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The Fragility of Persistently Economically Distressed Counties in Central Appalachia and the Promise of Public Leadership

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Appalachia has long experienced economic distress, but significant progress has been made since the establishment of the Appalachian Regional Commission (ARC) in the 1960s. However, many counties in central Appalachia continue to experience persistent economic distress despite several advantages that are normally conducive to progress. This study examines Rowan County, Kentucky in comparison to four other rural Kentucky counties with varying degrees of economic progress. Quantitative comparisons were made on the basis of out-migration, educational attainment, and industrial diversity. Qualitative data was then gathered through interviews to understand decisive events that affected progress as well as long-term causes of change over time. Findings indicate that rural counties that experience persistent economic distress are comparatively fragile. Single events, such as a general economic downturn or departure of a company, can be devastating and long lasting. At the same time, interviews showed that political and community leadership can be decisive. This includes deliberate long-term planning; communication and cooperation between local governments, business, and community leaders; enthusiastic fostering of small business and local entrepreneurship; and a willingness to revise local policies and regulations (e.g., zoning, alcohol sales, and property taxes) in order to attract business and improve quality of life.

Key Words: Appalachia, Kentucky, economic distress, public leadership, strategic planning

Appalachia has long experienced economic distress, but these issues came to national prominence in the 1960s. The extreme poverty of the region had

[1] This research was conducted by Dr. Christine Emrich and Dr. Stephen Lange, together with the students of RAPP 300: Seminar in Regional Issues I at Morehead State University. The authors gratefully acknowledge funding from the Appalachian Regional Commission's Appalachian Teaching Project in support of this project.

begun to receive some attention in the media already in the 1950s, but John F. Kennedy's campaign for the Democratic presidential nomination in 1960 focused the nation's attention on central Appalachia, especially West Virginia and Kentucky. The television coverage that this brought to the region, together with literary accounts, such as Henry Caudill's *Night Comes to the Cumberlands* (published in 1962), portrayed the hardships facing the Appalachian people in a way that stunned most Americans. In response to this disturbing and growing awareness, Congress established the Appalachian Regional Commission (ARC) in 1965 following passage of the Appalachian Redevelopment Act, which was heavily influenced by Kennedy's President's Appalachian Regional Commission (PARC) report just two years earlier.

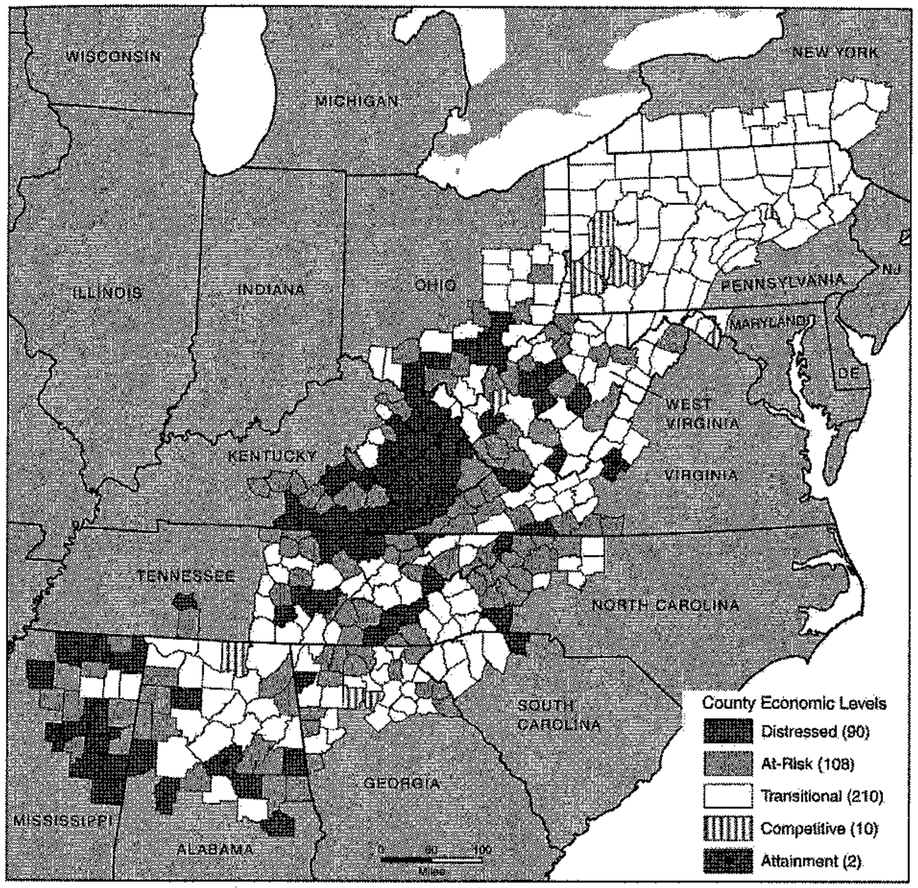
Since then, the ARC has led federal development efforts in the region. The ARC's mandate is to promote sustainable communities and help improve the economy of the Appalachian region. In particular, the Commission focuses on developing and improving infrastructure, completing the Appalachian Development Highway System, increasing employment opportunities and income levels, enhancing human capital (health and education), and fostering local markets that can compete regionally and globally. Currently, the ARC-defined Appalachian region consists of 420 counties spanning thirteen states.

The ARC has been successful in helping to alleviate poverty in the region overall. "Appalachia has come a long way in the past five decades: its poverty rate, 33 percent in 1960, was 16.6 percent over the 2008-2012 period."[2] The ARC has also successfully promoted economic development in the region in several areas. "The number of high-poverty counties in the Region (those with poverty rates more than 1.5 times the U.S. average) declined from 295 in 1960 to 107 over the 2008-2012 period."[3] Most notable is the improvement and expansion of the region's transportation infrastructure via the Appalachian Development Highway System. This infrastructure has been a vital component of the economic success for some communities in Appalachia. Despite these improvements, however, many counties have experienced persistent economic distress compared to the rest of the region and the country. A comparison of counties in the Appalachian region shows that those in central Appalachia have made the least progress since 1960. In particular, eastern Kentucky contains the largest cluster of economically distressed counties in the Appalachian region (Figure 1). Furthermore, even rural communities in central Appalachia with many seeming advantages (e.g., major educational institutions, major medical facilities, manufacturing, major retail stores, and good transportation access) have not made much economic progress since 1965. This limited

[2] "The Appalachian Region," Appalachian Regional Commission, last accessed January 31, 2015, http://www.arc.gov/appalachian_region/TheAppalachianRegion.asp.
[3] "The Appalachian Region."

progress in the face of clear advantages and 50 years of ARC funding and programs requires examination.

Figure 1. Levels of economic distress by county in Appalachia



Created by the Appalachian Regional Commission, March 2014
Data Sources:
Unemployment data: U.S. Bureau of Labor Statistics, LAUS, 2010–2012
Income data: U.S. Bureau of Economic Analysis, REIS, 2012
Poverty data: U.S. Census Bureau, American Community Survey, 2008–2012

Effective October 1, 2014 through September 30, 2015

A good example of persistent economic distress despite many advantages is Rowan County in Appalachian eastern Kentucky. Rowan County is bisected by an interstate highway and has a regional hospital, a public regional comprehensive university, and a community and technical college. In addition, it is a regional hub for goods, services, and retail shopping for several surrounding counties. Yet, it remains persistently economically distressed. In order to understand the causes of this persistent distress, Rowan County was compared to other rural Kentucky counties with varying levels of economic progress. Two basic questions were investigated:

1. What factors may have contributed to Rowan County's persistent economic distress?
2. How does Rowan County's community development and economic history compare with other rural counties in Kentucky?

BACKGROUND

The ARC's Distressed Counties Program

The ARC created a Distressed Counties Program in 1983 to address unmet needs of the poorest counties in Appalachia. Under pre-1983 guidelines, these counties were too poor to qualify for federal aid to build public facilities. In 1983, the ARC began providing special funds to these counties focusing on providing water and wastewater facilities and literacy training. Annual ARC budgets aim to give half of all (non-highway) grant aid to distressed counties.[4]

Since 1983 the ARC has used different approaches to identify economically distressed counties and its programs have focused on various strategies to decrease poverty in these areas. Until 2006, the Commission's approach generally involved (a) comparing a county's per capita market income, poverty, and three-year unemployment rates to national averages and (b) determining if the resulting ratios met or exceeded predetermined thresholds. In this approach, distressed counties were defined as those whose poverty and three-year unemployment rates were at least 150 percent of the national averages, and whose per capita market income was less than 67 percent of the national average. Alternatively, counties were also considered distressed if they met the threshold on either the unemployment or income indicator and had poverty rates that were at least twice the national average. Counties not classified as distressed were placed into one of three additional categories (transitional, competitive, or attainment) using different threshold values.

Since 2006, the ARC has modified this framework and applied it nationally. Values of per capita market income, poverty, and three-year unemployment for each of the 3,104 counties in the U.S. are compared to national averages, put in rank order, and then placed into one of five categories: distressed, at-risk, transitional, competitive, attainment. The worst 10 percent of all U.S. counties are labeled distressed; many of these counties

[4] Earl F. Goal, *Appalachian Regional Commission FY 2014 Performance Budget Justification*, as submitted by the federal co-chair to the Appropriations Committees of the House and Senate, April 2013, last accessed, February 7, 2015, http://www.arc.gov/images/newsroom/publications/fy2014budget/FY2014PerformanceBudgetApr2013.pdf, 21.

are found in central Appalachia. The ARC's distressed counties map series highlights the persistent clustering of distressed counties in eastern Kentucky over the past fifty years. The only counties in Kentucky to achieve anything but distressed or at-risk status are generally found adjacent to metropolitan areas. The most rural counties remain the most impoverished.

Factors affecting economic growth: economic diversity, outmigration, education, health care, and social capital

What factors may account for the observed patterns of economic and community progress in Appalachia? Ideas and strategies from many fields have contributed to an understanding of the characteristics of well-developed communities and some consensus as to how to measure such development.

Public officials and leaders have long sought to develop and maintain a diversity of industrial activities and occupational opportunities in their communities as a means of reducing the impact of economic shocks (e.g., resulting from major changes in the employer base). Many studies have demonstrated that higher levels of economic diversity are associated with greater economic stability. For example, Dissart's comprehensive literature review notes that "...the greater the variety of industries in a region...the less likely a region is to suffer severe...economic decline."[5] However, the relationship between economic diversity and economic growth is less clear and may depend on how economic diversity is measured (e.g., industrial diversity or occupational diversity),[6] on county character (e.g., urban or rural)[7] or economic status (e.g., distressed or competitive)[8], and regional context.[9]

In addition to economic diversity, a second factor is out-migration. As late as the 1990s, there has been a long-term trend of a net movement of people away from rural areas to more metropolitan areas. As emphasized in Tickamyer and Duncan, rural communities have long struggled with unemployment; rural residents have coped with this in a number of ways including holding down multiple jobs and seeking better opportunities in urban areas.[10] The decline of small rural communities is often attributed to such outmigration. Long

[5] Jean-Christophe Disssart, "Regional Economic Diversity and Regional Economic Stability: Research Results and Agenda," *International Regional Science Review*, 26 (2003): 424.

[6] Edward Fesser, Troy Mix, Mark White, Ken Poole, Deb Markley, and Erik Pages, *Economic Diversity in Appalachia: Statistics, Strategies, and Guides for Action*, March 2014, prepared for the Appalachian Regional Commission, last accessed on February 6, 2015, http://www.arc.gov/research/researchreportdetails.asp?REPORT_ID=108, 7-8.

[7] Fesser et al., "Economic Diversity in Appalachia," 13.

[8] Fesser et al., "Economic Diversity in Appalachia," 18.

[9] Fesser et al., "Economic Diversity in Appalachia," 43.

[10] Ann R. Tickamyer and Cynthia M. Duncan. "Poverty and Opportunity Structure in Rural America," *Annual Review of Sociology*, 16 (1990): 68.

reported that rural workers generally earn less than urban laborers due to the higher proportion of older, less educated, and often more disabled workers present in rural areas.[11] Similarly, Mills and Hazarika suggest that weak job prospects in non-metropolitan areas are a major factor contributing to increasing outmigration of highly educated youths from these areas.[12] This trend, coupled with an aging labor force, makes it difficult for non-metropolitan areas to maintain a strong and competitive labor force.[13] Obermiller and Howell demonstrate that migrants to Appalachia were not only less educated than those leaving the region, but also held less-skilled jobs that paid low wages.[14] Renkow found that "roughly one-third of new rural jobs are filled by (non-resident) in-commuters,"[15] while Tickamyer and Duncan note that new industries in rural areas sometimes import their own highly skilled laborers.[16] As a result, outmigration of more educated and skilled labor, in-migration of less educated and unskilled labor, and in-commuting of highly-skilled labor from outside areas all contribute to high rates of unemployment and poverty in rural Appalachia.

Third, while empirical evidence suggests a strong overall correlation between educational attainment and prosperity, there is a lack of consensus regarding relationships between specific educational attainment levels and specific levels of socioeconomic success. And, although it is recognized that more education generally leads to higher-level employment[17,18] post-secondary education is not a guarantee of economic prosperity. For example, Parkansky and Reeves point out that the substantial increase in college graduates in

[11] Richard Long, "Rural Development Policy: Rationale and Reality," *Publius*, 17 (1987): 18.
[12] Bradford Mills and Gautam Hazarika, "The Migration of Young Adults from Non-Metropolitan Counties," *American Journal of Agricultural Economics,* 83 (2001): 338.
[13] Mills and Hazarika, "Migration of Young Adults," 329.
[14] Philip J. Obermiller and Steven R. Howell, "New Paths and Patterns of Appalachian Migration, 1975-1990," *Journal of Appalachian Studies,* 7 (2001): 344.
[15] Mitch Renkow, "Employment Growth, Worker Mobility, and Rural Economic Development," *American Journal of Agricultural Economics,* 85 (2003): 511.
[16] Ann R. Tickamyer and Cynthia M. Duncan. "Poverty and Opportunity Structure in Rural America," *Annual Review of Sociology*, 16 (1990): 76.
[17] Lorie J. Schabo Grabowski, Kathleen Thiede Call, and Jeylan T. Mortimer, "Global and Economic Self-efficacy in the Educational Attainment Process," *Social Psychology Quarterly*, 64 (2001): 165.
[18] David B. Bills, "Credentials, Signals, and Screens: Explaining the Relationship Between Schooling and Job Assignment," *Review of Educational Research*, 73 (2003): 441.

Appalachia between 1970 and 1990 did not result in increases in family income.[19]

Although post-secondary educational attainment may not guarantee economic growth or community prosperity, the literature does suggest a strong relationship between educational attainment and socioeconomic status. For example, Glasmeier and Farrigan report that economically distressed counties are generally characterized by both low education rates and skilled labor shortages.[20] A study by Ziliak found a strong relationship between low levels of education and low wages in Appalachia.[21] However, Killian and Parker identified factors other than educational attainment that may be important in fueling a region's economic growth. For example, they tout local industrial diversity as being one of these key factors,[22] underscoring the idea that community economic development is a multi-faceted process.

Fourth, many scholars argue that an unhealthy population will not be able to participate fully and productively in the work force, thus hindering economic growth. Doeksen and Schott conclude that a viable health sector is a key component of a rural community's infrastructure and development.[23] The attraction of new firms to provide jobs and economic growth in a community can be extremely difficult if quality medical services are lacking. Three main problems adversely affect the quality and availability of health care in many areas of Appalachia. These are, "...(a) the accessibility of health-care services to all citizens within the region, (2) the education of health professionals, and (3)

[19] Steven Parkansky and Edward B. Reeves, "A Spatial-Ecological Model of Educational Attainment in Appalachia," *Papers of the Applied Geography Conferences,* 26 (2003): 214.
[20] Amy K Glasmeier and Tracey L. Farrigan, "Poverty, Sustainability, and the Culture of Despair: Can Sustainable Development Strategies Support Poverty Alleviation in America's Most Environmentally Challenged Communities?" *Annals of the American Academy of Political and Social Science,* 590 (2003): 145.
[21] James P. Ziliak, *Human Capital and the Challenge of Persistent Poverty in Appalachia,* February 2007, as prepared for the Federal Reserve Bank of Cleveland, last accessed January 31, 2015, http://gatton.uky.edu/Faculty/Ziliak/ClevelandFed_EconomicCommentary_020107.pdf, p. 2.
[22] U.S. Department of Agriculture. *Higher Education No Panacea for Weak Rural Economic,* October-January 1991, by Molly S. Killian and Timothy S. Parker, last accessed February 7, 2015, http://naldc.nal.usda.gov/naldc/download.xhtml?id=IND91021418&content=PDF, 6-7.
[23] G.A. Doeksen and V. Schott, "The Economic Importance of the Health Care Sector in a Rural Economy," *Rural and Remote Health* 3 (2003): 5.

the importance of providing culturally sensitive health-care services."[24] As Baldwin notes, "rural residents must often travel hours to consult specialists, and many rural communities lack even primary care physicians..."[25]

And fifth, there is a growing body of research showing significant associations between 'social capital' variables and economic outcomes. The literature suggests that community planners who actively engage local citizens in planning generate more economic development than those who employ a more bureaucratic process. For example, Korten observes that "[o]ne of the numerous weaknesses of centrally designed programs is that planners proceed as if they were writing on a clean slate and possessing all the knowledge relevant to improving [community life]."[26] Moreover, corporate delocalization may be weakening local civic leadership.[27] An emerging approach is that of bottom-up development, where community input is sought and existing community assets are built upon.[28] In other words, communities generally fare better when not only leaders and business owners, but also residents themselves, have a personal stake in community outcomes.

Knack and Keefer found that social capital positively influenced the performance of national market economies.[29] Similarly, Olberding found that strong cooperative norms and civic involvement begat regional partnerships and that regional economic development strategies are effective and on the rise.[30] Finally, Mencken, Bader, and Polson demonstrated a number of positive economic effects (e.g., increased earnings and employment) associated with community engagement in Appalachia, particularly in civic-oriented religious organizations.[31]

24 Anne B. Blakeney, "Health Care in Appalachia", in *A Handbook to Appalachia: An Introduction to the Region*, ed. Grace Toney Edwards et al. (Knoxville: University of Tennessee Press, 2006), 101.

25 Fred D. Baldwin, "Access to Care: Overcoming the Rural Physician Shortage," *Appalachian Magazine,* last accessed January 31, 2015, http://www.arc.gov/magazine/articles.asp?ARTICLE_ID=98.

26 David C. Korten, "Community Organization and Rural Development: a Learning Process Approach," *Public Administration Review,* 40 (1980): 498.

27 Robert D. Putnam, *Bowling Alone* (New York: Simon and Schuster, 2001), 283.

28 Gary P. Green and Anna L. Haines, *Asset Building & Community Development, 3rd edition* (Thousand Oaks: Sage Publications, 2011), 11.

29 Steven Knack and Philip Keefer, "Does Social Capital Have an Economic Payoff? A Cross-Country Investigation," *The Quarterly Journal of Economics,* 112 (1997): 1283.

30 Julie Cencula Olberding, "Does Regionalism Beget Regionalism? The Relationship between Norms and Regional Partnerships for Economic Development," *Public Administration Review,* 62 (2002): 488.

31 F. Carson Mencken, Christopher Bader, and Edward Clay Polson, "Integrating Civil Society and Economic Growth in Appalachia," *Growth and Change*, 37 (2006): 121-22.

Overall, the factors affecting economic growth are numerous, complex, and interrelated. The diversity of the economy, outmigration/in-migration/commuting of a skilled and educated labor force, levels of educational attainment, health care availability and quality, and a community's social capital all combine to influence economic and community development. How each of these factors contributes and to what degree is not clear, however, and likely varies significantly from community to community. As a result, individual case studies and subsequent comparisons may be useful in determining the complex interplay of these factors in persistently distressed counties in central Appalachia.

RESEARCH HYPOTHESIS

The literature review suggests that economic status is associated with economic diversity, out-migration, educational attainment, health care, and social capital. However, due to data availability constraints, the scope of this study was limited to examining only three of these important variables: level of out-migration, level of educational attainment, and level of industrial diversity. In order to help understand what may have contributed to Rowan County's lack of economic progress so far, the first research hypothesis posed was:

Persistent economic distress in Rowan County, KY between 1970 and 2000 was associated with (a) out-migration, (b) lower levels of educational attainment, and (c) lower industrial diversity when compared to non-Appalachian Kentucky and the U.S.

This addresses the first question posed earlier: 'What factors may have contributed to Rowan County's persistent economic distress?' The second question, 'How does Rowan County's community development and economic history compare with other counties in Kentucky?' is addressed by the second research hypothesis:

Three of the key factors responsible for Rowan County's persistent economic distress between 1970 and 2000 (out-migration, lower levels of educational attainment, and lower industrial diversity), as well as its economic history, are similar to other persistently distressed counties in Kentucky, whereas counties that have progressed beyond distressed have successfully overcome these obstacles and will show a different economic history.

METHODS

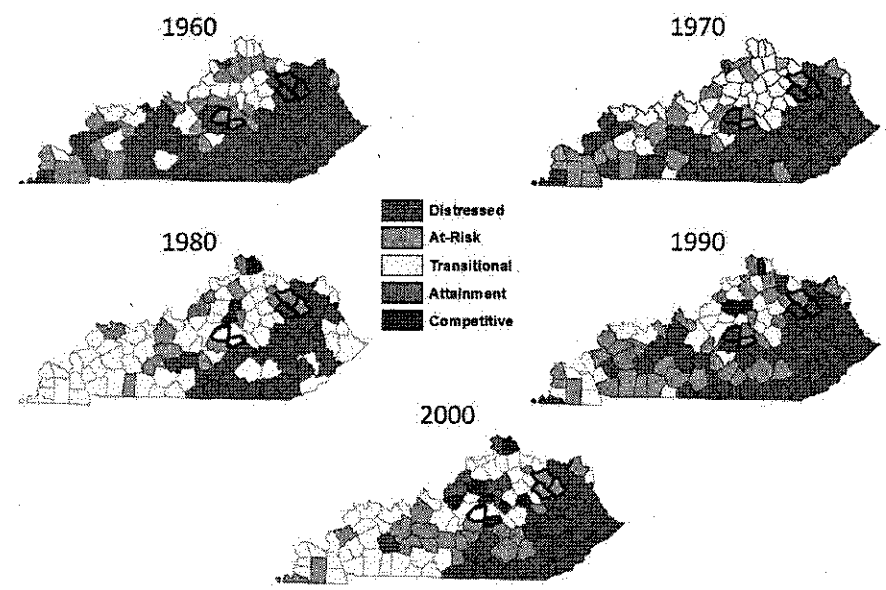
This study combined qualitative and quantitative methods to compare and contrast historical economic trends for a carefully selected set of five rural counties in Kentucky that have been both more and less economically successful since 1960: Bath, Boyle, Fleming, Rowan, and Washington. The selection of all Kentucky counties helped to control for differences in state budgets, laws, and regulations. Quantitative analysis of primary indicators was supplemented with historical case studies for each of these five counties in central and eastern Kentucky. This comparative case study approach aimed to "...tease out generalizations about an underlying commonality...,"[32] specifically, factors that have contributed to stimulating and sustaining greater economic growth in some rural counties over others. As described below, five county cases were chosen to represent the cross-section of economic growth trajectories and socio-demographic conditions found in rural central/eastern Kentucky.

Selecting the study counties

Selecting the study counties involved five steps. First, a modified version of the ARC's 2006 distressed counties classification methodology was utilized to determine the economic status (i.e., distressed, at-risk, transitional, competitive, attainment) for each of Kentucky's 120 counties in 1960, 1970, 1980, 1990, and 2000. (The ARC's 2006 classification approach was utilized in this study as opposed to the post-2006 approach due to the lack of information on all U.S. counties needed to employ the latter approach.) The ARC's 2006 classification scheme is based on the three-year unemployment rate, poverty rate, and per capita market income. This was modified due to data constraints in this project, such that classifications were made on the basis of one-year unemployment rate, poverty rate, and per capita income variables obtained from the U.S. Census and SocialExplorer.com websites. A very close correspondence was found between the ARC's and this project's economic status classification results for the Appalachian Kentucky counties in each period (results not shown). ESRI's ArcGIS Geographic Information Systems (GIS) mapping software was used to generate five economic status maps using the modified approach, each showing the economic status for every Kentucky county in 1960, 1970, 1980, 1990, and 2000 (Figure 2).

[32] Jason L. Jensen and Robert Rodgers, "Cumulating the Intellectual Gold of Case Study Research," *Public Administration Review*, 61 (2001): 238

Figure 2. Economic status for all 120 Kentucky counties from 1960-2000. The five study counties are outlined in black (see Table 2).



The second step in selecting counties for this project involved filtering the list of all Kentucky counties using the U.S. Department of Agriculture's (USDA) 2003 Rural-Urban Continuum Codes.[33] Counties with a code of 5, 7, 8, or 9 (Table 1) were retained and all other counties were deleted from the analysis. In the third step, the economic status for each of the remaining counties was examined over the 1960 to 2000 period in order to identify counties that had experienced some change in status over this period; counties that did not (e.g., those that were classified as distressed in all five periods) were removed from further analysis.

[33] "2003 Rural-Urban Continuum Codes," U.S. Department of Agriculture, Economic Research Service, last accessed February 6, 2015, http://www.ers.usda.gov/data-products.aspx.

Table 1. Rural-Urban Continuum Codes used in this study (USDA)

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

The fourth step involved scrutinizing the economic status 'trend' for each of the remaining 29 counties. Each county on this list was categorized as having experienced: (a) constant improvement (14 counties); (b) constant decline (1 county), (c) mixed improvement (14 counties). Constant improvement counties showed steady improvement in economic status between 1960 and 2000. Constant decline counties exhibited a steady decrease in status over this period. Mixed improvement counties ended the study period at a higher economic status level than where they began, but they had experienced one or more periods of decline between these two points. Those counties experiencing constant decline were eliminated from the list.

Finally, the fifth step reduced the list of remaining counties to the final five primarily on the basis of geographical proximity. Counties more than two hours distant from Rowan County were eliminated. However, special attention was given to selecting a number of counties from each of the two economic status 'improvement' categories (i.e., constant improvement and mixed improvement). Table 2 shows the economic status (as determined by this project) and the USDA Rural-Urban Continuum Code for each county in this final group.

Table 2. Economic status* and Rural-Urban Continuum Code for the final set of five counties (1960-2000).**

County	1960	1970	1980	1990	2000	Code
Bath	D	D	D	D	AR	8
Boyle	AR	AR	T	AR	C	7
Fleming	D	AR	AR	AR	AR	7
Rowan	D	D	AR	D	AR	7
Washington	AR	D	T	D	T	8

*D = distressed; AR = At-Risk; T = Transitional; C = Competitive
**See Table 1 for code descriptions.

Quantitative data and analysis

Data for the key indicator variables examined in Hypotheses 1 and 2 (out-migration, educational attainment, and industrial diversity) were obtained for all 120 counties in Kentucky as well as average values of these variables for the United States. Specifically, decennial census data were downloaded for the period 1970-2000 (1960 data were not used in this analysis since the ARC was not founded until 1965) from the U.S. Census, SocialExplorer.com, and ARC Online Resource Center websites. These data were then compiled into a master spreadsheet in Microsoft Excel prior to further processing and analysis.

Changes in the total population of each county were examined for evidence of out-migration. Educational attainment data were placed into four categories (reflecting the terminal level of education): less than high school, high school, some college, and bachelor's degree or higher. The standard industrial sector classifications were aggregated into seven sectors that were expected to reflect the major employment trends in Kentucky over the 1970-2000 period: goods and services, education, manufacturing, medical, agriculture and mining, construction, and professional.

Qualitative data and analysis

There is no substitute for actually speaking with local public officials when attempting to understand the complex set of circumstances that have contributed to a community's economic progress (or lack thereof) over time. Therefore, a structured open-ended interview technique was used to collect information on historical economic conditions from elected and other public officials in each of the five study counties, such as the mayor, city manager, county judge-executive, Chamber of Commerce executive director, and economic/industrial development council executive director. This approach was utilized in order to obtain background, contextual, and historical information for each county, which helped to explain the causal events behind the results from the quantitative analysis of key indicators.

Up to five officials in each county were contacted via telephone to request appointments for in-person interviews. Three to five officials from each county were then interviewed using a fixed list of primary questions and follow-up questions (Table 3). Information from each of the 20 interviews was typed into a document on a laptop by at least one interviewer.

Table 3. List of interview questions.

Primary Interview Questions

1) Has the county followed a strategic economic development plan?
    a. If yes, since when?
    b. If yes, how would you characterize your strategic plan?
2) In the past, what initiatives have been used in the county to create economic development?
    a. Were those initiatives successful/did they make a difference?
3) What events have had the biggest economic impact within the county since 1970?
    a. Which event do you think had the greatest impact?
4) What have been the biggest economic setbacks within the county since 1970?
    a. Which event do you think had the greatest impact?
5) What is the best approach for moving the county forward economically? In the short-term? In the long-term?
6) What are the obstacles to economic development within the county?
7) Are there any public policy issues/laws/ordinances that are in place that may hinder economic development? Local? State? Federal?
8) Has the county received any federal or state economic aid that has contributed to economic growth?
9) Is there a strong connection between residents and local leaders?
    a. How do citizens provide input to local leaders?
10) How closely do city council and county government work together?

Possible Follow-Up Questions

1) Does local government work with ____________ to foster economic development? How closely and in what way?
    a. School board
    b. Health care
    c. Business
    d. Property owners, etc.
2) What projects/initiatives are currently underway or planned that are aimed at encouraging economic development?
3) What attributes do you see as contributing to the economic progress, or lack of progress, that the county has experienced (schools, hospitals, business, neighboring areas, interstate, proximity to urban areas, rail, airports, etc.)?
4) What kind of business have entered or left the county since 1970?
    a. What impacts were felt as a result of these events?

A basic thematic analysis approach was used to evaluate the set of interviews for each county, from which a county summary was compiled. This analysis involved identifying the major themes responsible for economic progress or setbacks that emerged across all of the interviews for an individual county (e.g., city-county collaboration, strategic planning, and infrastructure development). Next, a 'master' summary was compiled using all five county-level summaries in an attempt to identify common strategies, policies, and procedures that had positively or negatively contributed to economic growth.

RESULTS AND DISCUSSION

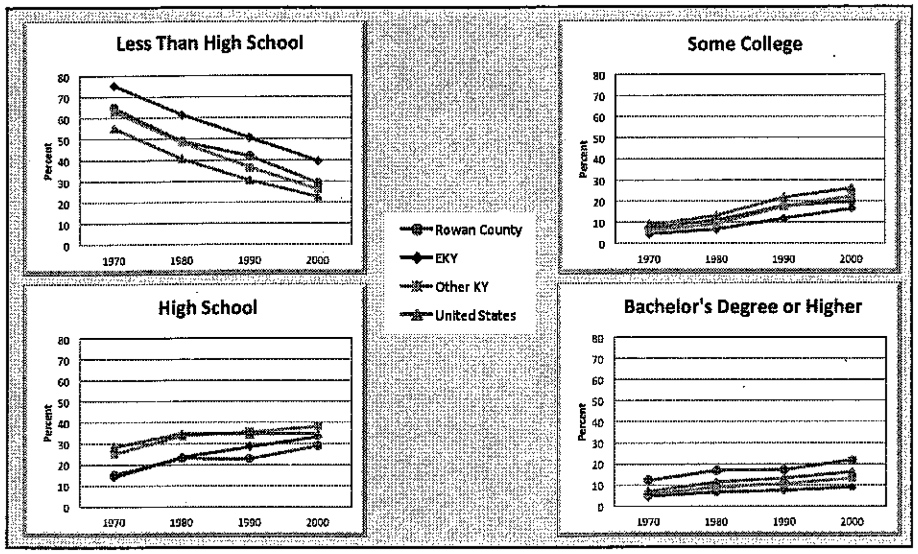
By combining quantitative and qualitative analyses this study was able to identify five major themes that appear to be critical to stimulating and sustaining economic growth in the study counties: (1) Leadership, (2) Infrastructure, (3) Education, (4) Financial Resources, and (5) Quality of Life. A discussion of these themes follows the presentation of the quantitative results for individual counties. Results are presented first for Rowan County, and then for the comparison counties: Bath, Boyle, Fleming, and Washington. These results will help address the questions (and corresponding research hypotheses) posed earlier, namely 'What factors may have contributed to Rowan County's persistent economic distress?' and 'How does Rowan County's community development and economic history compare with other counties in Kentucky?'

Rowan County

Figures 3 and 4 present quantitative results comparing Rowan County to non-Appalachian Kentucky and the United States, as per Hypothesis 1. (While Appalachian eastern Kentucky is not explicitly part of the hypothesis, it is shown for context.) There was no out-migration in Rowan County between 1970 and 2000 (results not shown). As shown in Figure 3, Rowan County had a higher percentage of people with a Bachelor's degree or higher compared to the other regions. Moreover, Rowan County followed the common trend of decreasing numbers of people with less than a high school education.

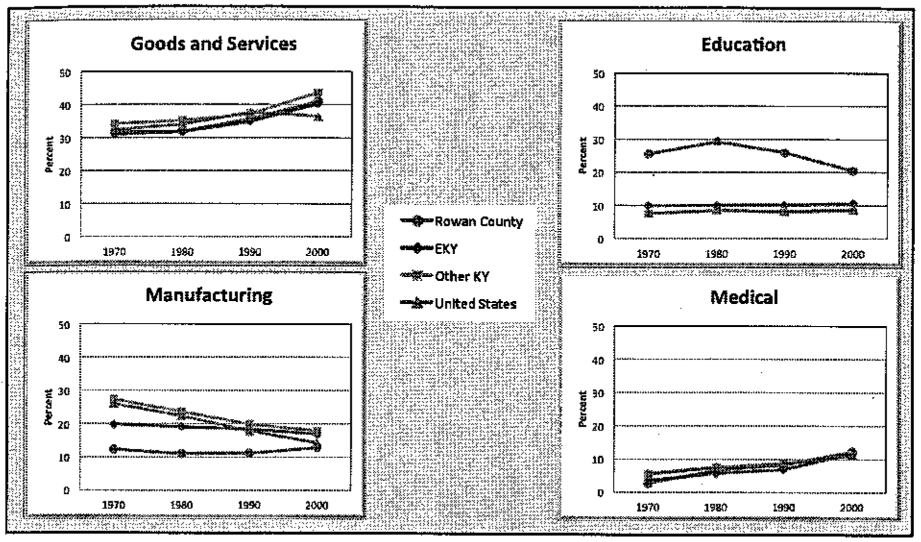
However, approximately three out of five people in Rowan County still had not attained greater than a high school degree by 2000.

Figure 3. Educational attainment levels for Rowan County compared to average values for Appalachian eastern Kentucky counties (EKY), non-Appalachian Kentucky counties (Other KY), and all U.S. counties.



With regard to industrial diversity, the economy of Rowan County appeared to be dominated by the 'education' and 'goods and services' industrial sectors (Figure 4), which together comprise approximately 60% of the available jobs. Manufacturing has historically been lower in Rowan County than in other regions, though there was a small increase between 1990 and 2000. There was also small, but steady, growth in the medical field.

Figure 4. Industrial diversity for Rowan County compared to average values for Appalachian eastern Kentucky counties (EKY), non-Appalachian Kentucky counties (Other KY), and all U.S counties.[34]



These results only partially support the first research hypothesis. Compared to non-Appalachian Kentucky and the United States, Rowan County did have somewhat lower levels of industrial diversity and overall educational attainment. However, there was no out-migration from Rowan County during the study period. As a result, two of the three factors suspected of contributing to Rowan County's persistent economic distress do appear to be relevant—industrial diversity and educational attainment; however, it is not likely that they are solely responsible. Also, Rowan County's lack of a net out-migration tends to be an advantage to economic growth as indicated in the literature review, which means that there are likely to be additional factors at work that account for the county's persistent distress.

County comparisons

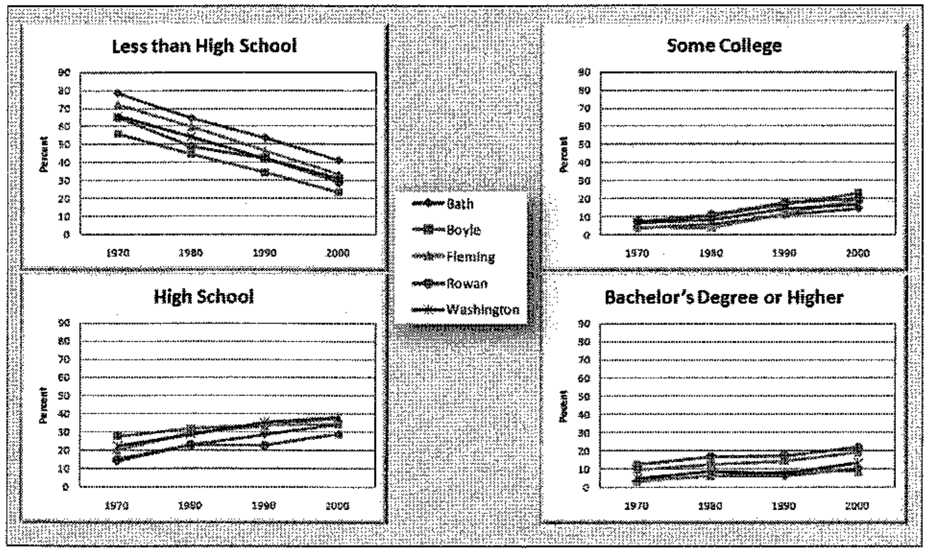
The same three variables that were examined for Hypothesis 1, out-migration, educational attainment, and industrial diversity were also analyzed to investigate Hypothesis 2. Results (not shown) indicated that there was no out-

[34] Each of the seven industrial sectors shown above represents an aggregation of more detailed sector information. These seven aggregated sectors were created in order to simplify and focus the analysis. Results for the 'agriculture and mining' and 'professional' sectors are not shown here – please see Figure 6.

migration in Fleming, Boyle, and Rowan counties over the study period; however, minor out-migration occurred in Bath and Washington counties between 1980 and 1990 (less than 340 people per county).

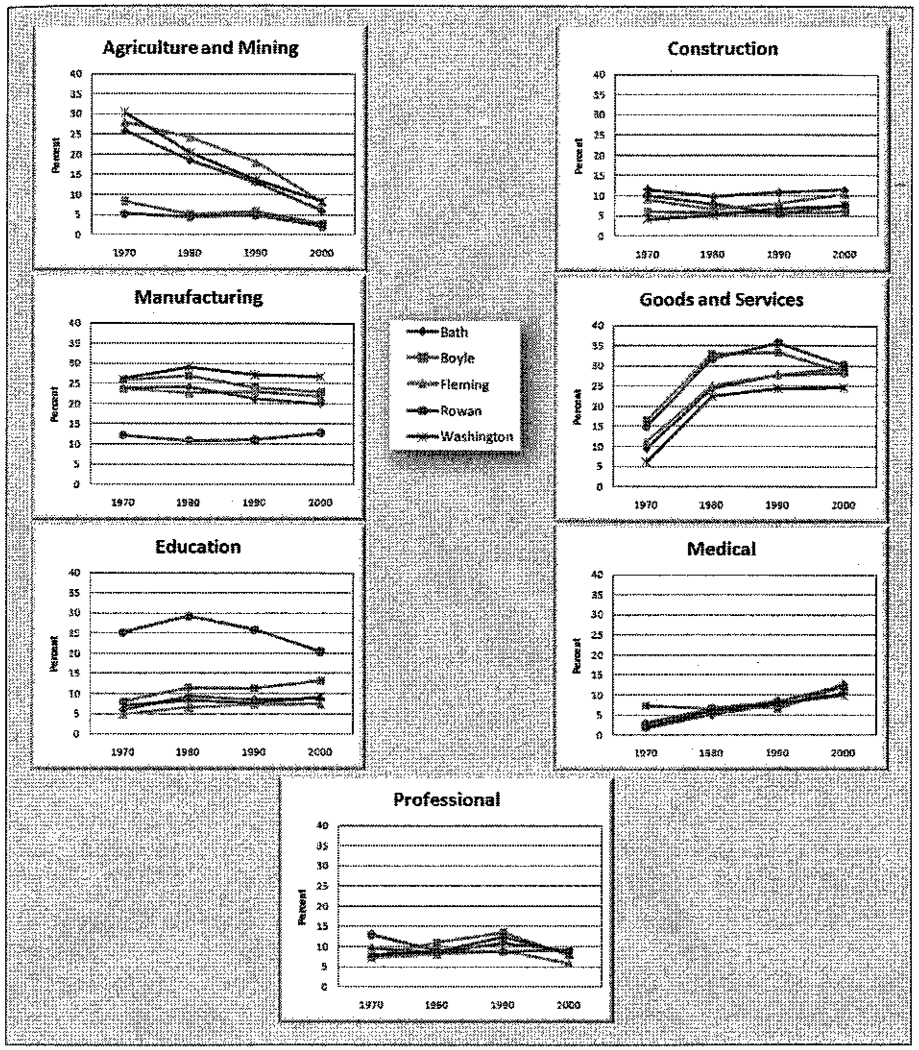
Not surprisingly, more people living in Rowan County received a bachelor's degree or higher compared to any other county during the study period (Figure 5). This is most likely due to the combination of university faculty and St. Clare Regional Medical Center personnel. However, Boyle County (home to Centre College and a hospital) had nearly caught up to Rowan County's numbers by 2000. The number of people whose education ended after high school graduation in Rowan County was generally lower than the figures for the other counties, likely as a result of its higher four-year college graduation rate. High school dropout numbers (Less than High School) for Rowan County fell in between those of Bath and Fleming counties (which were higher), and Boyle and Washington counties (which were lower). The numbers of people who attended some college, but who had not received a bachelor's degree, were fairly similar among all counties, reflecting the close proximity of Kentucky Community and Technical College System (KCTCS), vocational, college, and university campuses. It is important to note that this category of (terminal) educational attainment includes people that may have received an associate's degree or other professional degree or certificate.

Figure 5. Educational attainment results for Rowan County compared to Bath, Boyle, Fleming, and Washington counties.[35]



35 Each category represents the terminal level of educational attainment.

Figure 6. Industrial diversity results for Rowan County compared to Bath, Boyle, Fleming, and Washington counties.[36]



36 Each of the seven industrial sectors shown above represents an aggregation of more detailed sector information. These seven aggregated sectors were created in order to simplify and focus the analysis.

Industrial diversity in Rowan County was somewhat smaller than that in the other counties examined in that such a high proportion of jobs were found in the education sector (Figure 6). While this proportion steadily declined after 1980, employment in this sector remained above 20% in 2000. Employment in the education sector showed modest growth between 1970 and 2000 in Boyle and Washington counties, while it had leveled off in Bath and Fleming counties by 1990. Between 1970 and 2000, Rowan County had a much smaller manufacturing base compared to Bath, Boyle, Fleming, and Washington counties, though Rowan did see a slight increase between 1990 and 2000. Along with Boyle County, Rowan County had the highest percentage of jobs in the goods and services sector over time, although employment in this sector had nearly converged in all five counties by 2000. Boyle and Rowan counties had the lowest employment in agriculture and mining over time but, by 2000, the proportion of jobs in this sector had so dramatically declined in Bath, Fleming, and Washington counties that it nearly equaled the values for Rowan and Boyle counties. There was a steady rise in employment in the medical sector between 1980 and 2000 in all five counties, while jobs in the professional sector declined or leveled off. Finally, employment in the construction sector exhibited modest growth in Bath, Fleming, and Washington counties between 1990 and 2000; construction jobs in Boyle remained flat over the study period, while a small increase was seen in Rowan County between 1990 and 2000.

On the basis of these results, the second hypothesis is only partly supported. Out-migration did not account for the differences between Rowan and Boyle counties, the latter being the most economically successful county. With regard to educational attainment, the small difference in the proportion of the population with a bachelor's degree or higher between Rowan and Boyle would seem to indicate that this was not a factor that accounts for the economic differences. Lower high school drop-out rates, however, did seem to be noticeably different between the county showing the most economic progress (Boyle) and the other counties, weakly supporting the second hypothesis. With regard to industrial diversity, no clear pattern emerged that separated the more successful counties (Boyle and Washington) from the more persistently troubled counties (Bath, Fleming, and Rowan), so the second hypothesis is not supported here either. Once again, these three variables did not appear to account for differences in economic progress of these five counties and there are likely to be additional factors at work that account for Rowan County's persistent lack of economic progress. To investigate the second hypothesis further, then, the qualitative data from the case study interviews must be considered.

Case study interviews: major themes

Five major themes emerged from the 'master' thematic analysis of the combined five-county interview dataset: (1) Leadership, (2) Infrastructure, (3) Education, (4) Financial Resources, and (5) Quality of Life. The results suggest that leadership, the first major theme, appears to be the key attribute making it possible for a community to work, as strategically as possible, towards the remaining four themes: enhancing infrastructure, expanding educational assets, obtaining vital financial resources, and improving quality of life. The main characteristics of good leadership that were identified in this study on the basis of the interviews were: a positive attitude, a long-term vision, a personal commitment to growth in the community, dissatisfaction with the status-quo and 'how it's always been done', a willingness to reach out across the community and collaborate with others, being open to and actively seeking out new ideas and opportunities, a willingness to work longer hours and take more personal and political risks, and a tendency to be more connected and responsive to local residents. Counties whose leadership has been characterized by all or most of these traits have generally made the most economic progress since 1970. A large part of this growth was attributed to collaborative strategic planning efforts undertaken by these energetic and forward-thinking leaders – the more sophisticated the efforts, and the longer they had been going on, the more economic progress has been made.

This type of leadership also lead more often to collaboration between city and county governments, as well as partnerships between local government entities and industry, business, educational institutions, state government agencies, and neighboring counties, all of which were seen as critical components in creating economic success. This type of teamwork facilitated and optimized communication, resource utilization, and grant writing efforts within each county and between counties over time. In addition, city and county planning and zoning activities were more successful when key stakeholders were brought to the same table, which these leaders were able to do.

Improving and extending infrastructure was a high priority in all five of the study counties. In particular, officials spoke about the importance of having high-quality water and sewer services available to support business and industrial recruitment efforts as well as local residents throughout the county. Additionally, the presence of one or more industrial parks was seen as a major community asset, especially if it had water and sewer infrastructure in the ground and one or more buildings already on site that were available for lease or minor renovation. While some of the industrial parks had one or more vacancies (some were nearly empty), local leaders were almost unanimous in their view that these sites were foundational to their ability to attract new businesses and to become a vital regional hub. Other essential infrastructure that was widely viewed as critical to making solid economic progress included sufficient available land and reasonable property values as well as good access to road, rail, and water transportation networks. For example, the lack of a nearby interstate or major highway was frequently noted as a major impediment to economic growth.

Good access to higher education, particularly vocational and community college, was found to be an important component in all five communities' formulas for attracting and retaining business and industrial employers. In fact, a number of the counties had actively and successfully petitioned for a new KCTCS campus to be built in their community. Moreover, three of the counties were home to a four-year college or university. These two- and four-year institutions were viewed primarily as vital training grounds for the local and regional workforce. However, they were also seen as places that could produce a more educated and involved local citizenry and, consequently, local leadership and innovative, forward-looking ideas.

Every county in this study had obtained significant funding from state and federal agencies, primarily in support of infrastructure enhancement. Major funding in this realm went to projects for extending water and sewer lines, upgrading sewage treatment plants, developing industrial parks and regional airports, providing tax incentives for new businesses, and extending and improving roads and highways. Other areas of support included the creation of KCTCS campuses, the redevelopment or enhancement of downtown areas, building regional medical facilities, job training programs, and strategic planning initiatives. Officials in each county stressed the crucial role that such state and federal aid has played over time in helping their community become more competitive in attracting and retaining new businesses and industry, as well as in improving the general quality of life for residents and visitors.

The last of the five major themes, quality of life, was strongly influenced by each of the first four themes: leadership, infrastructure, education, and funding resources. First, strong, collaborative, and visionary leadership was viewed as foundational to creating a thriving and sustainable community, as well as one capable of minimizing the effects of economic downturns. Second, local officials noted that countywide access to water and sewer services was an important goal since it was expected to contribute to improved public health and sanitation conditions. Third, the presence of institutions of higher education in the community was seen by county leaders as a key component in improving employment opportunities for residents, educating future leaders and other professionals, and helping to minimize the 'brain drain' phenomenon that every county experiences. And fourth, grant and other aid from state and federal agencies has been a primary mechanism that well-led counties have utilized to improve the functionality and appearance of their communities – ranging from better access to medical care to new businesses to enhanced educational opportunities to downtown redevelopment to the beautification of roadways, parks, and trails. In addition to these four themes, officials observed

that the prohibition status of their city and/or county has had a major influence on the quality of life in their community in a number of ways. In purely economic terms, the inability of a city or county to sell or serve alcohol has hindered business recruitment efforts-not only restaurants but also industrial manufacturers-and thwarts efforts aimed at attracting new residents. All of this, in turn, limits local governments' revenues through business taxes, food and alcohol sales taxes, and local employment taxes. Both in itself and through this lost revenue, the quality of life of the community is diminished in many people's view.

CONCLUSIONS AND RECOMMENDATIONS

The interviews showed that relatively small rural counties experiencing persistent economic distress are very fragile. Due to their fragility, there are not large, consistent patterns such that if a county does 'x', then 'y' will result. Rather, single good events, such as effective leadership or planning or grant success, can lead to quite significant positive improvements; but similarly single bad events, such as one company leaving, can be devastating. For these reasons, such counties cannot absorb economic downturns as well as larger and more developed counties because they do not have the breadth and the depth in the community and economy. They can be slower to rebound as well, since they may not have the leadership or resources to take quick advantage of new opportunities. As a result, one significant change in such counties can make a large difference, which may be what lies behind the difficulty in identifying generalized trends.

This having been acknowledged, the major common themes identified above on the basis of our county interviews allow for some recommendations to be presented here that aim to help Rowan County and similar rural communities improve their current economic status and future prospects. It is hoped that these strategies and suggestions will be a source of encouragement and guidance for local leaders and citizens as they to work together to create more successful and sustainable communities.

Results from this study suggest that deliberate, long-term strategic planning plays a critical role in driving community success. Such planning forces communities to set carefully considered and attainable goals, to think about their long-term vision for their community, to come together and produce common goals that have broad stakeholder input and buy-in, to examine available and potential resources (financial and other), and to develop and enhance infrastructure (water, sewer, etc.) systematically and deliberately. Such strategic planning also causes local leaders and the community to look on themselves as part of a region, and hence to break down traditional county barriers and work collaboratively to develop the workforce, improve the quality of life, and attract businesses. It is also important to recognize, though, that it takes time, perhaps a decade or two, for this type of planning to bear fruit in a particular community. As a result, some communities will catch-up only gradually with their neighbors who already have strategic plans in place or who are further along in developing such plans.

The extent to which strategic planning efforts are successful is largely a function of the degree to which local government and other community leaders and citizens genuinely and effectively cooperate and collaborate with one another – both in the planning process and in the implementation phase. Open lines of communication and a clear understanding of the respective roles and responsibilities of all parties involved are vital to this process. Not only is it essential for city and county governments to work closely together in many areas, but they should also be looking to collaborate with neighboring cities and counties in order to develop strategic plans for the larger multi-county region and thereby increase efficiencies in service delivery (e.g., emergency response and utilities), take advantage of multi-partner grant opportunities, promote regional tourism, and recruit and retain major manufacturing and industrial businesses.

Welcoming, accommodating, and partnering with local and regional institutions of higher education appears to be another important component to building more successful rural communities. For example, students who attend college or university in a community that supports that institution and openly welcomes them may be more likely to remain in the community after graduation, or to return to live and work (and retire) in the area at a later date. In addition, counties wishing to enhance workforce training opportunities and programs may consider aggressively recruiting a KCTCS or vocational school campus for their community or region (in partnership with neighboring counties).

Promoting local entrepreneurship may offer additional opportunities for struggling rural counties to become more economically viable. Counties that focus on encouraging and supporting local small businesses can take advantage of local skills, knowledge, and resources. Small businesses can help retain local residents as employees and customers, keeping people more connected to their community. Small businesses can also help build a strong and more diverse local economic foundation that is less dependent on outside (especially large) businesses that may come and go – and hence provide a 'buffer' against hard economic times.

Counties might also consider focusing on a 'high road' rather than a 'low road' economic development strategy as they seek to recruit new businesses to their area. Among other things, this means seeking to build economic prosperity and competitiveness on the basis of local resources and amenities, as opposed to merely competing for new businesses by offering cheap land, labor, and energy as well as large tax breaks. Such 'low road' development strategies force neighboring counties to compete with one another in a 'race to the bottom' while it takes years to recover the initial investment. As acknowledged

above, though, heroic efforts are undertaken to attract one major manufacturer through substantial investment and concessions precisely because it can make a dramatic difference in these fragile communities.

On a related note, while many rural counties have concentrated on developing industrial parks as the centerpiece of their economic development plans, having a primary focus on increasing manufacturing jobs may not be a viable long-term solution to increasing employment and promoting economic growth. This is not to say that industrial parks should not be an important element of a county's strategic plan, since some (particularly regional) parks have proved fairly successful ventures, but results from this study show that they are clearly not a guarantee of future prosperity in and of themselves – as officials in many counties appear to believe. In certain ways they can prove to be a liability in so far as they require a large investment to create and the quick departure of a large manufacturer can devastate a community.

Finally, implementing and/or revising a number of policies and regulations (e.g., zoning, alcohol sales laws, and property taxes) may also help counties attract new businesses and improve quality of life. For example, developing zoning regulations for areas in the community that are currently not zoned, or are not sufficiently zoned, could reassure current and prospective owners that their property values are protected. Moreover, since most U.S. counties are 'wet' (allow full alcohol sales/service), the 'dry' prohibition status that characterizes so many rural Kentucky counties often serves as just one more barrier to attracting new businesses and increasing local tax revenues.

It is suggested that future work should focus on collecting and analyzing other key variables indicated in the literature review as contributing to economic progress in rural areas (e.g., health care accessibility and community involvement). In addition, expanding the county interviews to include both more Kentucky counties with a variety of economic histories as well as counties in other areas of Appalachia would provide a richer qualitative dataset from which to refine this analysis and add to the recommendations offered above.

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