



# PERC DATA POINTS

ISSUE 1, 2019



**PRIVATE ENTERPRISE  
RESEARCH CENTER**  
TEXAS A&M UNIVERSITY

## COLLEGE TOWNS: HANDLE DATA WITH CARE

DENNIS W. JANSEN, CARLOS I. NAVARRO, YUANHANG WANG

College towns—the very expression sparks idyllic images of ivy, oaks, youth, and Saturday football. The studious sitting in libraries and classrooms, the partiers heading out for a night on the town, the allure of learning and experimentation, of personal growth, spring and fall—all of these represent “the best times of our lives.”

Yet, there is an alternative viewpoint: college towns are composed of a high number of college students, most of whom fit within a certain age range and do not earn a salary, or at best a low salary. Most college students receive money from parents, family members or loans and most consume more than they earn. All of these characteristics cause college towns to appear poverty-ridden and impoverished, with low income areas burdened by unaffordable housing and perhaps low wages. They are seemingly undesirable locations to live and work. This is the view of college towns provided by government statistics.

So, which view is correct? We hope to leave your memories of the idyllic college town undisturbed, whatever that may be. Instead, we address government statistics and how they give a misleading and incorrect impression of college towns compared to similar towns that are not given the college town label. But before we do so, we need to address the question of just what defines a college town.

### COLLEGE TOWNS – THE DEFINITION

What is a college town? A general definition might be that it is a community dominated by its university population. Gumprecht (2003) defines a college town as “any city where a college or university and the cultures it creates exert a dominant influence over the character of the community.”<sup>1</sup> That seems about right — a college town is a community with a comparatively high concentration of college students. The high concentration of college students, young adults of a certain age, give a certain character to college towns. That same feature also skews certain summary statistics used to characterize socio-economic features of a community.

Still, even the definition proffered above is not specific enough. What is a community, and how is it related to a town? What does it mean to dominate a community? We might picture a college town as represented by Gettysburg Pennsylvania, a borough of 7,620 people as of the 2010 census. Gettysburg College is a private liberal arts college with an enrollment of about 2,600 students. These students would

<sup>1</sup>“The American College Town,” *The Geographical Review* 93(1), January 2003, 51-80. <http://www.jstor.org/stable/30033889>

seem to dominate the borough's population. Then again, is the population of Gettysburg the right scaling variable for this comparison? Gettysburg is located in Adams County, which had a 2010 population of 101,407.<sup>2</sup> Tiny Gettysburg College does not dominate the population of Adams County. So, we are also faced with a problem of defining the relevant community, as well as what we mean by the population of college students.

Gettysburg College is a small school in a small borough, but it is in a much larger county or Metropolitan Statistical Area (MSA). There are much larger university campuses that are in equally large counties or MSAs, and these universities may not dominate their relevant community. The University of Texas at Austin has a very large student body with over 50,000 in attendance. That number would seem to dominate the local community, except that the city of Austin has a population of almost one million residents, Travis County has a population over 1.2 million, and the Austin-Round Rock MSA has a population of over 2.1 million. The ratio of enrollment at Gettysburg College to its local MSA population is about 2%, similar to the ratio of enrollment at UT-Austin to the population of its local MSA.

Our operational definition of a college town should eliminate both Gettysburg and Austin, on the grounds that the campus enrollment does not dominate the population of the local community. Instead, we will use the ratio of college student enrollment to population in the local county as an indicator of a municipality being labeled a college town, and then examine those towns with the largest such ratio.

Our definition identifies college towns as municipalities that host such universities as Texas A&M University, Pennsylvania State University, and Cornell University. These municipalities host large universities and are surrounded by rural areas, so that the college student enrollment is a large percentage of the community population. County boundaries serve as our working definition of a community, so the ratio of college students in a county to county population will be used as our measure to indicate whether or not a municipality is labeled a college town. Our data source is the American Community Survey (ACS) for 2017. This is Census data, but it is limited to surveying areas with a population over 100,000. This means that our list of college town areas will exclude many counties who would qualify as areas with a high concentration of students but that are too small to be included in the ACS.<sup>3</sup>

Figure 1 shows the concentration of college students at the county level using data from 2017 and compares the ratio of college students to county population using FIPS codes (Federal Information Processing Standards County Codes). There are four counties with the ratio exceeding 25%: Brazos County, Texas (Texas A&M University College Station); Monroe County, Indiana (Indiana University Bloomington); Tompkins County, New York (Cornell University); and Clarke County, Georgia (University of Georgia). There are six additional counties if we lower the threshold to 20%. These are the counties that host Pennsylvania State University, Purdue University, the University of Illinois – Urbana Champagne, the University of Iowa, the University of Florida, and the University of California – Davis. At 15%, an additional 11 counties are included.

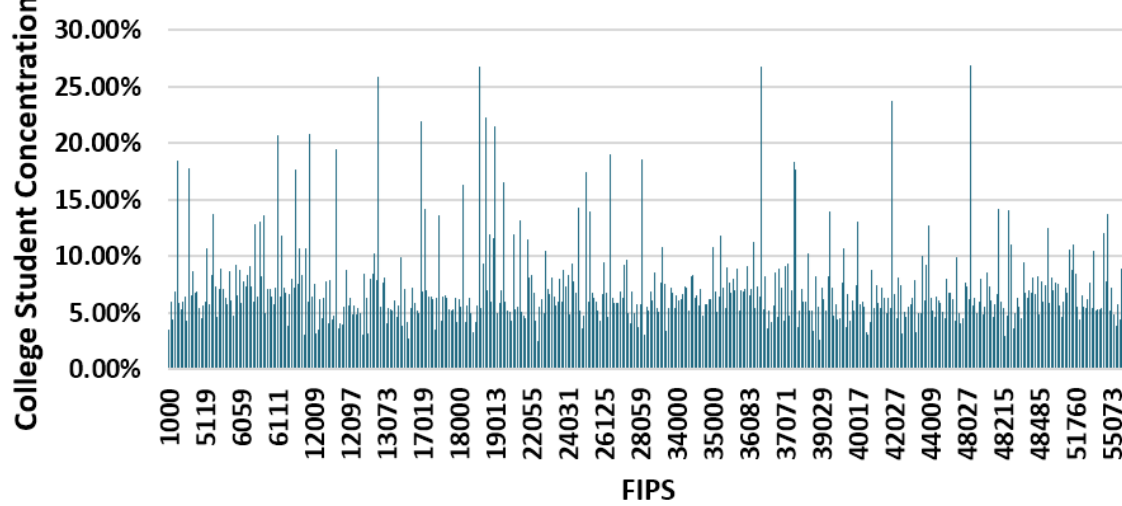
Table 1 contains a list of counties ordered by the ratio of college students to county population. The county is identified, along with the population of college students and the total population. The ratio is presented, and the large university residing in the county. These are presented in ranked order. It is clear that a 15 percent threshold filters out most observations while leaving a list of towns that should certainly qualify for a college town list.

<sup>2</sup> Adams County is also the designated MSA containing the borough of Gettysburg. That MSA is officially called the Gettysburg, PA Metropolitan Statistical Area.

<sup>3</sup> For example, Williamsburg City Virginia, home of William and Mary, had a population of 11,998 and a college student population of 5,006, in the 2000 U.S. census. Clearly this is a college town community, but it does not meet the population threshold for the ACS.

**Figure 1.** College Student Concentration By

County



**Table 1.** College Counties

FIPS	College Student Population	Total Population	Student Population Concentration	County	State	University	Rank
48041	60,040	223,018	26.92%	Brazos	TX	Texas A&M University	1
18105	39,610	147,867	26.79%	Monroe	IN	Indiana University Bloomington	2
36109	28,128	105,090	26.77%	Tompkins	NY	Cornell University	3
13059	32,921	127,165	25.89%	Clarke	GA	University of Georgia	4
42027	38,594	162,392	23.77%	Centre	PA	Penn State University	5
18157	42,569	190,750	22.32%	Tippecanoe	IN	Purdue University	6
17019	45,948	209,779	21.90%	Champaign	IL	University of Illinois at Urbana-Champaign	7
19103	31,996	149,173	21.45%	Johnson	IA	The University of Iowa	8
12001	55,364	266,355	20.79%	Alachua	FL	University of Florida	9
6113	45,398	219,425	20.69%	Yolo	CA	University of California, Davis	10
12073	56,328	289,579	19.45%	Leon	FL	Florida State Univ./ Florida A&M Univ.	11
26161	69,828	368,188	18.97%	Washtenaw	MI	University of Michigan - Ann Arbor	12
29019	32,993	178,236	18.51%	Boone	MO	University of Missouri	13
1081	29,708	161,157	18.43%	Lee	AL	Auburn University	14
37135	26,495	144,435	18.34%	Orange	NC	University of North Carolina at Chapel Hill	15
4005	25,039	140,697	17.80%	Coconino	AZ	Northern Arizona University	16
37147	31,716	179,239	17.69%	Pitt	NC	East Carolina University	17
9013	26,777	151,619	17.66%	Tolland	CT	University of Connecticut	18
26065	50,746	290,057	17.50%	Ingham	MI	Michigan State University	19
20045	20,015	120,587	16.60%	Douglas	KS	University of Kansas	20
18035	18,862	115,350	16.35%	Delaware	IN	Ball State University	21

Others have defined college towns differently. Gumprecht (2003) appears to use the ratio of enrollment to city population, not enrollment to county population, and his data predates ours by nearly two decades. His list of 59 college towns excludes West Lafayette, Indiana (Purdue University); Tallahassee, Florida (Florida State University); Columbia, Missouri (University of Missouri); Flagstaff, Arizona (Northern Arizona University); Greenville, North Carolina (East Carolina University); Storrs, Connecticut (University of Connecticut); East Lansing, Michigan (Michigan State University); or Muncie, Indiana (Ball State University). However, Gumprecht's list includes 46 cities/universities not listed here, including some small universities in small towns. Our use of county population instead of town population, to scale student enrollment favors the inclusion of large universities. His use of town population favors small universities in small towns, regardless of the size of the surrounding county. However, his use of town population is difficult with contiguous towns, such as Texas A&M University located in College Station but contiguous with Bryan, or the University of North Carolina located in Chapel Hill but contiguous with Carrboro.

## COLLEGE TOWNS – DATA ISSUES

We use our list of college towns – perhaps more correctly if less euphonicly labeled 'college counties' – to discuss a variety of statistics that are systematically skewed for college towns. Some of these are obvious, such as the comparative youth of college counties versus other counties. Others are perhaps less obvious, and could be misleading for various decision makers, such as poverty rates.

*Poverty:* The U.S. Census Bureau defines poverty using money income thresholds that vary by family size and family composition. If a family's income is below the relevant threshold, then every member of that family is considered to be in poverty. The logic behind using income to determine the poverty threshold is that income is related to consumption, especially for those with low income, and societal expectations are to have certain minimal consumption levels for each relevant family unit.

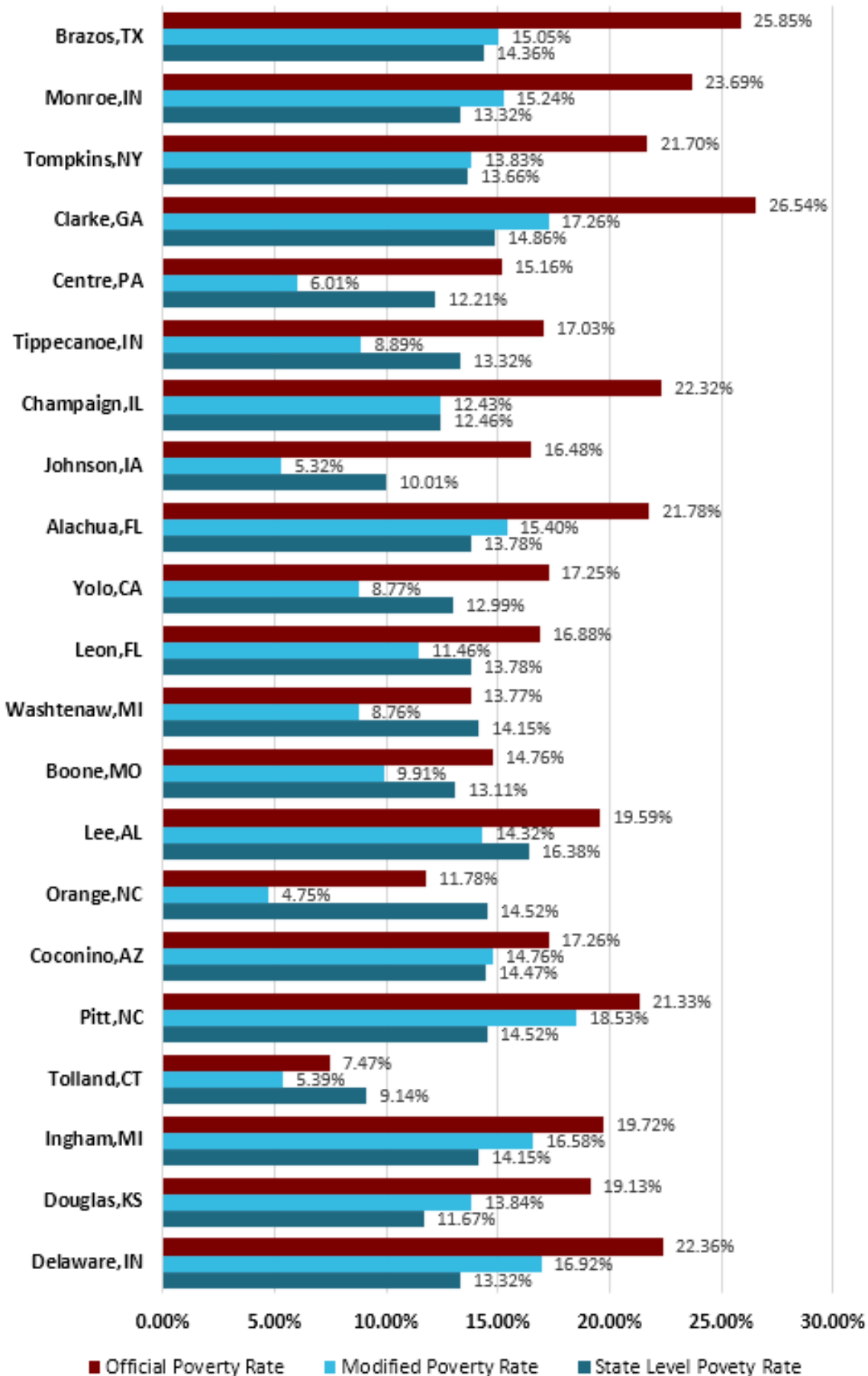
The statistics for poverty rates tend to be high in college towns. Students are typically considered a family unit of one, and they tend to have low incomes. That is, they tend to not work or else to work part-time and often at low paying jobs. These characteristics characterize them as poor on the poverty threshold. Towns with many students relative to the population – college towns – tend to have larger numbers of families classified as poor, and thus to have a higher poverty rate.

However, this higher official poverty rate is misleading. Students are poor by official measures, but they tend to have much higher consumption than their income indicates. Students receive funds from parents, from other family members, from student loans, and at times, from scholarships. All of these sources of funds are not considered income for purposes of calculating poverty status, and yet all of these funds contribute to the ability to consume goods and services. Another way to say this is that a student and a non-student may have the same level of income, but the student will have more financial resources available for food and lodging compared to the non-student. Our official statistics do not distinguish between the student in poverty and the non-student in poverty, but it is not at all clear that society would want to consider these two cases as equivalent.

There is another way that the student and the non-student may differ. The student may be in poverty today, but she will expect to be out of poverty after graduation. The non-student may be in a more permanent situation and expect her poverty to persist. The latter situation is one that society probably views as different in terms of justifying state intervention.

In this paper, we calculate a Modified Poverty Rate that calculates the poverty rate among non-students. The official poverty rate is the percent of the population below the income threshold for poverty. The modified poverty rate is the percent of the non-student population below the income threshold for poverty. Figure 2 presents a comparison of these two statistics for 21 college towns, or more accurately, 21 college counties. This comparison shows that the modified poverty rates are lower than the official poverty rates in each of these towns. Further, the modified poverty rates are closer to the state-wide poverty rates relevant to each location. Again, this shows that college students skew the statistics. They are officially 'poor' despite their often-significant levels of consumption and the fleeting nature of their poverty. They are labeled poor due to a lack of official current income and not because of a lack of lifetime earning capacity.

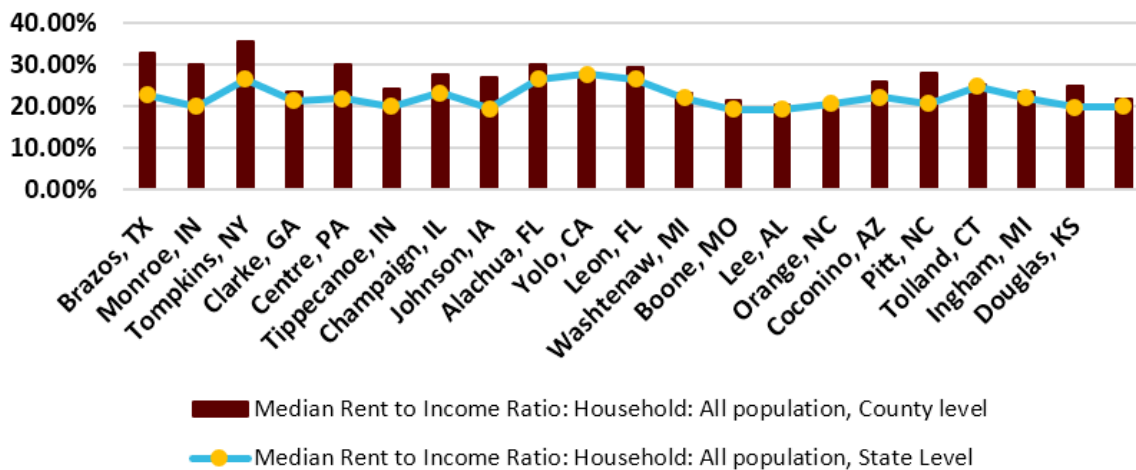
**Figure 2. College Counties - Poverty Rates**



*Housing Affordability:* College towns often end up being listed as locales with relatively unaffordable housing costs. This is related to the poverty issue, as housing affordability is typically measured by a ratio of housing cost – often rent – divided by income. Even if college towns have the same rent as non-college towns, the low average income of students pulls down the average income associated with the college town and hence raises the ratio of rent to income. The low official income levels of students impacts housing affordability just as it impacts official poverty rates.

In Figure 3 we graph the ratio of rent to household income for the selected college towns and for the states in which those college towns are located. The data is again from the American Community Survey, with median annual contract rent divided by median annual household income. While not universally true, it is typical for college towns to have higher rent-to-income ratios than their state average. This is true for 18 of our 21 college town locations, with three essentially equal to their respective state averages. Brazos County, Texas (Texas A&M University); Monroe County, Indiana (Indiana University Bloomington); and Tompkins County, New York (Cornel University) have the three highest ratios and are the three college counties that seemingly have the most unaffordable housing levels by this calculation. In fact, Table 2 shows results indicating that the rent to income ratio is statistically significantly higher in college counties compared to their respective statewide average. Again, however, the ratio is misleading.

**Figure 3.** Household Median Rent to Income Ratio, County Level vs. Statewide

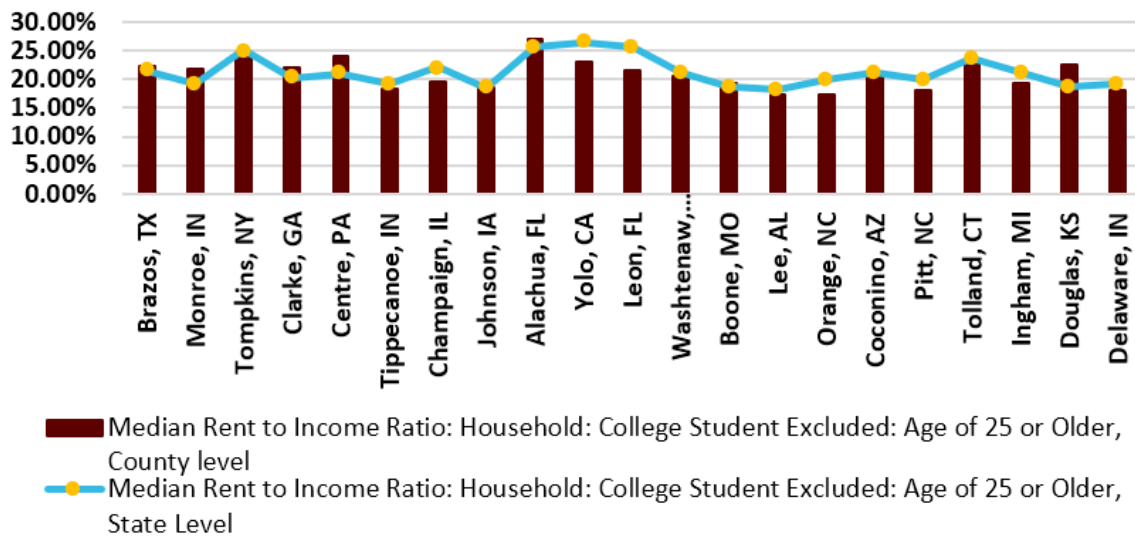


**Table 2.** Rent to Income Ratio in College Counties Versus Statewide

	Household Median Rent to Income Ratio, Entire Population, County Level	Household Median Rent to Income Ratio, Entire Population, State Level
Mean	0.263	0.224
Variance	0.00174	0.00077
Observations	21	16
t Stat*	3.360	
P(T>=t) one-tail	0.001	

Figure 4 presents a modified rent to income ratio which excludes the college student population. The ratio of rent to income in college counties is now lower than in Figure 3, and much closer to the respective statewide average. Overall, the rent to income ratio is typically lower in the college counties than in the respective statewide comparison. Table 3 reports summary statistics and the results indicate that the college counties and the statewide averages are no longer statistically significantly different once college students are excluded. In fact, college counties had lower rent-to-income ratios once we exclude college students and those under 25 years old. Again, we see that including college students in income-base measures of socioeconomic conditions can provide a misleading view of the situation in college counties.

**Figure 4.** Household Median Rent to Income Ratio for Population 25+ Excluding College Students, County Level vs Statewide

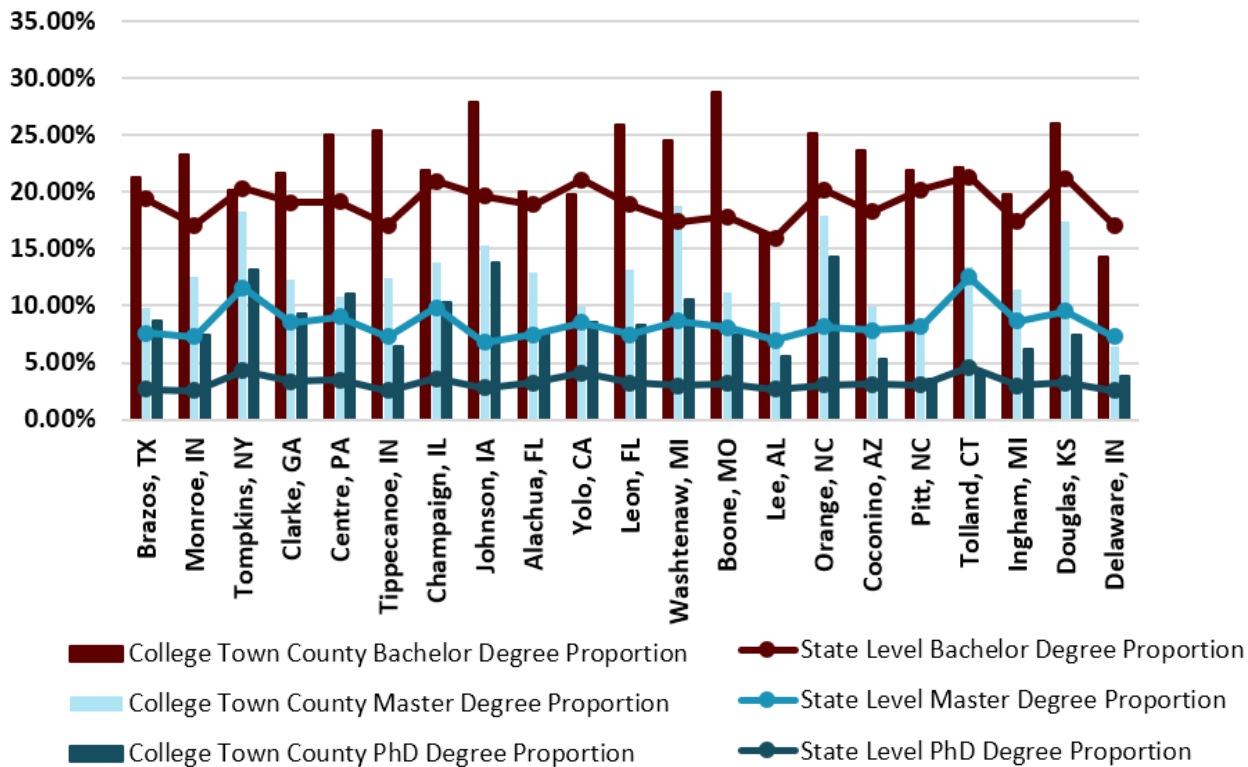


**Table 3.** Rent to Income Ratio in College Counties versus Statewide for Population 25 and Older Excluding College Students

	Household Median Rent to Income Ratio, County level	Household Median Rent to Income Ratio, State Level
Mean	0.209	0.213
Variance	0.00069	0.00071
Observations	21	16
t Stat	-0.503	
P(T>=t) one-tail	0.691	

*Education level of the population:* Leaving the student population aside, college towns tend to have a relatively high population with college degrees, especially advanced degrees such as MA/MS degrees or doctoral degrees. In Figure 5 we present information on the share of undergraduate and graduate degrees in college towns and their respective state averages. Here again it is important to adjust for the large proportion of students who reside in the college town and who are, for the most part, still pursuing an undergraduate degree. As a rough adjustment, we look at the proportion of degrees in the population aged 25 and older, leaving out the vast majority of undergraduate students. We present data on the highest degree completed in each geographic location. Professional degrees such as MD and JD are counted with the Ph.D. degree.

**Figure 5.** Proportion of Population 25 and Older with Various Degrees, College Town County vs. Statewide



**Table 4.** Education Levels in College Counties and Statewide in Population Aged 25 and Older

	College County Bachelor Degree Proportion	State Level Bachelor Degree Proportion
Mean	0.226	0.192
Variance	0.00128	0.00026
Observations	21	16
t Stat	3.860	
P(T>=t) one-tail	2.92E-04	
	College County Master Degree Proportion	State Level Master Degree Proportion
Mean	0.127	0.086
Variance	0.00109	0.00025
Observations	21	16
t Stat	4.920	
P(T>=t) one-tail	1.46E-05	
	College County PhD Degree Proportion	State Level PhD Degree Proportion
Mean	0.082	0.033
Variance	0.00098	3.52E-05
Observations	21	16
t Stat	7.017	
P(T<=t) one-tail	2.42E-07	

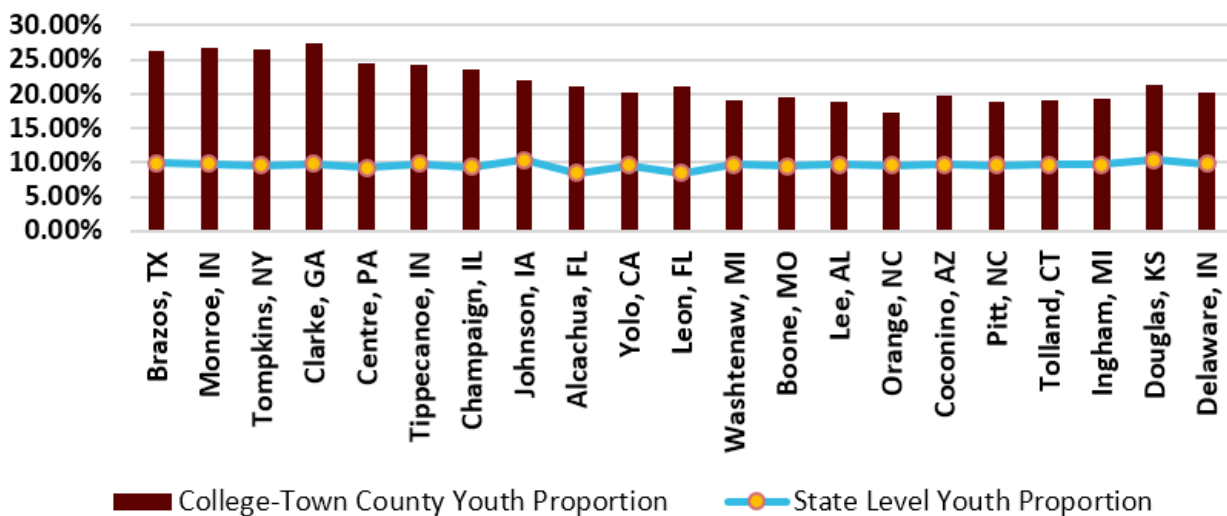


The figure shows that college counties generally have higher ratios of Bachelor, Master and PhD degrees than their respective state averages. There are exceptions, however, which may be attributed to the impact of large metropolitan areas in certain states. Table 4 provides summary statistics for our 21 observations. Overall, college towns have a highly statistically significant higher proportion of degrees in their over-25 populations, and this is even more telling for MS and Ph.D. degrees.

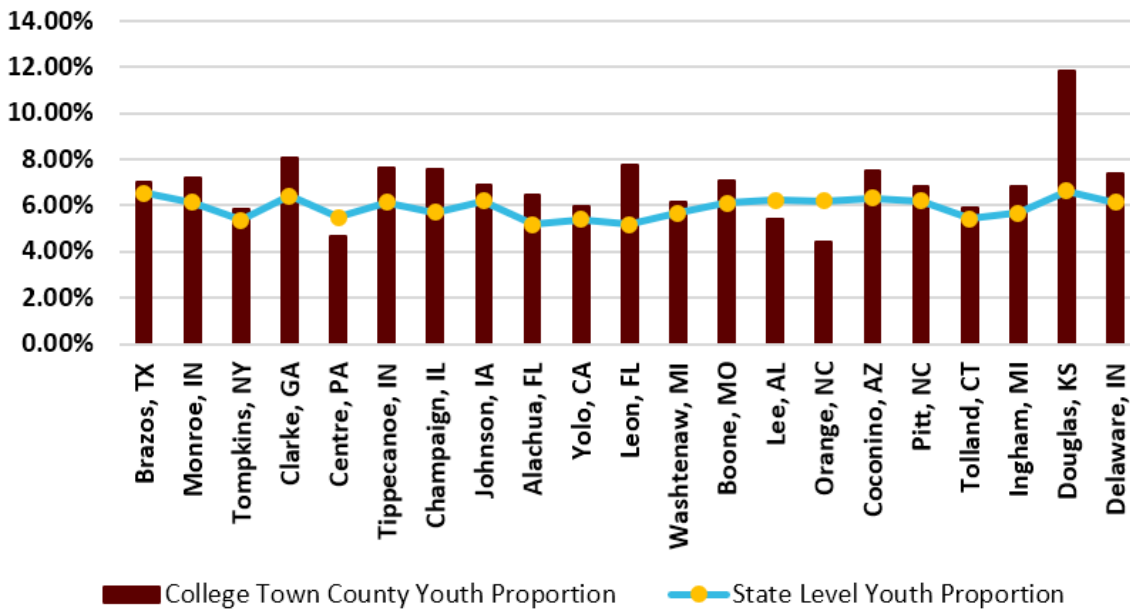
*Youth:* College towns have young populations. This is almost by definition, but college towns have a relatively high proportion of residents aged 18 - 24 compared to state-wide averages. Figure 6 shows the comparison with data retrieved from the ACS. The proportion of youth in each college county basically doubles compared to the state level.

It is probably obvious that college counties are young. But what about the demographic data if we exclude college students? Figure 7 shows the proportion of youth in college counties and statewide when we exclude college students from the sample. We can easily see that college counties are much more similar to their respective statewide averages when college students are not included. College counties are locations that provide educational services to a large number of college students, but these students seem to eventually depart for other locations. Table 5 indicates that, excluding college students, college counties are on average only slightly younger than statewide averages, with 6.9% of the population aged 18-24 in comparison to 5.9% statewide. This difference is statistically significant.

**Figure 6.** Youth (18-24) Proportion in 2017:  
College-Town Counties vs. Statewide



**Figure 7.** Youth (18-24) Proportion in 2017: College Counties vs. Statewide, Excluding College Students



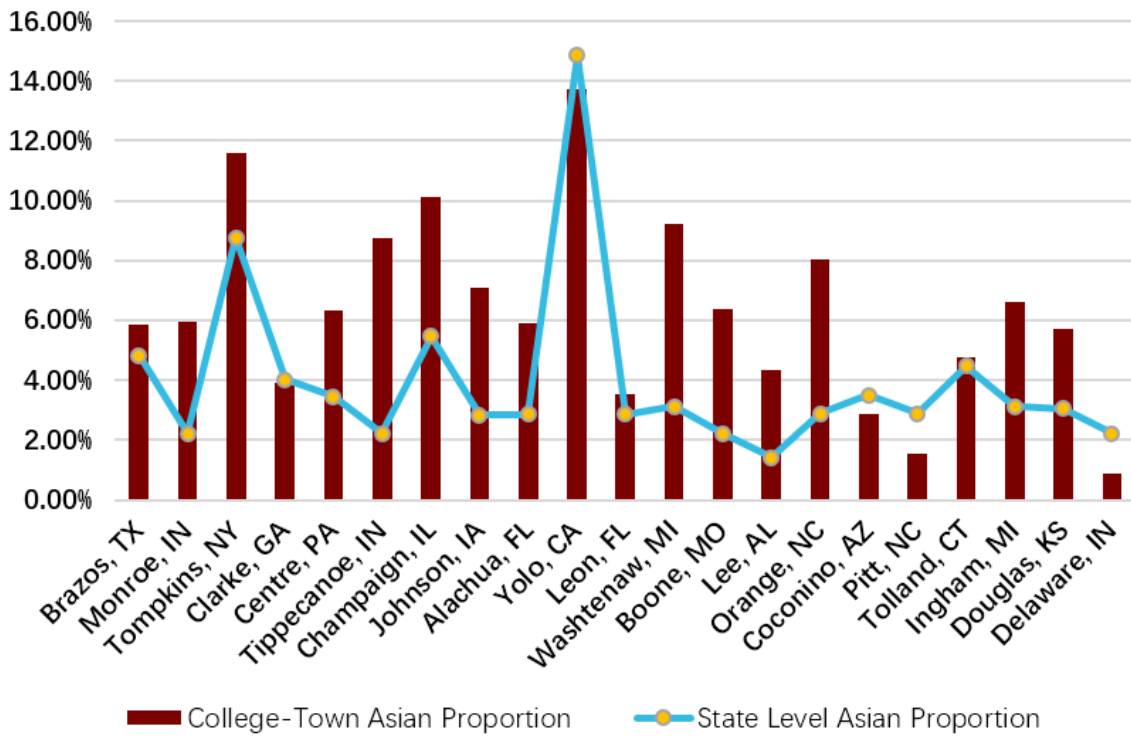
**Table 5.** Youth (18-24) in 2017 in College Counties versus Statewide, Excluding College Students

	College County Youth Proportion Excluding College Students	State Level Youth Proportion Excluding College Students
Mean	0.069	0.059
Variance	0.00023	2.22E-05
Observations	21	16
t Stat	2.699	
P(T>=t) one-tail	0.006	

*Ethnicity:* College counties have a different ethnic distribution relative to state and national averages. With the controversy over admissions policies at Harvard University and the University of California system regarding ethnic Asians, it may not be surprising that in our college counties, persons of Asian ethnicity are also more common than in the overall population. Figure 8 presents the proportion of individuals claiming Asian ethnicity in our college counties, where ‘Asian’ is defined as the sum of those claiming ethnicity as Chinese, Japanese and other Asian races. Again, the data is from the ACS. Most college counties had a higher proportion of Asians in the population than the respective statewide average. In fact, 16 college counties had higher proportions of Asians than their statewide average, while 5 were lower.

Table 6 presents information on the average proportion of Asians in the population in our 21 college counties. At 6.3%, this proportion is almost fifty percent higher than the statewide average of 4.4%, and the difference is marginally statistically significant.

**Figure 8.** Asian Proportion of Population in 2017: College Counties vs. Statewide

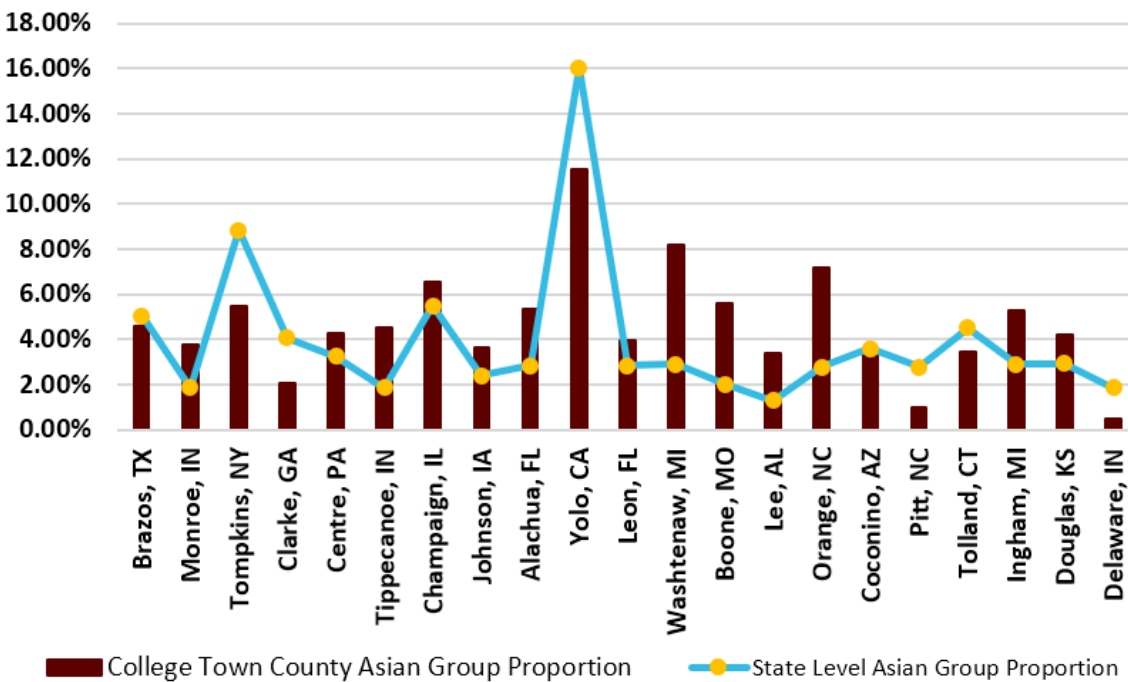


**Table 6.** Proportion of Asians in College Counties and Statewide

	College-Town Asian Proportion	State Level Asian Proportion
Mean	0.063	0.044
Variance	0.00100	0.00107
Observations	21	16
t Stat	1.838	
P(T>=t) one-tail	0.038	

The relatively high Asian ethnicity reported in college counties is due to college students. If we look only at the population aged 25 and older and we exclude college students, then the Asian population in college counties matches state averages. Figure 9 shows the values for select college counties, and Table 7 presents the statistical summary. Not only are the county population proportions in Figure 9 much closer to the state average, but Table 7 indicates that the averages in the selected college towns are nearly the same as statewide, and not statistically significantly different.

**Figure 9.** Asian Proportion of Population Aged 25 or Older and Excluding College Students in 2017: College Counties vs. Statewide



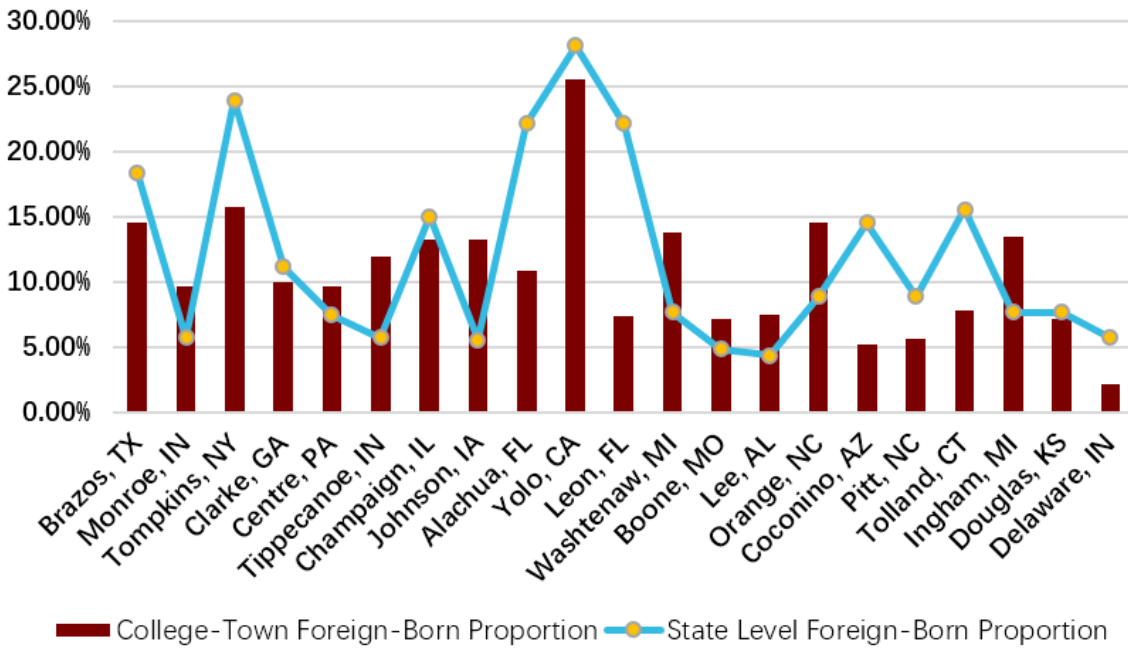
**Table 7.** Proportion of Asians in College Counties and Statewide Among the 25 and Older Population Excluding College Students

	College Town County Asian Group Proportion	State Level Asian Group Proportion
Mean	0.0465	0.0435
Variance	0.00058	0.00130
Observations	21	16
t Stat	0.287	
P(T<=t) one-tail	0.388	

*Immigrants:* We also look at the proportion of the foreign-born population in college counties. As seen in Figure 10, we find that college counties have no special overall difference in the proportion of immigrants. In fact, Table 8 shows that the average proportion of immigrants in college counties is lower than the average proportion of immigrants statewide, so clearly there is no support for the opposite hypothesis. (Just to be clear, if our hypothesis was that the proportion of immigrants in college counties should be lower than the statewide averages, this data does not support that hypothesis. The numbers are not statistically significantly different).

Interestingly, there may be a nonlinear relationship, as college counties in states with a high proportion of immigrants in the population have lower-than-statewide proportions of immigrants. In contrast, college counties in states with a low proportion of immigrants in the population have higher-than-statewide proportions of immigrants. However, our small sample size makes this comparison more suggestive than definitive.

**Figure 10.** Foreign Born Population Proportion in 2017: College Counties vs Statewide

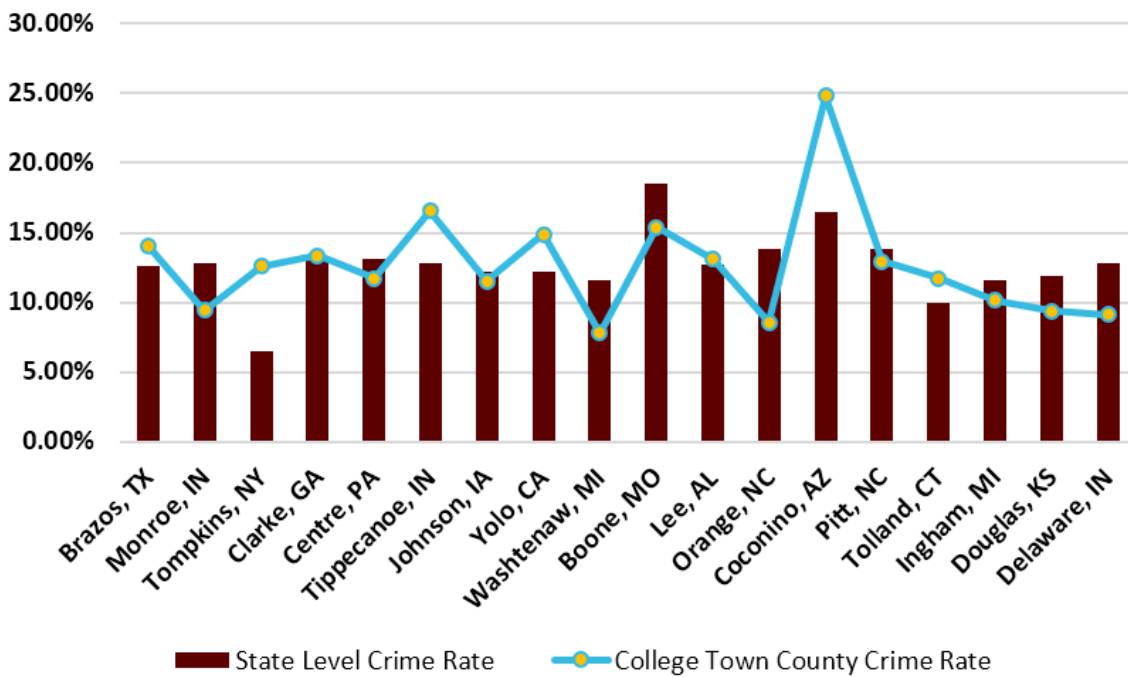


**Table 8.** Foreign Born Population Proportion in College Counties and Statewide

	College-Town Foreign-Born Proportion	State Level Foreign-Born Proportion
Mean	0.108	0.126
Variance	0.00246	0.00549
Observations	21	16
t Stat	-0.834	
P(T>=t) one-tail	0.794	

*Crime Rates:* There are two additional topics in which college towns do not seem to systematically differ from state averages. The first topic is crime rates. While some college counties have lower crime rates than their statewide average, others do not. Figure 11 provides information on this issue, and it seems clear that college towns do not stand out in this regard. In fact, the average crime rate for our 21 college counties and their respective states are nearly equivalent numerically and are not statistically different.

**Figure 11.** Crime Rates in 2016: College County vs. Statewide\*



Here, the county level crime data was retrieved at the OPENICPSR, and is based on the Uniform Crime Reporting (UCR) Program Data: County-Level Detailed Arrest and Offense Data. However, OPENICPSR has higher reported occurrences of crimes than the FBI-released numbers, because the FBI revises the data reported to it. Therefore, the crime rates in Figure 11 is higher than FBI-released data for the same counties. Note that statistics for Florida are missing, and there were only 6 of 102 counties reporting crime incidents for Illinois, so college counties in Florida and Illinois are excluded from Figure 11.

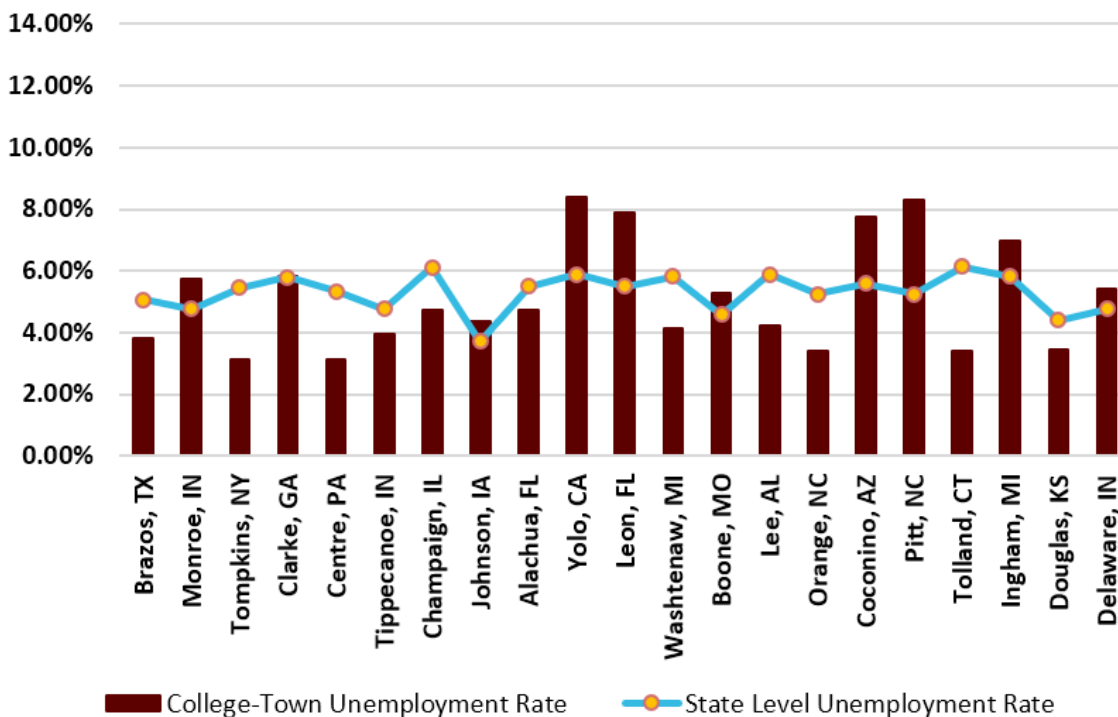
Table 9 reports numbers and results indicating that the crime rate in college counties is nearly the same as their statewide averages, and that the slight difference is not statistically significant. The results show that the crime rate in the available college counties are not significantly different from the state level.

**Table 9.** Crime Rates in College Counties vs. Statewide

	College Town County Crime Rate	State Level Crime Rate
Mean	0.126	0.127
Variance	0.00154	0.00076
Observations	18	14
t Stat	-0.071	
P(T<=t) one-tail	0.472	

*Unemployment rates:* The other area where college towns do not stand out is unemployment rates. In Figure 12 we present the unemployment rate comparison. In total, 9 college counties had higher unemployment rates than their statewide levels, 11 had lower unemployment rates, and in one case they were almost indistinguishable. Table 10 presents the averages across the selected 21 college counties, and while they have slightly lower average unemployment rates than their respective states, the difference is not statistically significant. The college town concept seemingly does not have much influence on shaping economic characteristics, but does influence the perspectives on poverty and demographics.

**Figure 12.** Unemployment Rates in 2017: College-Town Counties vs. Statewide



**Table 10.** Unemployment Rates in College Counties and Statewide

	College-Town Unemployment Rate	State Level Unemployment Rate
Mean	0.0515	0.0533
Variance	0.00031	4.57E-05
Observations	21	16
t Stat	-0.441	
P(T<=t) one-tail	0.331	

### CONCLUDING COMMENTS

College towns —college counties — are different from other areas, mostly in demographics related to age and education level. College students themselves are somewhat more likely to be of Asian ethnicity and are much more likely to have low income as measured by official statistics. Thus, college counties are reported to have high official poverty rates, and are also often reported to have relatively unaffordable housing. Both the high official poverty rates and the unaffordable housing are due to the low income of college students. Whether the official ‘in poverty’ label applied to college students is an apt description of their true state of consumption, and their true command of resources, is debatable. College students receive significant funds from parental and other sources, and college students in many, if not most, cases seem to be able to consume at above-poverty levels. At the very least, anyone reporting poverty statistics or housing affordability statistics for a college town geography should look carefully at the impact of college students on those statistics.

Some aspects of college counties are not dissimilar to other counties in a state. The unemployment rate, the crime rate, and the proportion of immigrants in the population are numerically and statistically similar between college counties and their respective statewide averages.

College towns, idyllic places perhaps, but equally important as a place where the young college student finds consumption exceeding income. Perhaps it is no wonder that many look back fondly at those college years and claim they are the best years of one's life.

### AUTHORS

Dennis W. Jansen is the Director at the Private Enterprise Research Center and a Professor of Economics at Texas A&M University.

Carlos I. Navarro is a Senior Research Associate at the Private Enterprise Research Center. He is a graduate of the Bush School of Government and Public Service at Texas A&M University.

Yuanhang Wang is pursuing his M.S. degree in the Department of Economics at Texas A&M University. A native of China, he received his Bachelor's degree in Economics from Rutgers University.

### REFERENCES

Gumprecht, B. (2003). The American College Town. *Geographical Review*, 93(1), 51-80. Retrieved from <http://www.jstor.org/stable/30033889>

Kaplan, Jacob. Uniform Crime Reporting (UCR) Program Data: County-Level Detailed Arrest and Offense Data. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2019-02-10. <https://doi.org/10.3886/E108164V3>

Ruggles, S; Flood, S; Goeken, R; Grover, J; Meyer, E; Pacas, J; Sobek, M. IPUMS USA: Version 9.0 [dataset]. Minneapolis, MN: IPUMS, 2019. <https://doi.org/10.18128/D010.V9.0>