Affordable, sustainable local economic research for small urban areas: 22 years of evolution and refinement

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Abstract

This article details the evolution and refinement of a low-cost study of economic conditions in a small metropolitan area over the past 22 years. Annually, the chamber of commerce of the study area collaborates with faculty members at a local university to conduct the research, which is shared with business and community leaders at a regional economic summit. The study addresses the unique information needs for a local economy that are not filled by existing federal and state data. Specific measures include projected changes in employment and an "optimism scale" for local organizations. Over time, the study's methodology has evolved from a paper survey to include an online survey option, as well as the addition of new measures to address changing community needs. The approach is technically and financially sustainable and within the reach of local organizations with modest research budgets. The study could be adopted easily in other small communities.

Keywords

Local economic research, sustainable research, affordable research

Twenty two years ago, a unique research study was presented for the first time, reporting on the economic climate of the small community of Johnstown, Pennsylvania. Johnstown's Metropolitan Statistical Area (MSA) consists of Cambria County and is located in a mountainous, largely rural area of west-central Pennsylvania, about 70 miles east of Pittsburgh. The total population of Cambria County is 136,411, ranking it 295th among the nation's 381 MSAs (U.S. Census Bureau, 2016a).

The project was originally conceived at the grassroots level based upon feedback from members of the Greater Johnstown/Cambria County Chamber of Commerce (GJ/CCCC). Many Chamber members are small businesses facing a tough postindustrial economy that is struggling with the

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out-migration of residents and jobs (O'Hara, 2001). One recurring theme the GJ/CCCC heard from its constituents was the need for *localized* market research information on projected *future* economic conditions. This contrasted with data that was typically available to local policy makers, in Johnstown's case, from the Commonwealth of Pennsylvania and the U.S. Federal Reserve Bank. Unfortunately, the Commonwealth's most relevant data, employment statistics, are available only *after* the fact. The Federal Reserve's regional economic outlooks do provide forward-looking data, but the Johnstown areas falls within the Philadelphia regional office's geography, an area that includes the large urban areas of eastern Pennsylvania, Washington, D.C., southern New Jersey, and Delaware (Federal Reserve Board, 2015). Unfortunately, these data tend to have little *local* relevance for small businesses in the rugged, isolated Allegheny Mountains surrounding Johnstown.

For the past 22 years, the GJ/CCCC has addressed this data gap by collaborating with faculty members at a local university to conduct the research described in this article, the Greater Johnstown Economic Climate Study.

Literature review

Sources of local economic data

As noted above, researchers investigating existing literature on local economic conditions in smaller cities face a paradox. On one hand, researchers have free access to excellent research reports from the U.S. Census Bureau's Economic Census. Using the American FactFinder utility, researchers can collect many useful insights, including the number of establishments, payroll, and number of employees in these establishments (U.S. Census Bureau, 2016b) on a county, city, and metropolitan area level.

Many states also have excellent resources that can provide researchers with additional insights into employment and unemployment rate statistics statewide and by county, such as the PA WorkStats database offered by the Commonwealth of Pennsylvania's Department of Labor and Industry (Commonwealth of Pennsylvania, 2015). Another helpful database for local policymakers is the Cost of Living Index developed by the Council for Community and Economic Research (C2ER). Although this tool does not examine employment or other economic measures, it does measure "relative price levels for consumer goods and services in participating areas" (Council for Community and Economic Research, 2015, p. i). The key limitation of this source is that only the top 271 metro areas in the nation are measured (missing smaller areas, including Johnstown). Finally, the National Neighborhood Indicators Project (NNIP) attempts to narrow the focus to an even more micro level: economic and social conditions within selected city neighborhoods. This project has grown from seven pilot cities (Sawicki and Flynn, 1996) to 31 today (NNIP, 2015). The goal of this project is to demonstrate that collecting and sharing data on local communities "can be operated on an ongoing basis at a level that can be locally self-sustaining" (NNIP, 2015, NNIP Concept page). This is a very promising source of data, but its limitation is that it is only available for the 31 participating cities, which does not include the Johnstown area.

All of these existing tools can be helpful sources of information to policymakers in smaller cities and towns. However, the literature is somewhat limited on research into local community and economic development factors that are unique to smaller metropolitan areas. One important exception is the qualitative study conducted by Mayer and Greenberg (2001), who used existing secondary data from the U.S.

Census Bureau, combined with interviews of local officials and community leaders in 34 smaller towns across the U.S. that had suffered economic disruption due to the decline in a dominant local business. This study has a direct connection to the present research because Mayer and Greenberg identified Johnstown, PA as one of their study "boom and bust" cities (Mayer and Greenberg, 2001). They found that the departure of these major employers often created such an economic shock that many of the communities struggled with developing a new shared vision and leadership that lasted for 10 to as many as 30 years after the economic event. This is certainly the case in the longitudinal study of Johnstown, as is the quote from Mayer and Greenberg's article: "In that time these cities experienced losses in population of from 20% to as much as 50%" (Mayer and Greenberg, 2001: 207). In the case of Johnstown, an analysis of U.S. Census Bureau data by Mather et al. (2011) indicated that the city's metropolitan area was the fourth fastest-declining region in the U.S. during the 2000–2010 period, losing 5.9% of its population while population of the nation as a whole grew by 9.7% (Mather et al., 2011).

Another important study was conducted by Erickcek and McKinney (2006), who analyzed social, economic, and demographic factors in 267 smaller metropolitan areas that had populations of one million or less in the era between 1990 and 2000. They examined these variables across a list of eight clusters identified ranging from "old economy places in slow decline" to "growing university/government/business complexes." They found that some cities performed better than expected on these variables ("winners") and some worse than expected ("losers"). They estimated that about 70% of a city's current performance was due to factors that existed in the region prior to 1990, but that the remaining variance may be due to other factors

including deliberate local policies. This study also has direct application to the Johnstown area because Erickcek and McKinney identified Johnstown as part of the "old economy places in slow decline" metro cluster and found that Johnstown was one of the "winners" in their analysis, ranking 48 in this group, out of 125 metro areas that performed better than predicted in their model.

Friedhoff et al. (2010) also examined a group of 114 metropolitan areas that specialized in manufacturing in 1980 and then lost manufacturing jobs in the 1980–2005 period. This study also has a direct connection to Johnstown, since the metro area was included in their analysis. This study found that Johnstown's total job loss in the period was low (−0.1%), but that the change in manufacturing jobs was catastrophic (−63.8%) ranking it the worst among the 114 study areas. The study also found that the Johnstown area suffered the second greatest decline in inflation-adjusted wages in the study period (−11.8%), behind only Longview, Washington (Friedhoff et al., 2010).

Among the research into specific geographic areas, Gibson and Glenn (2000) studied the Round Valley area of Arizona. Their study combined secondary data (population, school enrollments, building permits, sales tax, and employment) with primary data collected in a survey of 249 businesses in 1988 and repeated with 293 establishments in 1999. This approach provided a "rare glimpse into the workings of a regional economic system" (Gibson and Glenn, 2000: 5) that was not otherwise available from existing data sources.

Mallach (2012) examined the economies of 13 small cities located within the geography of the Federal Reserve's Philadelphia regional office. Although Johnstown is included in this geography, it was not included in this analysis. Koo (2005) examined economic conditions in the Cleveland metropolitan area

with a special emphasis on occupation data, and Fey et al. (2006) used secondary data and qualitative site visits to examine 57 small communities in an effort to determine how these areas can use external financial investments to improve their overall well-being.

Need for more localized research

These efforts are to be applauded, but the literature includes calls for more work in this research area. For example, Bartik (2012) suggests that research is essential in cities like Johnstown because "some of the areas hardest hit by the Great Recession are likely to have trouble getting back to full employment" (Bartik, 2012: 545). Lehman (2014) even claims that "the challenges faced by many of these small communities may seem insurmountable…and that many of these rural and micropolitan areas are ill-suited to adapt to demographic changes" (Lehman, 2014: 3–4). Weiler (2001) suggests that it is essential to understand local variations in economic data, particularly employment levels. Only by studying these data at a local level can policymakers formulate plans to address the unique economic challenges facing their communities.

Some of the existing literature agrees that most current research tends to be focused more on national or regional data. Wilson (1995) suggests there is a growing realization that a more micro look at local economic conditions is often preferable. Ettlinger (1994) argues that economic development activity is increasingly a local, bottom-up phenomenon due to the effects of global restructuring and funding crises at the regional and city level. Winders (2000) acknowledges that U.S. Census Bureau data are helpful at a state and county level but is limited because it does not provide some important detailed information, such as the affiliation of a business (i.e. independently owned or part of a national chain).

Cooperation model with local educational institutions

The literature includes two case studies describing partnerships between local economic policymakers and local institutions of higher education in the development of local economic climate research, similar to the model described in this article. For example, Weiler (2000) suggests that universities may be well suited to serve in a research gathering and assessment role because they provide access to sophisticated expertise and analytical tools. Desai and Margenthaler (1994) report on their successful use of a Maryland college's MBA program's faculty and student resources to facilitate research into local economic development issues. In part, they credit the success of these efforts to the politically neutral role faculty and students play as facilitators in bringing stakeholders together (Desai and Margenthaler, 1994).

In conclusion, the literature suggests that there is a need for economic climate data focused on the unique conditions in smaller communities throughout the United States. The literature also suggests that this need is not currently being met in many communities but that research partnerships between local economic development entities and higher education institutions may offer a practical, affordable solution.

Discussion of this study

Objectives

The Greater Johnstown Economic Climate Study has addressed many of the challenges described in the literature review since its inception. Each year, the study has provided data for the following key economic measures:

(1) **Employment projections.** The study addresses this need by identifying employment changes for the current

year and projections for one year into the future by type (white-collar skilled versus support and blue-collar skilled versus support).

(2) **Revenue and profitability projections.** The study addresses this need with a current year estimate, as well as a projection for one and three years into the future. These data are also broken down by types of organizations and by organization size.

(3) **Wages, benefits, and capital spending projections.** The study addresses these needs with projections one year into the future.

Over the years, the study has added three new annual measures that are benchmarked against other relevant studies in the field, including:

(1) **"Optimism scale."** This aspect of the study was added in 2008 as part of an effort to compare and contrast feelings about the local economy versus those of the Commonwealth of Pennsylvania and the overall U.S. The researchers adopted the methodology used by PNC Bank since 2003 known as the "Optimism Scale" (PNC, 2015). PNC's study is conducted twice each year and is conducted for both a Pennsylvania and a U.S. sample–a perfect fit with our study's objectives.

(2) **Top legislative issues**. This aspect of the study was added in 2009 also as part of an effort to benchmark local issues of the most importance to the local business community versus businesses across the Commonwealth. In this case, the researchers adopted methodology employed by the Pennsylvania Chamber of Business and Industry (2015).

(3) **Health care coverage.** This aspect of the study was added in 2009 also as part of an effort to benchmark this important issue for local businesses. In this case,

the researchers adopted methodology employed by the Pennsylvania Chamber of Business and Industry (2015), and also the Henry J. Kaiser Family Foundation (2015).

In addition to these three major areas of information, the study also provides the GJ/CCCC with relevant demographic and functional data on business in the Greater Johnstown area, including a breakout of organizations by type of industry.

Our study has always been conducted as part of a coordinated effort between the GJ/CCCC and a local institution of higher education, one of the interesting points identified in the literature review. As Weiler (2000) suggests, university researchers have been able to apply their expertise to the challenge, including the development of questionnaire instruments and the use of statistical analysis software such as SPSS to analyze data. Also consistent with Desai and Margenthaler's suggestion, the researchers have found that they are viewed as independent facilitators of the process, which has helped enhance respondent attitudes toward the study.

Methodology

Since its inception, the study has collected primary data using a quantitative survey approach. During the first 14 years of the study, a paper questionnaire was mailed to respondents to minimize costs. Surveying by mail was judged to be appropriate for this study because the logistics could be handled in-house by employees and volunteers at the GJ/CCCC, which has a very small research budget.

Starting in 2009, the researchers began using an online quantitative survey technique employing the Constant Contact platform. This approach was driven by two factors. First, a number of survey respondents began to request an online questionnaire instrument because of its ease of use

and speed. Second, the online option added no costs for GJ/CCCC since the organization already subscribed to the Constant Contact service which included the online survey option.

Response

The 22-year average response rate for the study is 22%. The highest response rate was 41% in the first year, providing a sample size of 349. Response rates in subsequent years have been significantly lower than in year one, perhaps owing to a decline in the novelty of the project. The lowest response rate was 13% in 2008, but the trend has improved in recent years leading up to a 21% response in 2015, possibly reflecting the impact of a free $250 retailer gift card sweepstakes incentive. Response rates and sample sizes for subsequent studies are noted in Chart 1.

Sample

The sampling frame for the study has always been organizations who are members of the GJ/CCCC. For the most recent study, this total was 675 organizations. The population for the study is the total number of business organizations in the Johnstown MSA (Cambria County). According to the U.S. Census Bureau, the most recent estimate (for 2013) of the number of nonfarm establishments was 3337 (U.S. Census Bureau, 2016b). Therefore, the sampling frame represents 20.2% of the population for businesses in the area with the sample size for the most recent year (134) representing 4% of all business organizations in the region.

As a validity check on how well the sample fits the population of businesses in the area, we conducted a correlation analysis between the composition of the sample by industry type and U.S. Economic Census data on the composition of all organizations in the MSA by industry type. The study started measuring key industry groups on the fourth year of its history in 1997 using a limited number of groupings based on the Standard Industrial Classification system (SIC) in place at the time. For this analysis, we converted the
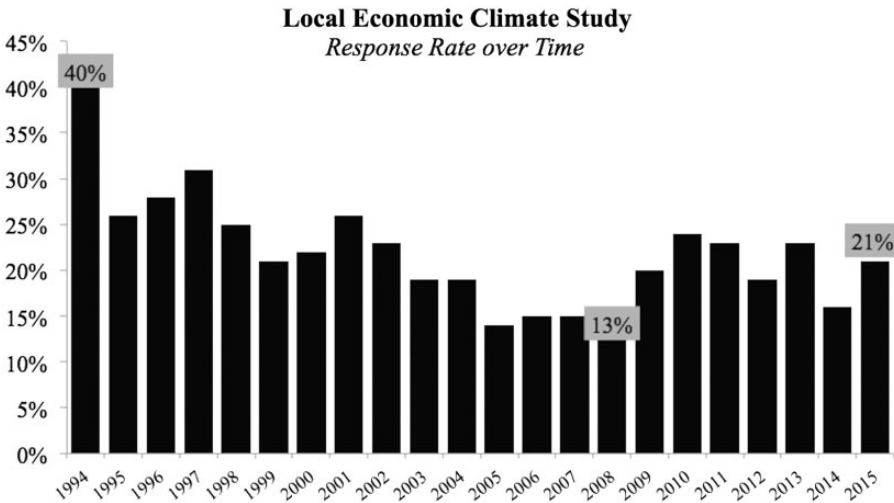

Chart I. Study response rate over time.

SIC groupings we used over the 19 years of measurement to the North American Industrial Classification System. We then calculated the 19-year means for each industry group and compared it with the industry groups in the 2012 Economic Census. Results of the analysis presented in Chart 2 indicate that the correlation between the study's composition of respondents by industry type and the U.S. Economic Census data is positive and statistically significant with the mean score 11.00 for our study versus a mean score of 11.11 for the Census data, yielding a Pearson correlation = .838, p = .005 (two tailed). This suggests that our sample provides a reasonably good approximation of the overall composition of the different industry groups present in the community.

Examples of study data

The following section provides an example of the type of longitudinal data the study has provided for two of the key measures noted above. The first measure, employment projections, is one that has been consistently studied for all 22 years of the study. The second measure, the "optimism scale" of local businesses, is one that was added more recently.

Employment projections. Chart 3 provides a snapshot of the most anticipated aspect of the study each year: job projections for the upcoming year. This measure includes changes in total employment at the responding organizations, including both new hires and replacement hires. As the longitudinal data in Chart 3 indicates, there has been very weak overall jobs growth in the region over the past 22 years.

As a validity check, the researchers conducted a correlation analysis of the relationship between each year's total job growth projected by respondents for the year ahead and the total jobs that respondents reported actually occurring in that year.
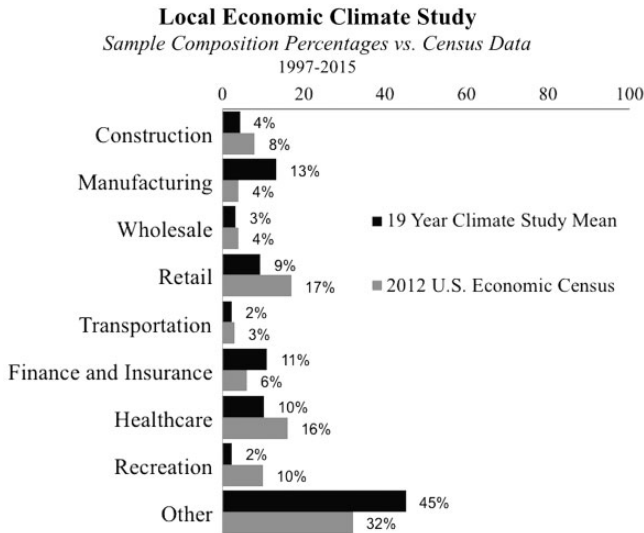

Local Economic Climate Study
Sample Composition Percentages vs. Census Data
1997-2015

Chart 2. Sample comparison percentages versus census data, 1997–2015.
Note: Climate Study for years 1994–1996 not available by industry group. Significant Pearson correlation = .838, p = .005 (two tailed).
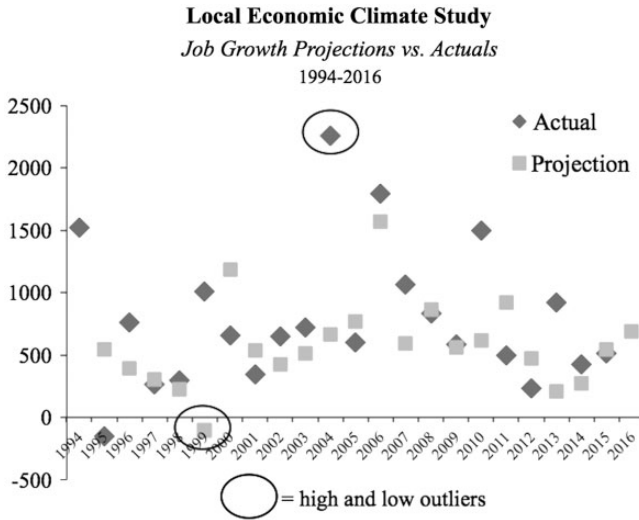
Local Economic Climate Study

Job Growth Projections vs. Actuals

1994-2016

Chart 3. Job growth projection versus actuals, 1994–2016.
Note: Significant Pearson correlation = .521, p = .022 (two tailed), when high and low outliers are removed.

Based on this analysis, a weak linear relation was observed between projected job growth and actual job growth for all the data over 22 years, with a Pearson correlation = .337, p = .136 (two tailed). However, when the highest outlier (2004 actual) and the lowest outlier (1999 projection) were removed from the analysis, the relationship became stronger with an annual job projection total mean of 608.55 versus an actual reported job total mean of 675.15, yielding a Pearson correlation = .521, p = .022 (two tailed).

The value added by this data is the directional feedback on employment changes expected in the area–before the fact. Employment projections provide a rough idea of possible changes in consumer demand for the products and services of small businesses.

"Optimism scale." Chart 4 reviews the results for the top new measure added in 2009: the degree of optimism local organizations have for the upcoming business year. For this measure, we replicated the methodology

employed by PNC Bank since 2003 when the bank first started measuring an "Optimism Scale" of businesses across the U.S. and in key states where PNC conducts operations, including Pennsylvania. PNC surveys more than 1200 business owners and executives throughout the United States in order to gauge the mood and sentiment among business owners (PNC, 2015). The only two differences between our methods and PNCs are that we conduct our study only once each year versus twice annually for PNC, and that our survey is administered via paper and online questionnaires versus PCN's telephone survey method. Otherwise, we match PNC's exact terminology in employing a 10-point semantic differential scale measuring the perceived optimism of respondents and use the same scale ranges to rate "optimistic" (rating 8–10 on the scale), "moderately optimistic" (rating of 5–7), and "pessimistic" (rating of 1–4) (PNC, 2015).

As Chart 4 indicates, 69% of our respondents in the 2015 study were "moderately optimistic/optimistic" about the
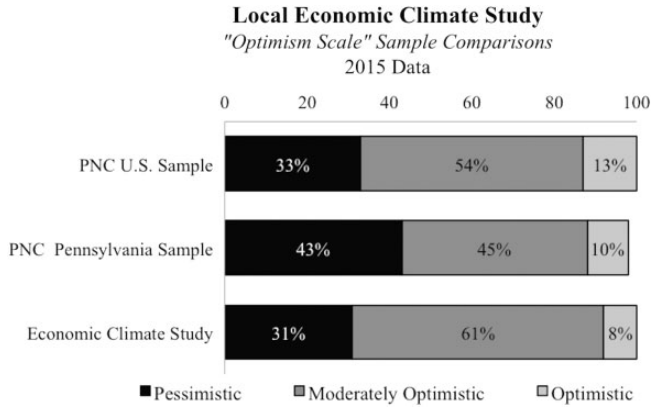
Local Economic Climate Study
"Optimism Scale" Sample Comparisons
2015 Data

Chart 4. "Optimism scale" sample comparisons, 2015 data.

upcoming year's business conditions versus 67% for PNC's national sample and 55% for PNC's Pennsylvania sample. The value added by this data is directional feedback on the confidence level that local business owners have versus their peers across the nation and Commonwealth heading into a new year. This feedback could be critical for local business organizations when contemplating key business decisions like hiring and capital expenditures. In this case, local organizations appear to be more optimistic about the future–a good sign for the local economy.

Conclusions/limitations/implications

This study continues to provide a practical, affordable model for the collection of localized economic data for small metro areas. Over the years, the presentation of the study's results has become an integral part of an annual economic summit of local business, political, and economic development professionals and has helped catalyze a dialog among the different constituencies.

The key limitation of the study is the undesirable sampling bias inherent in using only GJ/CCCC members as respondents. The researchers believe that chamber membership may be skewed toward more established businesses and therefore may not include many newer entrepreneurial organizations. We would like to have greater representation within this segment, and others, but the study sponsor has not been able to afford the added costs of securing a contact database of all businesses in Cambria County, and the mailing costs of distributing paper questionnaire instruments to organizations that prefer to not take the survey online.

The first implication for future research is to continue to advocate for the implementation of a true random sampling technique for future studies. The researchers will argue that the low cost of the online survey instrument would minimize the added costs of administering the questionnaires. Another possibility to minimize contact database procurement costs would be to engage the use of students at the local university to research the contact addresses and emails of local organizations, perhaps as part of internships or directed studies.

Another implication is the expanded use of secondary data to benchmark the local results, as suggested by Gibson and Glenn. While the study has moved in this direction over the past 22 years with the inclusion of Pennsylvania Chamber of Business and
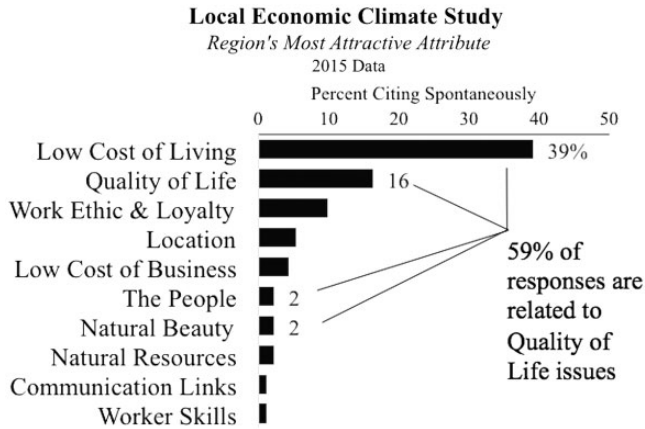
Local Economic Climate Study
Region's Most Attractive Attribute
2015 Data

Chart 5. Region's most attractive attribute, 2015 data.

Industry, PNC Bank, and Henry J. Kaiser Family Foundation Data, there is certainly an opportunity to integrate other state and federal secondary data as comparative sources of data. These new initiatives would enhance the external validity of the study's primary data and also could provide some very helpful insights into the Johnstown region's strengths and weaknesses compared to other small metro areas around the state and the U.S.

Another implication for future studies is the incorporation of benchmarks using quality of life indices employed by other smaller metropolitan areas. This implication derives from study results that indicate that "quality of life" issues have been the top responses to the survey question "Identify the #1 attribute that makes our region attractive to your organization (or new firms considering relocating here)." Results for this measure in the 2015 study are noted in Chart 5.

One quality of life benchmarking model that seems particularly successful is used in Roanoke, Virginia, where the Roanoke Regional Partnership has reframed their measurement of community economic progress around four areas: Quality of Life, Human Capital, Innovation, and Entrepreneurship (Roanoke Regional

Partnership, 2015). The categories are designed to capture data that illustrate and fuel the strategic direction of business development, as well as to help create new language for champions of the region to use when courting new business and talent to the area. Data for each index are drawn from existing secondary data sources, such as the Bureau of Labor Statistics, and then benched against other cities of comparable size. For example, the Quality of Life Index pulls data for the following categories: heating degree days, share of employment in entertainment industry, average commute time, good air quality days, violent crime rate, health care employment, and cost of living.

These categories are then benchmarked against data for selected (competing) towns in the region such as Asheville, North Carolina, Spartanburg, South Carolina, and Lynchburg, Virginia along with a national average. An additional city outside the region, Fort Wayne, Indiana, of comparable size was included as well (Roanoke Regional Partnership, 2015). Data for these benchmarks are available free of charge from government and nongovernment agencies (National Oceanographic and Atmospheric Administration, U.S. Department of Labor, Council for Community and Economic Research, U.S. Census Bureau,
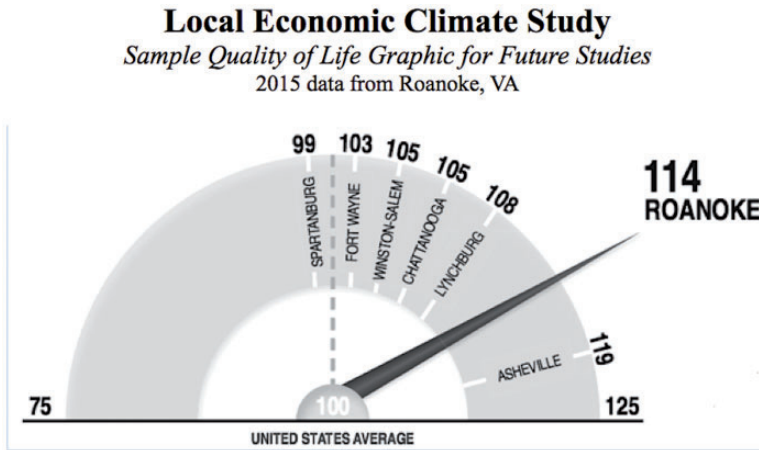
Figure 1. Sample quality of life graphic for future studies, 2015 data from Roanoke, VA. (Used with permission of Roanoke Regional Partnership.)

Environmental Protection Agency, Federal Bureau of Investigation). This information is presented in an overview chart depicted in Figure 1. Additional data are gathered locally, such as the concentration of retailers and consumer services by category or service against national concentration levels.

We will argue that this quality of life benchmarking technique should be incorporated into future studies with the Johnstown area benchmarked against the primary large city in our region, Pittsburgh, and other smaller metropolitan areas such as Altoona, Erie, Harrisburg, Lancaster, Scranton, and York, Pennsylvania.

In conclusion, the research team will strive to address these implications by ensuring that the study evolves with important new measures as they emerge in the future and attempting to refine our methods, while continuing to deliver the measures of the local economic climate that our constituents value most.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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