Colleges and Communities: A Preliminary Analysis of the Impact of Four-Year Colleges and Universities on Communities

Nicholas Brake Western Kentucky University

This study examines all counties in the United States that have four-year colleges and universities and compared the civic, socio-economic, and health factors of college communities compared to those without four-year institutions. The data analyzed, using single factor analysis of variance, provide evidence that counties with colleges and universities have higher levels of civic engagement and social capital, higher median incomes, and lower mid-life mortalities than counties without four-year institutions. The results have implications for municipalities and counties with baccalaureate institutions. The results are particularly important from a policy perspective as institutions face financial challenges from the coronavirus pandemic.

Keywords: college civic engagement, college towns, economic development, liberal arts colleges, social capital, town and gown

INTRODUCTION

The late Senator Daniel Patrick Moynihan is often credited with saying that the way to create a great city is to create a great university and wait 200 years (*The Economist*, 2020, July 23). The economic and social returns on the human capital produced by higher education is well documented. The impact of the externalities of higher education that accrue to local geographic areas is more nebulous. Baccalaureate institutions have always had complicated relationships with the communities that house them. Research about the impact and importance of four-year institutions on the economic, social, political and cultural health of cities and regions reveals a complicated mixture of results—some positive, others negative and most inconclusive.

The pandemic of 2020 will test the impact of four-year colleges on the health of their communities in profound ways. The coronavirus has put higher education in chaos and the future of the "college town" along with it (Liming, 2020). A study by the education consultancy Pantheon-EY found that nearly 40 percent of institutions with fewer than 1,000 students have seen enrollments decline (*The Economist*, 2020, May 20). The financial aid and education data firm Edmit examined financial trends at 937 private universities and found the number of colleges ranked with "Low" financial health — defined as being on track to run out of money within six years — by nearly 50 percent, to 345, more than one-third of all private colleges studied (Carney, 2020). Zemsky (2020) predicts that 20 percent of colleges will either close or merge with others, most of which will be located in small towns or rural areas where the need for higher education is the greatest. Such results will have significant economic implications for communities—especially small cities and college towns with baccalaureate-level colleges.

This study will examine counties in the United States that have four-year baccalaureate colleges and universities and compare the social, civic, economic, and health factors of college communities compared to those without four-year institutions. I hypothesize that the presence of a four-year baccalaureate college in a community, especially small and medium sized cities, have higher levels of social capital, less poverty, higher income levels, less mid-life mortality, and more effective civic engagement than those that do not have baccalaureate institutions.

REVIEW OF LITERATURE

There is overwhelming evidence from studies on the causal effect of college on earnings. Most economists and policymakers know that people with a bachelor's degree earn more than those who have not attended college. The average bachelor's degree contributes \$278,000 more to local economies than high school graduates (Rothwell, 2015). Many economists have noted the high correlation between regional economic growth and higher education attainment. Glaesser (2004, 2000, 1999), Golden and Katz (2007), Moretti (2003) and Florida (2002) have explored this relationship in great depth. In addition to the effect of overall human capital on the economy of a city, Moretti (2003) identified several externalities such as social, political and public health returns that accrue to local geographic areas as a result of increased human capital. Universities are themselves generators of human capital. They attract and produce two primary types of talent—students and faculty. Regions that can retain these locally produced goods gain competitive advantage. Rothwell (2015) indicated that, nationally, 42 percent of four-year college alumni remain in the community of the college after graduation. Students represent the core production of universities. But faculty members are important talents in their own right. (Florida, 2006).

Despite this evidence, disagreements remain about the direct impact of colleges and universities on communities in which they are located. Siegfried, et al. (2008) reviewed economic impact studies of 138 colleges and universities since 1992 and determined that many make exaggerated claims about their economic impact in their communities. While the spillover social benefits of students that remain in the community after graduation is hard to fully measure, the impact of human capital production is much larger in smaller regions compared to large urban areas. Carnevale and Cheah (2020) studied the 40-year return on investment of college graduates and found significant levels of ROI for graduates of doctoral institutions and highly selective liberal arts colleges. Valero and Reenen (2019) examined nearly 15,000 universities in 1,500 regions and found a positive association with future growth of GDP per capita. Steinacker (2005) found a significant impact of small colleges within their surrounding neighborhood, even in larger urban areas.

The college and university as an economic driver extends beyond the development of human capital to business formation and leadership in community and economic development. Florida, et al. (2006) suggest the changing role of the university is bound up with the broader shift from an older industrial economy to an emerging creative economy. They emphasize the importance of universities in the transfer of research to industry, the generation of new inventions and patents, and spin-off of its technology in the form of startup companies. As such, there has been a movement in the U.S. and around the world to make universities "engines of innovation," and to enhance their ability to commercialize their research. Universities have largely adopted this model, in part, because it makes their work more economically relevant.

But not everyone agrees. Levine (2009) calls the entrepreneurial university a failed promise. His case study reviewed the relationship between research universities and local economic development in 55 major US regions finding no meaningful correlation between any gauges of entrepreneurial activity and core measures of city or regional well-being. The success stories according to Levine are confined to powerhouse regions in Silicon Valley, Route 128 in Boston or through world class institutions such as Johns Hopkins, MIT, and Yale. In other places, the potential for entrepreneurial development has been "vastly oversold" (Levine, 2009).

The research from Florida (2018) and Levine (2009) is mainly applicable to large research universities, especially those in large urban centers like the Bay Area and Boston. Globalization and technology have

transformed the economic development landscape for small cities, especially those in the Rust Belt and Midwest served primarily by small baccalaureate colleges or regional universities. These institutions are playing an increasingly important role in community leadership in the postindustrial era. The breakdown of the working class and the end of civic capitalism, like that which existed in the early and middle 20th century, stripped small communities of the institutional leadership of banks, large businesses and manufacturers (Rost, 1993). Colleges and universities have been among the few institutions left to provide the kind of civic leadership once assumed by business and industry (Goeppinger ,2002).

Universities and colleges are increasingly playing a more prominent role in shaping regional, social and economic policy in the communities they serve (Massey, et al., 2014). Research shows that university leadership plays a key role in establishing positive relationships to help students build experiential relationships in their localities and make them more than likely to stay after graduation.

Positive "town and gown" relations are more than just employment of graduates, Lazzeroni and Piccaluga (2014) indicate that colleges and universities are more active in performing new activities aside from those considered "traditional." The status of the university in regional and urban contexts is having an increased impact on development of small and medium size cities, which is redefining the relationship between academia and local community (O'Mara 2010).

Renn (2017) demonstrates that this role has become very important for small colleges and small communities. Economic change has created a more competitive environment for small cities and small colleges. As a result, the two are collaborating like never before. "The days of the standalone campus separated from the community is no longer the preferred model, colleges want to engage with their community" (Renn, 2017). McGrail (2013) offers a similar assessment with a case study of the role of the university in the economic transformation of Bethlehem, Pennsylvania from a steel town to a college town from the mid-1990s to 2010.

There are numerous other examples of the role colleges play in the transformation of small communities from company town to college town. The idea of the college town is a uniquely American almost Romantic concept. But it does lead to questions about the definition of a collet town and the difference between a college town and a small city with the presence of a baccalaureate college in the community. Liming (2020) calls college towns "microcosmic symbols of American civic life where the whole gamut of democratic interactions feels present and accessible." Gumprecht (2003) quantified the idea of the college town and compared the demographics of 59 college towns to the overall US population and US small urban areas with a population between 25,0000 and 50,000. These cities include unusual densities of young people, a highly educated workforce, a mobile cosmopolitan, yet, transient population, and the college or university is the dominant institution--often the largest employer--within an aesthetic campus environment.

Despite the image, town and gown relations have not always been rosy. Many conflicts date back centuries in some of the earliest college towns-- Oxford and Cambridge-- where unruly students would often be in conflict with townspeople (Gann, 2010). Such challenges remain a core issue in college towns, Baker-Minkel, et al., (2004) found the fiscal impact of colleges on municipal governments to be mainly negative that led to recurring issues, even legal battles. Studies have also found mixed reviews when it comes to some economic indicators and inequality issues centered around the elitism sometimes associated with colleges. Bass (2008) found no difference in the household income of college towns compared to non-college town residents in a paired sample study of small towns in the northeast. Maranto and Dean (2015) found achievement gaps suggesting a level of inequality of K-12 schools in college towns compared to non-college towns.

Much research has been narrowly focused, using small samples or case studies of the characteristics of selected college towns or regions. The American Community Project (ACP) based at the George Washington University School of Media and Public Affairs (2020) has used extensive data to quantify the characteristics of all 3,143 counties in the US. "College towns" are one of the 15 community-types included in ACP. The 154 counties classified as ACP college towns are mostly small to medium-sized metropolitan or micropolitan areas, with an average population of about 120,000. About eight percent of the population is between the ages of 18 and 21 — far higher than any other community type. While incomes tend to lag the national average because of the large student populations, access to healthcare in these communities is

more prevalent than in other places, with nearly 200 fewer people per primary care physician than the national average. It is not surprising that they hold a large number of college graduates; 36 percent of their population have at least a bachelor's degree, more than any other community type. They are also less diverse than the nation as a whole, about 82 percent white, four percent black and five percent Hispanic.

The college towns identified by Gumprecht (2003) and the American Community Project (2019) are the cities and regions with very high concentrations of college students and institutions that are dominant in each community's ecosystem. But the regions identified in each study are not the not only small cities with colleges or a college ecosystem. Out of all 3,143 counties in the US, 772 have at least one baccalaureate level four-year college or university.

This study will examine selected characteristics of not only counties identified as "college towns," but also all counties in the US with four-year institutions. It seeks to provide a comprehensive perspective on the role that colleges and universities play in the overall health of their communities, particularly small and medium sized cities. The study will compare outcomes from counties with baccalaureate level four-year institutions and those without any four-year college or university.

METHODOLOGY

This study will use existing data from the Social Capital Project and the US Census Bureau. The study will use four factors, civic engagement, economics, education, and mortality outcomes. The treatment factors are counties in the United States with a four-year college or university and counties designated by the American Community Project (ACP) as "college towns." The study will address the following research questions:

- 1. Civic engagement, as measured by the Social Capital Project Institutional Health Index, is higher in "college towns" and counties that have four-year colleges and universities compared to counties that do not have four-year institutions.
- 2. The median household income is higher in "college towns" and counties that have four-year colleges and universities compared to counties that do not have four-year institutions.
- 3. The poverty rate is lower in "college towns" and counties that have four-year colleges and universities compared to counties that do not have four-year institutions.
- 4. The mortality rate of "deaths of despair" is lower in "college towns" and counties that have four-year colleges and universities compared to counties that do not have four-year institutions.
- 5. The bachelor's degree attainment rate is higher in "college towns" and counties that have four-year colleges and universities compared to counties that do not have four-year institutions.

The existing data for this study came from the database downloaded from the Social Capital Project and the American Community Project websites. The measure of civic engagement uses the county-level Institutional Health sub index from the Social Capital Project prepared for the Joint Economic Committee of the United States Senate (2018). The index is based on the following measures: average county-level participation of voting over 2012 and 2016 elections based on the US Election Administration and Voting Survey collected in the American Community Survey by the US Census Bureau; the mail-back response county-level response rate for the 2010 census collected by the US Census Bureau; and the Confidence in Institutions sub index from the Volunteer Supplement to the November 2013 Current Population Survey. To track the reliability and validity of the institutional health index, population-weighted state averages across a state's counties and compared them to the state-level institutional health index. The version that correlated most strongly included presidential voting rates (weight of 0.63), census response rates (0.41), and the confidence sub index (0.66), accounting for 44 percent of the variability in those three measures. The correlation of the population-weighted state average across counties with the state-level institutional health sub index was 0.98.

The Penn State social capital index, which expanded on the work of Putnam (2000) on the concept of social capital, was used to compare the reliability of the Institutional Health measure. The correlation of the two indices is 0.43 (Joint Economic Committee Report, 2018).

Economic data was taken from the Social Capital Project database. The median household income and poverty rate data was collected from the US Census Bureau, American Community Survey, five-year estimate, 2012-2016.

Bachelor's degree attainment data was also captured from the Social Capital Project database, using data from the US Census Bureau, American Community Survey, five-year estimate, 2012-2016. The "deaths of despair" indicator stems from the work of Case and Deaton (2015) emphasizing the increased mortality rate—especially mid-life mortality from substance abuse, mental health problems, and suicide. The mortality rate from "deaths of despair" data came from the US Centers for Disease Control and Prevention (2015).

Social capital data (Putnam, 2000), bachelor's degree attainment (Moretti, 2003) and "deaths of despair" (Case and Deaton, 2015) are heavily relied upon in this study because they serve as proxy measures for several factors of overall community health, quality of life, as well as demographic health indicators and mid-life mortality.

The "college towns" used for the study were downloaded from the American Community Project data file located on the website. The 154 counties classified as "college towns" were then matched using their county FIPS codes with the county-level data from the Social Capital Project database file. In order to emphasize the importance of colleges and universities in medium sized and small cities, the counties identified by ACP as "big cities," which are counties that encompass the 47 largest metropolitan areas in the US were excluded from this analysis. Other counties with colleges or universities not included in the 154 ACP "college towns" were identified manually using the Carnegie Classification of Institutions of Higher Education website. A list of all colleges in each state and their classification from the Carnegie Classifications from public and private, non-profit, baccalaureate colleges, master's colleges and universities, and doctoral universities was coded into the data file for each county. For-profit and career-based institutions were not counted as four-year colleges or universities. Institutions were classified using four codes, baccalaureate colleges, master's colleges and universities, highly selective colleges with an arts and sciences emphasis (liberal arts), and research universities.

The data were analyzed using a single factor analysis of variance to determine if there is a statistically significant difference between the variance in the data outcomes for college towns and counties without four-year institutions. Single factor ANOVAs will also be run to determine if there is a statistically significant difference between the variance in the data outcomes for counties with baccalaureate institutions and counties without four-year colleges or universities. Post-hoc tests using Tukey HSD/Kramer was used to further determine the significance of the variance between each college classification (baccalaureate, university, highly selective liberal arts, and research universities) compared to counties without four-year institutions. The data was analyzed using the Real Statistic add-on application to Microsoft Excel. The Levene's test for equality of variances was conducted to confirm that equal variances are not assumed.

RESULTS

Below you will find descriptive information, ANOVA, and post-hoc test results for the analysis of all counties with baccalaureate institutions as well as the analysis of "college towns."

For the institutional health index used to measure civic engagement for the first factor there was a significant main effect for the treatment variable, counties with a four-year college or university, F(4, 3,205) = 12.96, p = >0.01. Post hoc comparisons using the Tukey HSD test indicated that the mean score for counties with three of the four types of colleges and universities (baccalaureate college M = 0.10, liberal arts college M = 0.58, and research university M = 0.15) was statistically significantly higher than counties with no college (M = -0.02). The mean for the university was statically significantly lower than counties without a four-year institution (M = -0.17)

Median household income and poverty rate used to measure the economic indicators for the second dependent variable there was a statistically significant difference, F(4, 3,237) = 30.36, p = >0.01 for household income and F(4, 3,237) = 11.63, p = >0.01 for poverty rate. Post hoc comparisons using the Tukey HSD test indicated that the mean score in median household income for counties with any type of

four-year college or university (baccalaureate college M = \$49,782, university M = \$48,866, highly selective arts and science college M = \$56,094, and research university M = \$54,459) was significantly different than counties with no college (M = \$43,774). However, post-hoc tests point to a different conclusion in comparing poverty rates of counties with universities and research universities. Both institutions have statistically different rates of poverty that are higher (universities M = 18.1 percent, research universities M = 17.9 percent) than all other counties, including those with no four-year college (M = 16.4 percent). The poverty rate of baccalaureate colleges did not significantly differ from counties with no four-year college (M= 16 percent). Only highly selective colleges with an arts and science focus had a rate of poverty that was statistically significantly lower than counties with no college (M = 13.8 percent, t = 5.78, p = >0.01).

TABLE 1 SINGLE FACTOR ANOVA COMPAING THE CIVIC, ECONOMIC AND SOCIAL OUTCOMES IN U.S. COUNTIES WITH AND WITHOUT FOUR-YEAR INSTITUTIONS

		Sum of Squares				
		1	df	Mean Square	\mathbf{F}	Sig
Institutional Health	Between Groups	50.92	4	12.73	12.96	>0.01
Index	Within Groups	3146.02	3205	0.98		
(IHI)	Total	3197.02	3209	0.99		
	Between Groups	18,132	4	4533,097,225	30.36	>0.01
Median Household	Within Groups	48,279	3233	149,333,107		
Income	Total	50,093	3237	154,750,177		
(MHI)						
Poverty	Between Groups	1983.01	4	495.75	11.63	>0.01
(Pov)	Within Groups	137,872.6	3,235	42.62		
	Total	1398,55.6	3,239	43.18		
Mortality "deaths	Between Groups	40,284.08	4	10,071.02	20.37	>0.01
of despair"	Within Groups	687,800.43	1,391	494.46		
(Mdd)	Total	728,084.5	1,395	521.92		
Bachelor's degree	Between Groups	94,101.72	4	23525.43	391.95	>0.01
Attainment (BA)	Within Groups	194,168.26	3235	60.021		
	Total	288,269.97	3239	88.99		

Unsurprisingly, there is a statistically significant difference between bachelor's degree attainment rates in all counties with a four-year college or university compared to those without four-year institutions, F(4,3,239) = 391.95, p = >0.01. Based on post-hoc comparisons using the Tukey HSD test, the mean bachelor's attainment rate was significantly higher for every type of college or university compared to those without such institutions.

Mortality rates or "deaths of despair" was used as a proxy health indicator for the last factor. There was a statistically significant difference as well, F(4, 1,395) = 20.37, p = >0.01. Post hoc comparisons using the Tukey HSD test indicated that the mean "deaths of despair" per 100,000 for counties with any type of fouryear college or university (baccalaureate college M = 56.24, university M = 56.44, highly selective arts and science college M = 50.15, and research university M = 47.66) was significantly different than counties with no college (M = 63.34).

For the second treatment variable, counties designated by the American Community Project as "college towns" there was statistically significant difference for three out of four factors analyzed using the single factor ANOVA. For the institutional health index, F(1, 2,493) = 4.90, p = 0.027, the mean difference was the lower than household income, F(1, 2.521) = 10.81, p = 0.001, and "deaths of despair," F(1, 847)= 27.6, p < 0.00.

TABLE 2
SINGLE FACTOR ANOVA COMPARING THE CIVIC, ECONOMIC AND SOCIAL OUTCOMES OF COLLEGE TOWNS AND COUNTIES WITH AND WITHOUT FOUR-YEAR INSTITUTIONS

		Sum of		Mean		
		Squares	df	Square	\mathbf{F}	Sig
Institutional	Between Groups	5.07	1	5.07	4.90	0.027
Health Index	Within Groups	2583.37	2492	1.04		
	Total	2588.44	2493	1.04		
Median	Between Groups	1,552,331,02	1	1,552,331,02	10.81	0.001
Household	•	9		9		
Income	Within Groups	3,6184	2520	143,585,470		
	Total	1,552,336,83	2521	144,144,274		
		4				
Poverty	Between Groups	568.65	1	568.65	12.98	0.000
•	Within Groups	11,0519.10	2522	43.82		
	Total	11,1087.75	2523	44.03		
Mortality	Between Groups	15,560.68	1	155,60.68	27.60	0.000
"deaths of	Within Groups	476,970.92	846	563.80		
despair"	Total	49,2531.59	847	581.50		
•		•				
Bachelor's	Between Groups	39,196.70	1	39,196.70	674.84	0.000
Degree	Within Groups	146,483.84	2522	58.08		
Attainment	Total	185,680.55	2523	73.60		
		· · · · · · · · · · · · · · · · · · ·				

The largest difference was in bachelor's degree attainment, F(1, 2,522) = 674.84, p < 0.00. Similar to the analysis of all counties with colleges, the poverty rate for "college towns" is significantly higher than counties without four-year colleges and universities, F(1, 2,523) = 12.98, p < 0.00.

DISCUSSION

The data analyzed in this preliminary study provide evidence on a national scale that counties with colleges and universities tend to have better civic, economic, social, and health outcomes than counties without four-year institutions. The results have implications for importance of county governments, economic development professionals and municipalities working with baccalaureate colleges and universities for community development and town and gown strategies. The same can be said about the importance of colleges engaging in new and productive ways at the community level. There are also policy implications for addressing many of the challenges facing small private institutions.

This is important information at a time when colleges and universities are facing serious financial challenges as a result of the coronavirus pandemic. Liming (2020) predicts that the pandemic could be the beginning of a shift away from the importance of college towns as unique physical spaces within Americana. Florida and Selingo (2020) emphasized the challenged face by urban universities. Bruni (2020) predicted the end of college as we know it.

Many industries, ranging from airlines to restaurants, are receiving bailouts to abate the economic effects of the pandemic. Colleges have been left out of this equation, in part, because they have been maligned by conservative politicians for elitism and their hefty price tag (Bruni, 2020). Even the debt incurred by college students facing a foreboding job market, have been left out of the relief measures (Karisch, 2020).

While many argue that the four-year institutions need reform and cost saving measures such as more efficient, three-year degrees. Zemsky (2020) says many are failing because of the combination of demographics as well as antiquated teaching methods, out-of-touch faculty and outdated curriculum. However, allowing the pandemic to undermine the foundation of traditional colleges will be hurtful to the communities they where they reside. Communities have a vested interest in not letting colleges fail and a vested interest in advocating for funding and seeing to the fiscal health of colleges much the way they would work to save a major employer in business and industry.

The current economic circumstances on top of existing financial challenges have been particularly acute for small, private colleges. The results of this research call particular attention to the importance of these institutions, many of which are located in small or medium sized communities. Based on the data in this analysis, highly selective liberal arts colleges had statistically significant outcomes compared counties without a college or university on all indicators. Baccalaureate colleges performed nearly as well, with statistically significant results on all factors except poverty rate. Baccalaureate colleges play a major role in overall health and welfare of small cities, as such communities should nurture relationship with college and involve the institution in the economic and community development strategy. Best practice in many "college towns" has been to involve the college or university as a public-private sector partnership-driven in community leadership, effectively filling the void of industrial leadership in many areas that have seen an exodus of private sector jobs.

This is especially important with the rural small-town brain drain issue. Kefalas and Carr (2009) and Carney (2019) describe the brain drain of young people leaving small communities as a key factor of economic dislocation and the population crisis. Small towns need to be retooled for the global economic order and colleges remain the most important partner in stemming the tide of the brain drain.

There are several limitations to this study. The causal comparative nature of the analysis is a limitation, showing cause and effect would require a more quasi-experimental model that would match "college towns" and counties with four-year institutions with geographically and demographically similar counties for a more robust comparison. More sophisticated data analysis to sort out the predictive power of colleges and universities compared to other indicators of community well-being would be a natural progression from these preliminary data. This study reviewed prior research that utilized paired-sample and predictive models, but the scope and scale of the studies were limited to single regions of the US or a select few institutions. More research is need in this area, specially focusing on middle American counties in the Rust Belt and Appalachia.

The use of only a few proxy measures of data are another limitation of the study. There is an abundance of available data to further evaluate the civic, economic, and social outcomes of four-year college counties compared to non-college communities. Further analysis of additional data would paint a more complete picture. The use of the data points as proxy measures also has some limitations as well. While county level data measuring social capital may be the best available datapoint to serve as a proxy for civic engagement, there is an abundance of research both supporting and refuting the concept of quantifying and measuring a store of capital for civic and social goods (Claridge, 2004). The datapoints available for mortality and "deaths of despair" is not available for all counties with the same consistency of the other data sets used in the analysis. Of the 3,143 counties with data available in the Social Capital Project data file downloaded, 1,396 had available data for "deaths of despair."

The results from this study highlight the need for more research about the influence of colleges on their communities. Prior research along with the fact that that all college counties except those with highly selective liberal arts college had higher poverty rates than non-college counties shows the need to further explore the impact of colleges on inequality in college communities. This topic could benefit from qualitative research to more deeply delve into areas such as leadership, economic development, civic activities and other factors where colleges make a difference in communities.

Over the past several decades, colleges and universities have committed themselves to greater engagement in their communities. They are increasingly seen as anchor institutions —whose physical presence is integral to the social, cultural, and economic wellbeing of the community. Understanding that their fortunes are tied in part to those of their neighbors and physical surroundings, many have expanded

their efforts to engage new partners and address pressing community issues. In the process, they are broadening the education of students, improving neighborhoods and cities, helping strengthen other anchor institutions, and informing and advancing the larger society. Measuring the size and significance of that impact, however, has remained an elusive quest. Previous case studies have captured a part of those efforts, which can be cobbled together to portray the accomplishments of selected institutions in their city or region but cannot demonstrate the comprehensive impact of all four-year colleges and universities. While more sophisticated analysis is needed, the data reviewed in this research provides some preliminary evidence on a national scale of how communities with colleges benefit not only from the human capital aspect of their institutional mission but from enhanced civic capacity and other social and economic benefits from the presence of a college in their community.

REFERENCES

- Baker-Minkel, K., Moody, J., & Kieser, W. (2004, Fall). Town and gown. *Economic Development Journal*, pp. 8-15.
- Bass, J.A. (2008). *Income differences in small college and noncollege towns in the northeast*. Durham, NH: Northeast Business and Economic Association.
- Bruni, F. (2020, June 4). The end of college as we knew it? *The New York Times*. Retrieved from https://www.nytimes.com/2020/06/04/opinion/sunday/coronavirus-college-humanities.html
- Carey, K. (2020, May 28). Risky strategy by many private colleges leaves them exposed. *The New York Times*. Retrieved from https://www.nytimes.com/2020/05/26/upshot/virus-colleges-risky-strategy.html
- Carnegie Classification of Institutions of Higher Education. (2020). *Carnegie classification summary tables*. Retrieved from https://carnegieclassifications.iu.edu/downloads.php
- Carnevale, A., Cheah, B., & Van Der Vert, M. (2020). *ROI of liberal arts colleges: Value adds up over time*. Washington DC: Center for Workforce and Education, Georgetown University. Retrieved from https://lgyhoq479ufd3yna29x7ubjn-wpengine.netdna-ssl.com/wp-content/uploads/Liberal-Arts-ROI.pdf
- Carney, T. (2019). *Alienated America: Why some places thrive while others collapse*. New York: Harper Collins.
- Case, A., & Deaton, A. (2015). Rising morbidity and mortality, US whites. *Proceedings of the National Academy of Sciences*, 112(49), 15078-15083. DOI: 10.1073/pnas.1518393112
- Claridge, T. (2004). *Social Capital and Natural Resource Management: An important role for social capital?* [Unpublished Thesis]. Brisbane, Australia: University of Queensland.
- Florida, R. (2002). The rise of the creative class: And how it is transforming, work, community and leisure. New York: Basic Books.
- Florida, R. (2018). The new urban crisis. New York: Basic Books.
- Florida, R., & Selingo, J. (2020, May 11). A crisis for the urban university. *Wall Street Journal*. Retrieved from https://www.wsj.com/articles/a-crisis-for-urban-universities-11588867157
- Florida, R., Gates, G., Knudsen, B., & Stolarick, K. (2006). *The university and the creative economy*. Retrieved from
 - http://creativeclass.com/rfcgdb/articles/University andthe Creative Economy.pdf
- Gann, J.L. (2010). Beyond the research park. *Economic Development Journal*, *9*(3), 39-48. Retrieved from https://login.libsrv.wku.edu/login?qurl=https%3A%2F%2Fsearch.proquest.com%2Fdocview%2F 759548531%3Faccountid%3D15150
- Glaeser, E. (1999). Learning in cities. *Journal of Urban Economics*, *46*(2), 254-277. https://doi.org/10.1006/juec.1998.2121
- Glaeser, E. (2000a). The New Economics of Urban and Regional Growth. In G. Clark, M. Gertler, & S. Feldman (Eds.), *The Oxford Handbook of Economic Geography* (pp. 83-98). New York: Oxford University Press.

- Glaeser, E. (2000b). The Future of Urban Research: Non-Market Interactions. In W. Gale & J. Rothenberg-Pack (Eds.), Wharton Papers on Urban Affairs (pp. 101-149). Washington DC: The Brookings Institution.
- Glaeser, E., & Saiz, A. (2004). The Rise of the Skilled City. Brookings-Wharton Papers on Urban Affairsm, 5, 47-94. DOI: 10.3386/w10191
- Goeppinger, A. (2002). The fallacies of our reality: A deconstructive look at community and leadership. *International Journal of Leadership in Education*, 5(1), 77-83. https://doi.org/10.1080/13603120110090689
- Goldin, C., & Katz, L. (2007). The race between education and technology: The evolution of US wage differentials, 1890-2005. Cambridge, MA: National Bureau of Economic Research, Working Paper 12984. Retrieved from http://www.nber.org/papers/w12984
- Gumprecht, B. (2003). The American college town. Geographical Review, 93(1), 51-80. https://doi.org/10.1111/j.1931-0846.2003.tb00020.x
- Joint Economic Committee, US Congress. (2018). Geography of Social Capital in the US. Washington DC: Social Capital Project, SCP Report 1-18. Retrieved from https://www.lee.senate.gov/public/cache/files/da64fdb7-3b2e-40d4-b9e3-07001b81ec31/thegeography-of-social-capital.pdf
- Joint Economic Committee, US Congress. (2018). Supplemental data for social capital index. Retrieved from https://www.jec.senate.gov/public/index.cfm/republicans/2018/4/supplemental-data-forsocial-capital-index
- Karisch, K. (2020, June 3). Why are student loan borrowers being kept out of the coronavirus relief? Washington Monthly. Retrieved from https://washingtonmonthly.com/2020/06/03/why-arestudent-loan-borrowers-bing-kept-out-of-the-coronavirus-relief?/
- Kefalas, M., & Carr, P. (2009). Hollowing out the middle: The rural brain drain and what it means for America. Boston: Beacon Press.
- Lazzeroni, M., & Piccaluga, A. (2015). Beyond town and gown: the role of universities in small and medium sized cities. Industry and Higher Education, 29(1), 11-23. https://doi.org/10.5367/ihe.2015.0241
- Levine, M.V. (2009). The False Promise of the Entrepreneurial University. Center for Economic Development Publications, 26. Retrieved from https://dc.uwm.edu/ced_pubs/26
- Liming, S. (2020, April 17). Town and gown gone. The Chronicle of Higher Education, 14. Retrieved from https://www.chronicle.com/issue/2020/04-17
- Maranto, R., & Dean, J. (2015). Not separate and not equal? Attainment and equity in college towns. Social Science Ouarterly, 96(4), 985-995. https://doi.org/10.1111/ssqu.12174
- Massey, J., Field, S., & Chan, Y. (2014). Partnering for economic development: How town and gown relations impact local economic development in small and medium sized cities. Canadian Journal of Higher Education, 44(2), 159-169.
- McGrail, F.J. (2013). Lehigh University and Bethlehem, Pennsylvania: Partnering to transform a steel town into a college town. Journal of Higher Education, 17(3), 91-108.
- O'Mara, M.P. (2010, July 30). Beyond town and gown: University economic engagement and the legacy of the urban crisis. Journal of Technology Transfer. DOI 10.1007/s10961-010-9185-4
- Pigg, K. (1999). Community leadership and community theory: A practical synthesis. Journal of Community Development, 30(2), 196-212. https://doi.org/10.1080/15575339909489721
- Putnam, R. (2000). Bowling alone: The collapse and revival of American community. New York: Simon Shuster.
- Reeves, R. (2017). Dream hoarders: How the American upper middle class is leaving everyone else in the dust. Washington DC: Brookings Institution.
- Renn, A. (2017, March). Town and gown goes downscale. Governing, pp. 22-24.
- Rost, J.D. (1993). Leadership development in the new millennium. *Journal of Leadership Studies*, 1(1), 91-110. https://doi.org/10.1177/107179199300100109

- Rothwell, J. (2105). What colleges do for local economies: A direct measure based on consumption. Washington DC: The Brookings Institution. Retrieved from https://www.brookings.edu/research/what-colleges-do-for-local-economies-a-direct-measurebased-on-consumption/
- School of Media and Public Affairs at George Washington University. (2020). American Community Project: College Towns. Retrieved from https://www.americancommunities.org/communitytype/college-towns/
- School of Media and Public Affairs at George Washington University. (2020). American Community Project: Methodology and community typology by county. Retrieved from https://www.americancommunities.org/methodology/
- Siggfried, J., Sanderson, A.R., & McHenry, P. (2008). The economic impact of colleges and universities. Change, 26(5), 546-558. DOI: 10.1016/j.econedurev.2006.07.010
- Steinacker, A. (2005). Economic impact of urban colleges on their surrounding communities. Urban Studies, 42(7), 1161-1175. DOI: 10.1080/00420980500121335
- The Economist. (2020, July 23). From rustbelt to brainbelt: How higher education can drive prosperity. Retrieved from https://www.economist.com/special-report/2020/07/23/from-rustbelt-to-brainbelt
- The Economist. (2020, May 30). College Blues, 24. Retrieved from https://www.economist.com/unitedstates/2020/05/28/could-a-fifth-of-americas-colleges-really-face-the-chop
- Zemsky, R., Shaman, S., & Baldridge, S.C. (2020). The college stress test: Tracking institutional failures in a crowded market. Baltimore: Johns Hopkins University Press.