entire state of Indiana has only one community college (Ivy Tech Community College) simply because the "parent" location (located in Indianapolis) holds the PPA for its 40+ "child" locations found across the entire state. Similarly, even a "child" location may have satellite campuses or even provide academic programs in multiple off-site locations.

To address these limitations, this section merges IPEDS data with data from the U.S. Department of Education's Database on Accredited Postsecondary Institutions and Programs (DAPIP). DAPIP provides the street address of accredited parent and child institutions and includes "additional locations" that we describe in more detail below. These "additional locations" provide a wider and more complete list of where college opportunities are located: the cleaned DAPIP dataset includes 24,455 total locations while IPEDS includes roughly 7,000. Figure 15 illustrates the benefit of merging IPEDS with DAPIP, where the left panel shows the IPEDS "parent" and "child" locations of Wausau, Wisconsin's commuting zone and the right adds all additional locations from DAPIP. According to IPEDS, there are only four colleges located in this commuting zone while DAPIP counts 63 locations that include various types of offerings outlined in more detail below.

Figure 15: Locations in IPEDS compared to DAPIP

Classifying DAPIP location types



There is little established literature or research using DAPIP data in higher education.[49] Accordingly, our research team analyzed this novel dataset in three distinct ways. First, we geocoded each DAPIP location based on its street address and then merged those locations with their respective commuting zone. Second, we ran a word-frequency query (using NVivo software) on each location's name, resulting in the word clusters outlined in Appendix B. Third, we used text-based algorithms and manual coding to apply those thematic word clusters to each DAPIP location, resulting in the following list of location types:

Table 4: DAPIP Location Types

Main Campus Locations
Institution
Branch Campus
Additional Locations
Administrative and Extension Offices
Corrections
Hospital/Medical
Inter-Institutional Program
K-12 Education Setting
Military Bases/Military Academies
Miscellaneous Community Agencies
Private Companies and Hotels

DAPIP reports three types of locations for each observation in its dataset: institution; additional location; and site. An "institution" is a main campus which serves as the primary contact for accrediting agencies. Unlike the unique identification number colleges use in IPEDS (e.g. "UNITID") to signify the holder of the PPA, the DAPIP file includes locations where instruction occurs. An "additional location" is defined as "a facility that is geographically apart from the main campus of the institution and at which the institution offers at least 50 percent of a program and may qualify as a branch campus."[50] These would only appear in IPEDS if the location held its own PPA, which is often unlikely, meaning we are able to identify many more "additional locations" where instruction occurs. Finally, DAPIP's data documentation lists a "site" as "a location used for the supervised practical training of advanced students or recent graduates in areas such as medicine, psychology, and dietetics. Or location used for the specialized clinical training of physicians."[51] Because locations deemed "sites" serve a very specific purpose for training of advanced degrees, we excluded them from this analysis.

In the DAPIP dataset, just over 16,000 observations are coded as "additional locations," making them an ideal candidate for the text mining techniques outlined above. By applying those techniques, we were able to generate the eight sub-groups of "additional locations" where key words for determining these sub-groups are provided in Appendix B. For instance, our coding process identified "Administrative & Extensions Offices" where programs are flagged if they include phrases such as "administration," "extension," or "administrative." Another distinct location type are accredited programs operating in correctional facilities (e.g., prisons, jails, juvenile detention centers) and our code identifies these as "Corrections." For the "Hospital/Medical" flag, we coded locations that included such terms as hospital, clinic, and medical center[52]; inter-institutional programs are those that are offered by one institution while located at the physical address of another institution; this often occurred within systems of higher education, as well as between Bachelors/Masters and non-Bachelors/Masters institutions. If the location name included such phrases as primary or middle school, high school, testing service, K-12 district offices, etc., then we would code these locations as a "K-12 Education Setting." Military bases and academies also play host to numerous postsecondary opportunities and were coded as "Military Bases/Military Academies" if the location was affiliated with a military installation (e.g., fort, air force base). "Miscellaneous Community Agencies" are postsecondary opportunities offered within non-profit or government agencies that are unaffiliated with the campus itself (e.g., police or fire stations, community centers, YMCAs, churches). Lastly, several locations are affiliated

with private companies, such as Strayer University at Verizon Wireless or Fontbonne University at The Boeing Company. Similarly, many operate in private hotels or conference centers, and our code identifies these places as "Private Companies and Hotels."

DAPIP is an unaudited dataset which means there are likely to be inconsistencies in how data are reported. While our line-by-line review resolved many of these issues (e.g., typos in names or locations) the dataset is not without limitations. Additionally, our procedures for flagging each additional location – and the 8 types of "additional location" we identified – should be understood as a first attempt at classifying these places that to our knowledge have been underexplored and unevenly documented in the research literature. Ultimately, we conducted multiple rounds of quality control, both manually and with text-based algorithms, resulting in 24,455 observations for this analysis.[53]

Applying DAPIP data to rural commuting zones

Table 5 shows the distribution of DAPIP locations that were included in this analysis by rurality, where approximately 15% of all DAPIP locations are in rural commuting zones.[54] Most of these locations are either "parent" institutions or "child" branch campuses; however, nearly one-third of rural postsecondary opportunities are coded as "additional locations." In rural areas, these additional locations tend to be more heavily represented in K-12 locations (19% compared to 16% for non-rural), correctional facilities (1.7% compared to 0.9%), administrative/extension offices (2.5% compared to 1.2%), and inter-institutional programs (6% compared to 4%).

Table 5: DAPIP Location Types by Rurality, 2019

	Rural		Non-Rural	
Main Campus Location				
Institution	981	28%	7,468	36%
Branch Campus	1,029	30%	5,674	27%
Additional Locations				
Administrative and Extension Offices	88	3%	261	1%
Corrections	58	2%	182	1%
Hospital/Medical	106	3%	758	4%
Inter-Institutional Program	212	6%	803	4%
K-12 Education Setting	646	19%	3,335	16%
Military Bases/Military Academies	42	1%	451	2%
Miscellaneous Community Agencies	142	4%	831	4%
Private Companies and Hotels	154	4%	1,200	5%
Total	**3,458**	**100%**	**20,963**	**100%**

The types of postsecondary programs available in rural communities differs from those available in non-rural locations. On one hand, rural areas tend to be over-represented in non-traditional forms of postsecondary education, with K-12, corrections, branch campuses and inter-institutional programs being more represented than in non-rural places. Further, students looking for opportunities in rural locations will likely find fewer "traditional" institutions than in non-rural places. Table 6 disaggregates the location types by Carnegie Classification, where we can see many of the "branch campuses" in rural commuting zones are linked to public Associates institutions (community colleges).[55] Additionally, this table shows public Associates and Bachelors/Masters institutions tend to expand their offerings through established methods of educational opportunity, where branch campuses, inter-institutional programs, extension offices, and community agencies are the most common types of "additional locations." Alternatively, private non-profit institutions tend to cluster into "additional locations" tied to existing community resources, such as K-12 settings, hospitals, and private companies. Further research can explore these networks in much greater detail, but our main finding is that colleges have different strategies for reaching rural students and making use of existing education infrastructure that has largely gone underexplored in academic and policy research.

Table 6: Number of Additional Locations in Rural Commuting Zones, by Carnegie Class, 2019

	Branch Campus	Administrative and Extension	Corrections	Hospital / Medical	Inter-Institutional Program	K-12 Education Setting	Military Bases/ Military Academies	Miscellaneous Community Agencies	Private Companies and Hotels	Total
Public										
Associates	482	25	48	18	18	166	6	51	36	850
Bachelors/Masters	172	15	5	12	86	84	7	12	18	411
Doctoral	65	13	1	8	22	46	4	9	4	172
Other	40	19		6		22		10	1	98
Non-profit										
Associates	1	1								2
Bachelors/Masters	178	12	3	51	63	295	18	48	83	751
Doctoral	13	2	1	3	5	25		4	2	55
Other	17	1		2	6	1	3	4	2	36
For-profit										
Associates	6							1		7
Bachelors/Masters	3								1	4
Doctoral				1		1	1		1	4
Other	38				1					39
Missing IPEDS Data	14			5	11	6	3	3	6	48
Total	**1,015**	**88**	**58**	**101**	**201**	**640**	**39**	**139**	**148**	**2,477**

Summary and Further Research

When deciding where to attend college, most students stay relatively close to home. Researchers and policymakers are taking greater interest in this often-overlooked fact and, by doing so, are gaining new insights into the geography of college opportunity. This report contributes to those ongoing conversations by (1) identifying "rural-located" colleges, (2) describing the communities where these colleges are located, and (3) expanding the definition of what counts as an educational opportunity in these places. What follows is a summary of these three contributions and ideas for expanding research on rural-located colleges in the U.S. Through multiple research methods and with a diverse array of stakeholders and partners, researchers can build a stronger understanding of rural higher education and a more complete account of the various roles colleges play in rural communities.

Developing a Typology of Rural-Located Colleges

We found four main types of "rural-located" colleges in the United States. The first and largest group are broad-access institutions that include public community colleges and public Bachelors/Masters-granting institutions.[56] These broad-access institutions represent the majority of rural-located colleges and they enroll the majority of students in rural places. Second are public and non-profit research universities that tend to be more selective and likely draw students from far beyond the rural region where they are located. Third are private non-profit Bachelors/Masters-granting institutions that, similar to research universities, tend to be selective and likely draw students from far beyond the rural region. Fourth are for-profit colleges that account for a small share of rural-located colleges and enroll relatively few students, yet likely play a distinct role in the local higher education marketplace.

These four groups of rural-located institutions are experiencing quite different enrollment trends. Unlike other public broad-access institutions in the U.S., those that are rural-located now enroll fewer students than they did prior to the Great Recession. A similar pattern is occurring among rural-located non-profit Bachelors/Masters institutions that are approaching pre-Great Recession enrollment levels. To the extent these rural-located institutions are dependent on tuition revenue, these enrollment declines can have significant implications on rural-located colleges' budgets and financial positions. And if these colleges are located in places that are experiencing significant out-migration or economic conditions that draw people into work (rather than to college) then they likely face additional pressures with respect to recruiting students to enroll. Further research is needed to understand the full array of responses that rural-located broad-access institutions are making to these pressures, and our findings can help identify examples and case studies.

Contrary to the image of all rural-located colleges experiencing enrollment declines, rural-located research universities have steadily increased their enrollments since the Great Recession. These colleges have also experienced less of an enrollment decline in the wake of COVID-19. Similar to the previous finding, further research is necessary to understand why this is so and how these institutions are weathering challenging times. Further research should also examine in much more depth how these rural-located institutions serve, represent, and otherwise contribute to the social and economic wellbeing of rural communities.

Generating New Insights into Rural Places

Using "commuting zones" – where people commute across county and even state lines on a daily basis – offers a promising and practical way to identify local areas in the U.S. We identified 364 rural commuting zones that are home to approximately 32 million people.

Similar to research using county-level geographic data (rather than commuting zones) we find rural places tend to have lower income levels, higher child poverty levels, and lower unemployment rates than non-rural commuting zones.[57] We also find similar patterns of geographic mobility where many rural places are slowly growing after years of depopulation.[58] This finding warrants further research, particularly in rural places "just beyond the urban edge" where people are moving into rural recreational and retirement areas.[59]

While commuting zones provide a useful measure of geographic areas, there is much work to be done with respect to refining, expanding, and improving on how this measure can be integrated into higher education research. For example, our analysis simply measures rural versus non-rural places and does not distinguish the wide array of variation that exists within rural places. Further research should distinguish between the various "types" of rural communities that exist nationwide, including rural places with high agricultural employment, diverse natural resources, attractive recreational centers, and other unique features that likely shape the higher education opportunities nearby.[60] By exploring variation that exists within rural places, researchers can produce valuable new insights into the academic offerings, college choice process, career aspirations, and a host of additional insights into the rural higher education experience that have yet to be fully explored.

Similarly, there is great racial/ethnic diversity within rural commuting zones that this report only began to explore. For example, rural areas of the Southeastern U.S. are likely to have greater shares of the population identifying as Black, while rural areas in the Southwest and Midwest may see greater shares of people from Hispanic ethnic groups. Each region is experiencing different trends with respect to the racial/ethnic composition of its population, and further research could explore whether the colleges located in these places are also changing the racial/ethnic profile of their student bodies. Researchers could use measures such as the dissimilarity index to determine whether colleges are representative of their local communities racial/ethnic diversity; if they are not, then they could use that information to guide planning efforts to make their institutions more reflective of their surrounding community.[61] Our study can help guide research in this direction, where there is growing interest in ensuring greater equity in college access and degree completion among people from groups currently under-represented in higher education.

Expanding our View of Postsecondary Opportunities

If we decided to rely solely on IPEDS to identify "rural-located" colleges and universities in the US, we would have significantly undercounted the number (and types) of colleges located in these places. IPEDS resulted in 522 rural-located colleges (Table 2) while DAPIP resulted in 981 (Table 5). Not only did DAPIP provide a more inclusive count of the total number of institutions, it also provided new insights about the "additional locations" that are tied to many of these colleges. Our report is the first to our knowledge to link IPEDS with DAPIP and classify these additional locations. Doing so revealed that public broad-access institutions in rural areas have extensive (and under-explored) networks of branch campuses, K-12 educational settings, correctional facilities, and inter-institutional partnerships that highlight how these institutions are integrated into their local communities. It also revealed that many people living in rural areas are likely to find opportunities in non-traditional "additional locations" like military bases/academies and private companies/hotels where accredited education providers are operating beyond the walls of a "traditional" college setting.

By expanding our view of "what counts" as a postsecondary opportunity in rural places, researchers and policymakers may not only come to new appreciation and

understanding for the local contexts in which colleges operate. But they might also come to new approaches to data collection (to promote consumer information or accountability), funding models (to promote outreach and partnerships), or academic planning and coordination (to promote transfer and academic improvement). Additionally, using the DAPIP flags we developed could help researchers and policymakers describe the "marketplace" of postsecondary options in any given commuting zone. For example, do some commuting zones have more accredited programs in prisons, K-12 schools, or military bases/military academies while other commuting zones perhaps have more branch campuses and inter-institutional programs? Documenting these differences could contribute to the academic community's understanding of the geography of college opportunity while also helping regional planning efforts identify opportunities to expand, improve, or otherwise change the options available nearby.

Conclusion

This report brings new data to bear on longstanding questions regarding the landscape of rural higher education. It answers basic questions about where rural colleges are located and how rural communities are changing based on important social and economic indicators. Since the Great Recession, and now in the wake of COVID-19, rural places have garnered greater attention from public policymakers, philanthropic organizations, media outlets, and a host of other stakeholders concerned about the future of rural America. This report and its accompanying data tool aim to help inform conversations while providing publicly accessible resources for researchers to more accurately portray rural areas and the colleges serving people who call these places home. This report and its underlying data are publicly available to download, explore, and ultimately use for developing new insights into rural higher education. Doing so should lead to more meaningful research that more fully captures the lived experience of people in rural places, and that research should help inform public policy conversations around how to promote greater educational opportunity and outcomes in postsecondary education.

Acknowledgements

We would like to thank Bhuvanesh Reddy Bathala, Cheptoo Grace, Ariana Hammersmith, Khasan Redjaboev, Abigail Reid, and Mark Wu for their tireless work getting the DAPIP data in shape. We appreciate Asjad Naqvi's help on our data visualizations. Thank you also to David Long and Caitlin Bourbeau at the Applied Population Lab for bringing the mapping tool to life, and to Sunčana Pavlić for her designing this report. Finally, we are immensely grateful to Kirstin Yeado at Ascendium Education Group for her thought partnership and guidance throughout this process. Ascendium provided generous financial support for this work. Views expressed in this report are ours and do not necessarily represent those of Ascendium.

Appendix A: Commuting Zone Characteristics Over Time

Table A1: Educational Attainment Over Time by Rurality, 2005-2019

	Non-Rural			Rural		
	2005-2009	2010-2014	2015-2019	2005-2009	2010-2014	2015-2019
# of CZs	261	261	261	364	364	364
Less than High School	15.1%	13.5%	11.9%	18.0%	15.4%	13.3%
High School Diploma	28.4%	27.1%	26.1%	36.7%	35.6%	35.0%
Some College, No Degree	20.3%	21.1%	20.3%	20.3%	21.9%	21.7%
Associate degree	7.4%	7.9%	8.4%	7.5%	8.3%	9.3%
Bachelor's Degree	18.1%	19.%	20.5%	11.4%	12.2%	13.2%
Graduate Degree	10.6%	11.5%	12.9%	6.1%	6.7%	7.5%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table A2: Economic Characteristics Over Time by Rurality, 2005-2019

	Non-Rural			Rural		
	2005-2009	2010-2014	2015-2019	2005-2009	2010-2014	2015-2019
# of CZs	261	261	261	364	364	364
Unemployment Rate	4.7%	5.9%	3.4%	4.4%	5.1%	3.1%
Child Poverty Rate	18.1%	21.5%	18.1%	23.0%	25.9%	22.6%
Total Income per Capita	$49,157	$50,239	$55,886	$37,167	$39,303	$41,985

Table A3: Age and Migration Over Time by Rurality, 2005-2019

	Non-Rural			Rural		
	2005-2009	2010-2014	2015-2019	2005-2009	2010-2014	2015-2019
# of CZs	261	261	261	364	364	364
Net Commuting Zone Migration(%)	0.0%	0.0%	0.0%	0.2%	0.1%	0.2%
Age Categories						
Age Under 5	7.0%	6.4%	6.1%	6.3%	6.0%	5.8%
Age 5 - 9	6.6%	6.5%	6.2%	6.2%	6.3%	6.1%
Age 10 - 14	6.9%	6.6%	6.5%	6.6%	6.4%	6.3%
Age 15 - 19	7.1%	6.9%	6.5%	7.4%	6.9%	6.6%
Age 20 - 24	7.0%	7.2%	6.8%	7.1%	7.0%	6.7%
Age 25 - 34	13.7%	13.7%	14.1%	11.3%	11.7%	11.9%
Age 35 - 44	14.3%	13.1%	12.8%	12.8%	11.7%	11.4%
Age 45 - 54	14.5%	14.1%	13.0%	14.7%	13.9%	12.4%
Age 55 - 59	5.9%	6.5%	6.6%	6.6%	7.1%	7.1%
Age 60 - 64	4.7%	5.6%	6.1%	5.5%	6.5%	7.0%
Age 65 & Up	12.3%	13.4%	15.3%	15.4%	16.7%	18.7%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table A4: Race and Ethnicity Over Time by Rurality, 2005-2019

	Non-Rural			Rural		
	2005-2009	2010-2014	2015-2019	2005-2009	2010-2014	2015-2019
# of CZs	261	261	261	364	364	364
Non-Hispanic						
American Indian/Alaskan Native	0.5%	0.5%	0.5%	2.1%	2.2%	2.3%
Asian	4.7%	5.4%	5.9%	0.9%	1.0%	1.1%
Black	12.6%	12.7%	12.8%	7.9%	7.9%	7.9%
Native Hawaiian/Pacific Islander	0.1%	0.2%	0.2%	0.1%	0.1%	0.1%
White	64.0%	60.9%	58.8%	81.4%	79.8%	78.6%
Two or more races	1.6%	2.2%	2.5%	1.6%	1.9%	2.1%
Other or Not Listed	0.3%	0.2%	0.3%	0.1%	0.1%	0.1%
Hispanic						
American Indian/Alaskan Native	0.1%	0.2%	0.2%	0.1%	0.1%	0.1%
Asian	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%
Black	0.3%	0.4%	0.4%	0.1%	0.1%	0.1%
Native Hawaiian/Pacific Islander	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
White	9.2%	11.7%	12.5%	3.6%	4.9%	5.6%
Two or more races	0.6%	0.8%	0.9%	0.3%	0.4%	0.4%
Other or Not Listed	5.8%	4.8%	5.0%	1.9%	1.5%	1.5%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Appendix B: Flagging Process

Words/Phrases Associated with Location Names

The below table demonstrates the words and phrases that were used to code the categories. Words and phrases were discerned using NVivo software and the "word frequency" function, along with the word cluster function. In some instances, we included typos reported to the accreditors within our code (e.g., "Dsitrict" or "Schoo") to capture frequently mistyped occasions of words. Lastly, code for this process only included observations that DAPIP classified as "additional locations."

Category	Words/Phrases (code for all pulled in lower- and upper-case instances of words or phrases; words separated by semicolon).
Branch Campus	Campus; Community; College; Business College; Marinello School of Beauty; I.T.S.; Empire Beauty; Regency Beauty; G Skin; The Studio Academy of Beauty; Jones Beauty; Drexel University at; Western International University at Maricopa County; County Career; Ocean County Vocational; State College at; Colorado State University at; Colorado State University -; School of; Adams State University
K-12 Education Locations	Public School; School District; School Dsitrict; Elementary; Elementary School; Middle School; H[iI]gh School; Charter School; International School; Montessori School; Intermediate; Montessori; Department of Education; HS; H.S.; High Schoo; Board of Education; School Distict; Elementary Sch; Elem School; Test Prep; Youth Center; Neighborhood Center; Catholic School; Secondary School; Local School; City School; Junior High; ISD; Primary School; Unified District
K-12 Education Locations	Public School; School District; School Dsitrict; Elementary; Elementary School; Middle School; H[iI]gh School; Charter School; International School; Montessori School; Intermediate; Montessori; Department of Education; HS; H.S.; High Schoo; Board of Education; School Distict; Elementary Sch; Elem School; Test Prep; Youth Center; Neighborhood Center; Catholic School; Secondary School; Local School; City School; Junior High; ISD; Primary School; Unified District
Hospital/Medical Locations	Hospital; Hospital ; Medicine; Medical Center; Health Care; Health System; Healthcare; Residency; Clinic; VAMC; Internship; Care System; Health Service; Premier Health; Franciscan Health; Baptist Health; Mayo Clinic; Health Center; Predoctoral Internship
Private Companies and Hotels	Hotel; Inn ; Inn; Conference Center; Suites; AmericInn; Best Western; Lodge; Marriott; Hilton; Sheraton; Hyatt; Hotel; Hampton Inn; Hampton Suite; Ritz Carlton; Lockheed; Boeing; Verizon; Dale Carnegie; Raytheon; Business Incubator; Equipment Operations; Corporation; Mart; Walmart; Mc[dD]onald; Tyson Foods; Bosch Power; United Airline; Credit

	Credit Union; Kohls; Corporate Center; Super Center; Business Center; Maintenance; Corp; Casino; Pfizer; Verso; Anthem Blue; Airport; Staples; Company; Hyundai; Golf Course; Incorporated; CenturyLink; Assembly Plant; Nuclear Power Plant; Nuclear Plant; General Electric; Allstate; Farm; American Family; Cisco System; Bank
Corrections	Correctional; Prison; Penitentiary; Jail; Correction; Probation; Detention
Military Bases	Base; Joint; Military; Force; Naval; Arsenal; Coast Guard; Marine Corps; Barracks; Infantry; US Navy; U.S. Navy; US Army; U.S. Army; USCG; Camp Smith; Pearl Harbor; Warfare; Combat; Air National Guard; National Guard; AFB
Administrative and Extension Offices	Administration; Administrative; County office; Extension
Miscellaneous Community Agencies	Fire Department; Fire District; Fire Station; Police Department; Ctr; FD ; Child and Adolescent Services Center; Language Center; Rec Center; Recreation Center; Community Center; Counseling Center; Regional Center; Aquatic Center; Innovation Center; Civic Center; City Hall; Rescue Center; Development Center; Treatment Center; Wellness Center; Community Services; Department of Public Health; Department of Health Services; Library; Police Dep; Police Officers; Courthouse; Court House; Retirement Community; Club; Rifle; Children's Services; County Sherriff; Maricopa County; County Department; County Health; Riverside County Adult; County Fire; County Adult; County Lifelong; Chamber of Commerce; Village Hall; Circuit Court; University Center of Lake County

Manual Flagging Process

The manual flagging process was completed by the authors as well as a team of 6 employees. Employees were trained on understanding the data, as well as provided with a detailed guide that included definitions and examples of each of the categories. The flagging team reviewed each unflagged observation and assigned them to one of the categories based on the name of the observation, the address, or by conducting brief research. The definitions of each of the flag categories, as they appeared in the guide, are in the table below:

Flag	Description	Examples
Institution	These are "traditional" institutions. Our process up to this point has been to not move any additional locations into this category. This is because DAPIP categorized observations as Institutions within the original file. If you can make a convincing case that an observation is a standalone institution in the traditional sense (e.g., not a child campus of a larger parent organization,	"Grossmont College" "Southern California Seminary"

	etc.), then you can recommend it be labeled an institution. You will likely use this option sparingly, though. Some places that you might get where you could hypothetically move into the Institution category are going to be professional schools (e.g., Law and Medical Schools) that are currently classified as "Additional Locations" to their parent. For instance, Harvard Medical School was classified as an unflagged additional location – given our definition of places, this should likely be a standalone institution.	
Branch Campus	Think of these as places where the primary purpose of the building/space is education and is owned by a postsecondary education institution, not a community organization or other entity.	"Arizona College – Mesa" "Arizona State University at the Downtown Phoenix Campus"
Additional Location - K-12 Education Setting	For K-12 additional locations, these are programs or offerings in K-12 settings, or test-prep settings. Any offerings in elementary schools, middle schools, high schools, etc. should be labeled as a K-12 setting. Be on the lookout for "preparatory" or misspellings of K-12 type settings not caught in our current code. Oftentimes, these might be "Dual enrollment" type offerings (for instance, Fox Valley Technical College at Appleton North).	"Illinois State University at Lincoln Magnet School" "McKendree University at Lincoln Middle School"
Additional Location - Hospital/Medical	Hospital/Medical settings are offerings that are located in hospitals or clinics. These aren't traditional programs or medical colleges, rather, sites or offerings within hospitals themselves (think: X University at X Hospital/Medical Center). We also classify any VA hospitals in this category, not military.	"Grand Canyon University at Banner Desert Medical Center" "Scottsdale Healthcare-Shea"
Additional Location - Private Companies and Hotels	Think of these places as educational offerings within traditional business or hotel settings (e.g., X University at Marriot Inn and Suites – Madison). Oftentimes, these are programs offered by a business to its employees within their office.	"University of Phoenix at Hyatt Regency" "Strayer University at Verizon Wireless, Rancho Cordova"

Additional Location – Corrections	If it is an educational offering within a Correctional institution (prisons, jails, juvenile detention centers), mark as such.	
Additional Location - Military Bases/ Military Academies	These are offerings that are noted to be at military bases. You may get Air Force Bases, or "Camp XYZ." In addition to looking at the institution name, pay close attention to the address on some of these. Some may not explicitly say "Air Force Base" in the name, but the address might be on an air force base – and a quick Google search may point to the observation as clearly being an offering on a military base.	"Webster University at Scott Air Force Base"
Additional Location - Administrative and Extension Offices	We were categorizing these places as predominantly system or administrative offices (think: UW-System Administration) and campus extension offices (think: UW-Madison Jackson County Extension Office). Some states might call their extension offices something different: just be on the lookout for those.	"John A Logan College at Alongi Extension Center" "Shawnee Community College - Anna Extension Center"
Additional Location – Inter-Institutional Program	These are instances of colleges/universities offering program(s) at a different college campus. Oftentimes, this might be a bachelor-granting institution offering a program at a community or technical college.	"SIU Carbondale at Harry S. Truman College"
Additional Location - Miscellaneous Community Agencies	For this flag, be on the lookout for places in community centers, YMCAs, police or fire departments, etc. Oftentimes, these might be after-school programs or professional development opportunities for service-workers offered up through universities, but can also be more traditional offerings offered in a non-traditional settings (e.g., a seminary that has a main campus, but offers robust programs at churches throughout the country). For this flag, pay close attention to the ownership of the location. Is it owned and operated by a non-profit or community agency? Or, is it owned and operated by a college? If owned by a college, label as a branch campus.	"Concordia University Chicago at Faith Lutheran Church" "Maricopa Community Colleges at Buckeye Fire Department" "University of Phoenix at California Children's Services - Santa Ana"
Closed Location	Many of these have been captured, but if you come across a place that is clearly closed (e.g., news article notes their closure or a website notes their closure), please categorize as such.	

End Notes

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51 See the following for the DAPIP documentation file: https://ope.ed.gov/dapip/Content/ReadMe.doc

52 Notably, the "Hospital/Medical" code differs from medical colleges affiliated with a college itself because these university-based locations would be institutions; we interpret the "Hospital/Medical" locations in DAPIP as separate medical facilities that house programs for colleges (e.g., nursing clinical locations, etc.).

53 We welcome any feedback on the flags or the flagging process, which is outlined in additional detail in Appendix B.

54 We excluded closed locations (7,739) and sites (1,388) from this analysis. Given DAPIP's definition of sites

(a location used for the supervised practical training of advanced students or recent graduates in areas such as medicine, psychology, and dietetics. Or location used for the specialized clinical training of physicians) we opted to exclude these from analysis as they aren't accessible by most students. Further, some locations were excluded during the flagging process if it was clear that those places were no longer operational. Ultimately, this reduced the total observations within DAPIP from 33,582 down to 24,455.

55 Table 6 includes only "Additional Locations" that have a Parent campus that is in the Carnegie Universe – so, some observations are suppressed.

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