

Economic Analysis for Southern Appalachian Ohio: Regional Industrial Targeting



Micah B. Stryker

CP 8990 Applied Research Paper
Georgia Institute of Technology School of
City and Regional Planning
5/1/2011

Cover Photos:

Top: Kenworth truck manufacturing in Chillicothe, Ohio. Mike Seigel/The Seattle Times.

Bottom: American Micro Products Inc. office building, Clermont County, Ohio. www.american-micro.com

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Executive Summary

Appalachian Ohio covers 32 counties in southern and eastern Ohio. It is an area that has long been plagued by a poor economy and the many social problems that accompany such conditions. Appalachian Ohio had a poverty rate of 13%, higher than both State and National levels. Currently, unemployment rates sit at or above 10% in 27 of the 32 Appalachian counties. Southern Appalachian Ohio is comprised of 11 counties in the southern and southwest part of the State and is the focus of this report. The Appalachian Regional Commission has classified the economies of two counties, Vinton and Pike, as “Distressed.” Five counties, Adams, Scioto, Jackson, Lawrence, and Gallia, were classified as “At Risk.” Three counties, Brown, Highland, and Ross, managed to be classified as “Transitional.” Only Clermont, a suburban Cincinnati county, had an economy labeled as “Competitive.” The economic status of this area signifies a need to be proactive in identifying the industrial strengths of the region to guide possible economic development agendas.

This report used both shift share and location quotient analysis techniques to identify strong industries in the region that should be targeted by local and regional economic development agents. It also combined the results of these two analyses with other employment data to group industries in Key, Growth, and Dormant categories. The results of these analyses were combined with research on local economic developments and conditions through news articles, government websites, and local chambers of commerce to determine development priorities for each county. An effort was made to establish regional and industrial linkages that would allow for collaboration among economic development authorities.

Shift share analysis identified eleven industries that had a positive median local share. Four of those industries were growing at the national level as well. Those four industries were Ambulatory Health Care Services 621, Accommodation 721, Justice, Public Order, and Safety Activities 922, and Private Households 814. Private Households had the largest local share percentage by far at 84%, but its

small location quotients and informal nature of much of the work in the industry severely hurts its targeting potential. Location quotient results were disappointing as only Ambulatory Health Care Services 621 had more than one county report a location quotient over 1. To move past this, the results of those analyses moved into an industry classification analysis that would better capture the strength and growth of important industries in each county. County classifications were defined as:

- 1) **Key Industry:** These are industries that have positive changes in employment, LQ, and positive local share. For this analysis they will also have 250 or more employees.
- 2) **Growth Industry:** These industries also have positive changes in LQ and positive local share. They also have experienced job growth of 20 % or greater. However, they have less than 250 employees.
- 3) **Dormant Industry:** A dormant industry has significant employment that is decreasing while its location quotient is increasing over time. Employment of 200 is used for this analysis.

This analysis identified many more strengths and opportunities for industrial targeting and economic development. Key and growth provide excellent targeting opportunities while dormant industries identify areas to focus on retention and support for existing businesses. Counties with shared or related industries also provide an opportunity for regional cooperation and collaboration in economic development initiatives. Several of the strongest opportunities include:

Wood Products Manufacturing: Natural resources have long been an asset for Appalachian areas. Brown, Clermont, Scioto, and Pike all indicated this as an important industry. This industry was also the largest employer in Vinton County. Most other counties also have a significant presence of employers who use the ample wood resources in the region. This represents a great opportunity to regionally target industries that use wood, focusing mainly on higher level, value added industries. This strategy would also allow local entrepreneurial development and distribution that could mirror the success of Amish craftsmen.

Ambulatory Health Care Services: Health care represents an important industry for rural areas. Besides the obvious services and jobs it supplies to the area, it also provides a way for local

economies to capture Federal and State monies through Medicare and Medicaid payments. Prospects for developing the health care industry were greatest in Adams and Lawrence County, while Gallia had prospects for catering medical services to older populations. Cooperation in this area could help provide stronger economies to many areas and better services to the region as a whole.

Tourism: Heritage tourism and natural amenities have allowed many rural areas to experience economic growth. The Accommodation industry was one of the few industries in the region that had positive local share and positive national share. It was listed as Growth in neighboring Pike and Scioto Counties, providing an excellent opportunity to join together to develop and promote tourism. A joint convention center could provide an excellent opportunity to attract conferences and visitors to the area to help support the local economy. The proximity from many larger metropolitan areas provides a great opportunity cater to day and weekend travelers throughout the region.

Retail: Retail sectors were identified in several counties as Key and Growth. Clermont had the broadest retail opportunity, but Lawrence and Highland also showed opportunity to develop retail in growing markets. General Merchandise and Building Materials and Garden Equipment and Supplies stores were the strongest retail sectors in the region.

Construction: Two construction industries were identified as strong in several counties, Construction of Buildings 236 and Specialty Trade Contractors 238. Lawrence, Scioto, and Pike identified both as Key while Gallia reported Construction of Buildings as Key with one of the highest location quotients for any reported industry. While this industry is strong in the region,

it does represent some challenges. The Great Recession and housing crisis have severely hurt the industry, making competition for projects even more competitive. The strength in the region indicates that it would be a worthwhile economic venture to target and support this industry.

Many other industries and opportunities were identified through the analysis. Some provided the opportunity for regional cooperation while others were excellent targets for individual counties. This analysis represents one tool that can be used to help guide economic development opportunities in the region as part of a broader development strategy. Combined with other tools and support, this type of analysis can help guide Appalachian Ohio down a path to a brighter economic future.

Purpose

Appalachian Ohio is a rural area abundant in natural resources and a population that values community and hard work. However, it is also an area where poverty and economic hardship are also often abundant. A trait shared amongst most Appalachian areas. This research will specifically address the eleven county region of Southern Appalachian Ohio. It seeks to determine economic strengths found in the region and foster regional cooperation among those industries to help propel the local and regional economies forward. This report begins with a discussion of Appalachian Ohio and a profile of the Southern Region's economic conditions. A literature review provides insight into the current thought and research geared towards economic development in rural areas. Industrial analysis using shift share and location quotients will be used to identify target industries and guide economic recommendations and strategies for each of the eleven counties.

Appalachian Ohio

The Appalachian Regional Commission (ARC) designates the Appalachian Region of the United States as a 205,000 square mile area surrounding the Appalachian Mountains. The area ranges from southern New York to northern Mississippi and includes 420 counties in parts of 13 different States (Appalachian Regional Commission, n.d.). Ohio Appalachia includes 32 counties stretching from the far northeast corner of the State, down its southern border, almost reaching Indiana (ARC). The Governor's Office of Appalachia (GOA) governs economic development in twenty-nine of the 32 counties of Ohio Appalachia and further divides the region into three sections, each overseen by a Local Development District. They are the East Central Region, the Central Region, and the Southern Region (Governor's Office of Appalachia, 2008). The focus of this study is on the 11 county Southern Region of Appalachian Ohio. This includes the counties Adams, Brown, Clermont, Gallia, Highland, Jackson, Lawrence, Pike, Ross, Scioto and Vinton (Ohio Department of Development (ODD), 2010).

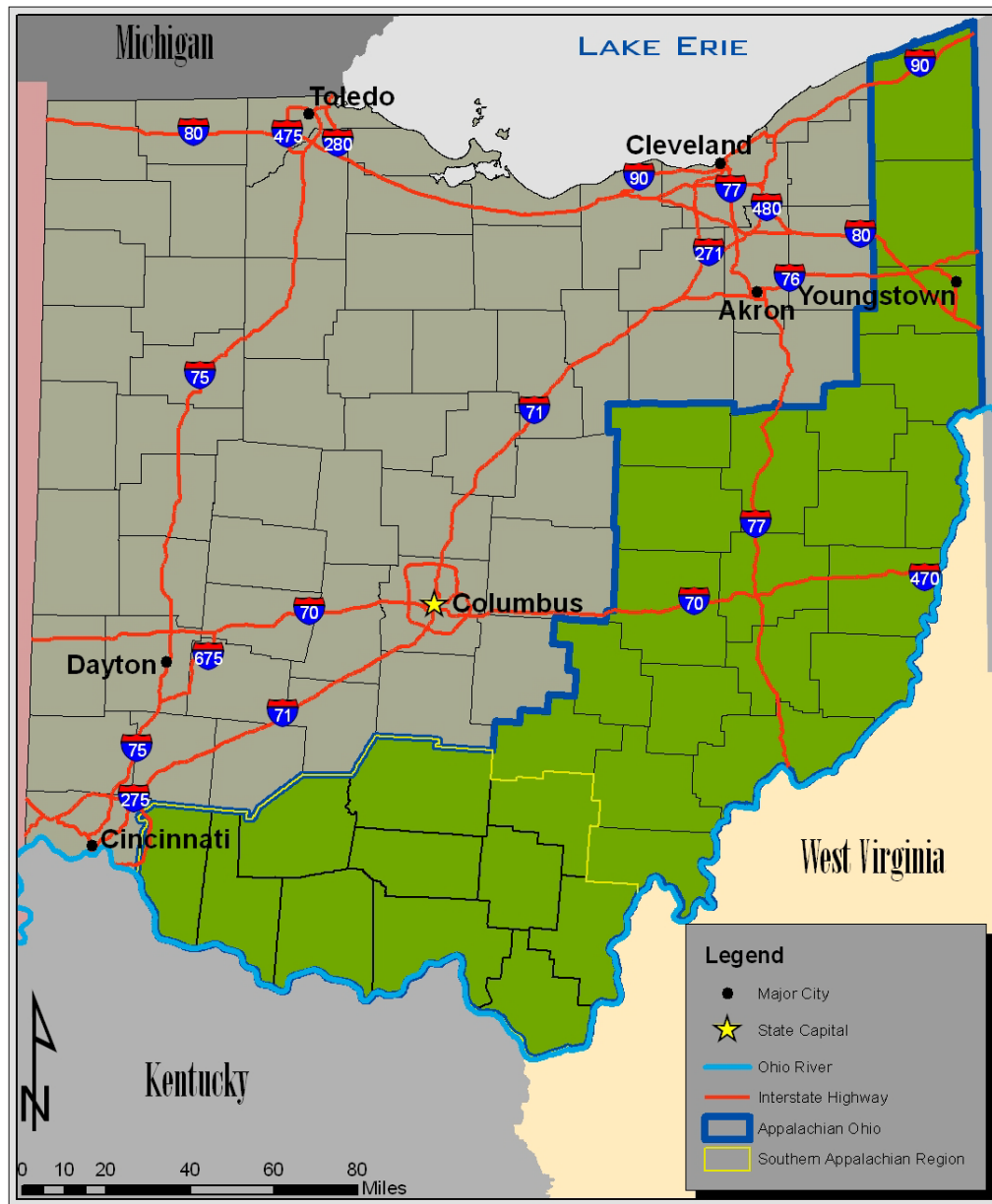


Figure 1 – Appalachian Ohio

The popular image of Ohio for many people is of old industrial cities like Cleveland, Cincinnati, Dayton, Akron and Toledo. They may even think of the rapidly urbanizing area of Columbus. Many people do not realize how rural, and how large, this area of Ohio is. Over one third of Ohio's eight

counties are included in Appalachia. Each of the three Regions of Appalachia in Ohio has over 60 % forest cover. The Central Region alone is over 90 % forest cover. Urban land cover does not count for more than 3 % of total coverage for any of the three regions (ODD, 2007). Ohio's Appalachia covers just over 16,000 square miles of land with a population just over 2 million people. It has a population density of 127.5 people per square mile. That is almost 150 people less than the density for the entire state (ARC). The Southern Region itself covers over 5,100 square miles and had a 2006 estimated population just over 437,500 people. Apart from the suburbanized Clermont County, the largest populated city is Chillicothe, in Ross County, with a population of just over 22,000 people. Portsmouth is the only other city in the region over 12,000 people (ODD, 2007).

Economic Conditions

The economy of Appalachian Ohio, like Appalachia as a whole, has relied heavily on natural resource extraction. Salt, iron, coal and timber have been important commodities driving industry in the region. Agriculture has been a mainstay as well. More recently, the growth of tourism and a concerted effort for entrepreneurial support have seen success (Appalachian Ohio, 2008). Mining no longer plays a significant role in the Southern Region of Appalachian Ohio, but manufacturing does. In 2005, outside of the government sector, manufacturing employed the most people in the region. Eleven of fourteen major employers were in manufacturing (ODD, 2007). With the current economic conditions and unemployment rates, these industries have no doubt faced challenges and many have probably suffered. Analysis can show which industries have persevered or are poised to emerge as economic forces in the coming years.

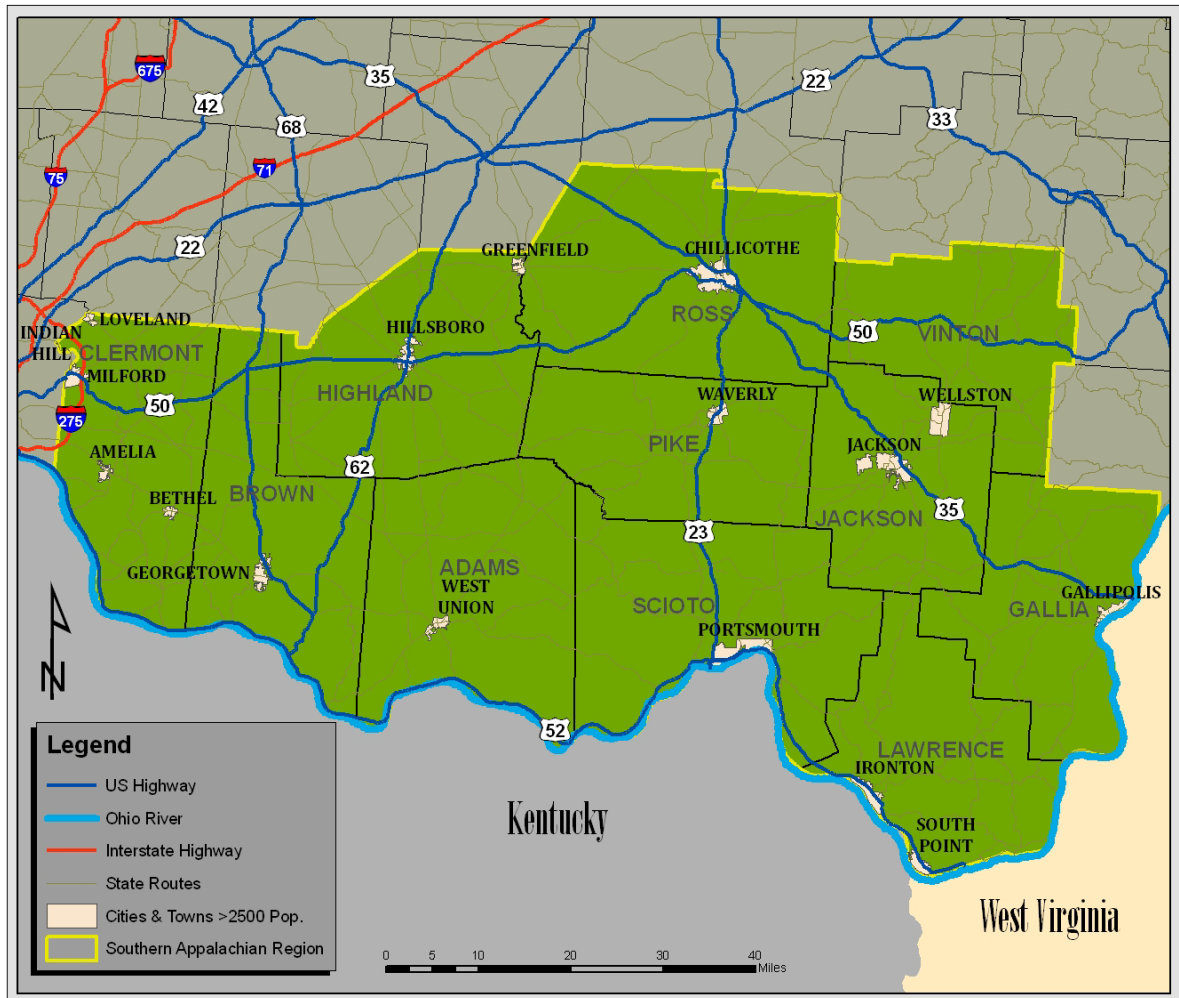


Figure 2 – Southern Appalachian Ohio

Appalachian areas and poverty often go hand in hand. The case is no different in Appalachian Ohio. The poverty rate for Appalachian Ohio in 2000 was 13 %. This was above the National level of 12.4% and the State level of 10.6%. For the Southern Region, six counties had a poverty rate higher than the National average. Vinton County alone had a poverty rate of 20% (ARC). Poverty and unemployment are often associated as well. Unemployment in Appalachian Ohio for 2008 was 7.2%. Pike County's unemployment rate was over 10%, while many others sat in the 8 to 9 percent range (ARC). In light of the continuing economic recession, current unemployment rates in 27 of the 32 counties in Appalachian Ohio sit at or above 10 % (Bureau of Labor Statistics, 2010).

The Appalachian Regional Commission classifies counties into five economic performance categories. The lowest classification is “Distressed”, followed by “At-Risk”, “Transitional”, “Competitive” and then “Attainment”. For the Fiscal Year 2011, only one county in Southern Ohio Appalachia, Clermont, is classified as high as “Competitive” Pike and Vinton Counties are labeled as “Distressed”. Five other counties are classified as “At-Risk” (ARC). This range of economic performance presents many opportunities in studying this region. Proximity to stronger economies should provide economic opportunities to the poorer counties. Working regionally in this manner will allow counties to feed and spur growth in other areas.

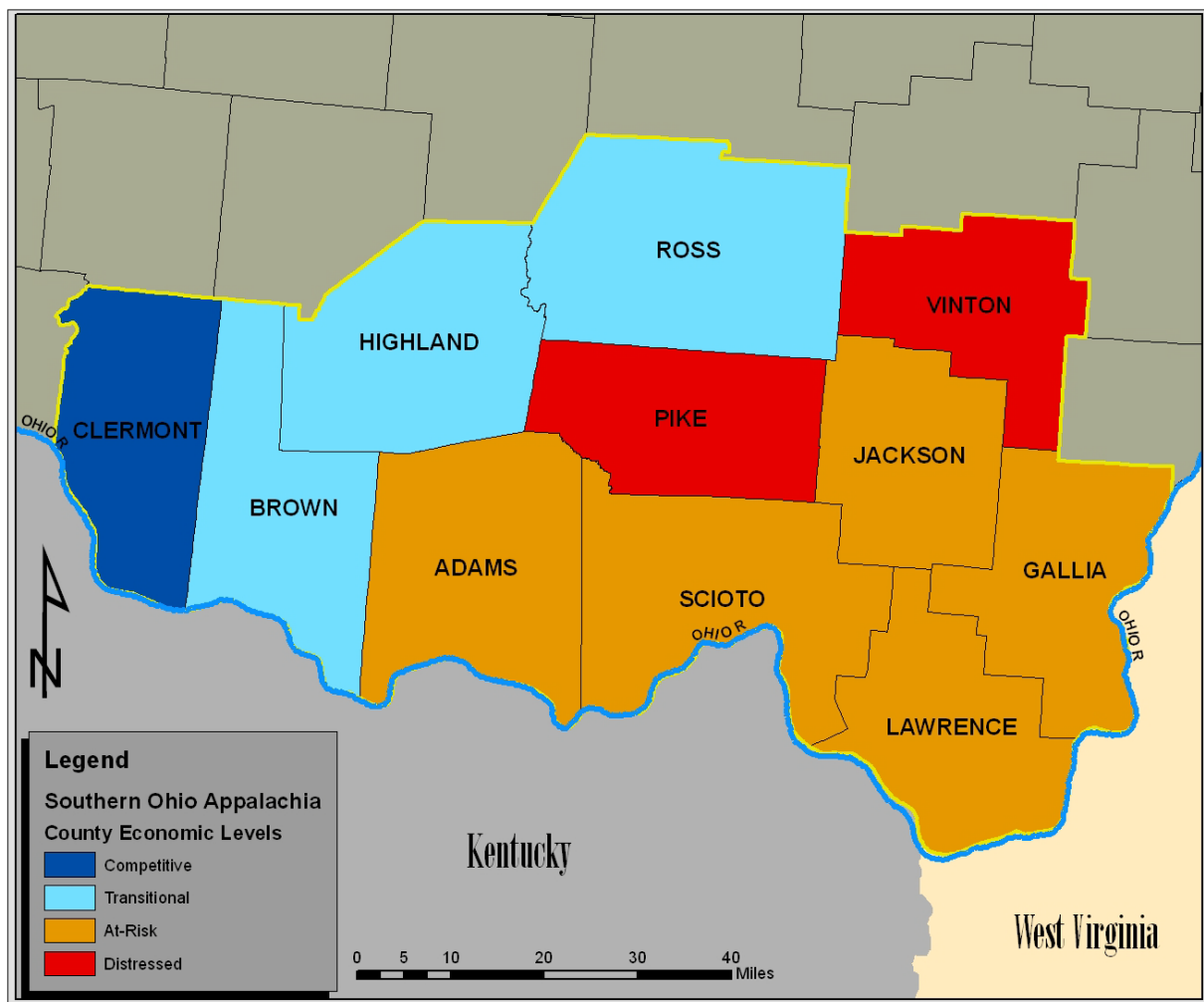


Figure 3 – Economic Performance of Southern Appalachian Ohio Counties

Role of This Analysis

No single economic initiative can solve the many problems faced in the region. However, identifying and targeting key industries can be a part of the solution. The Southern Region of Appalachian Ohio needs to pursue strong and emerging industries that can drive its economy. Economic analysis using shift-share and location quotient techniques will identify the industries that this Region should pursue. Along with information from local governments, organizations, and news reports on current developments will further aid in selecting target industries and location.

The Ohio Valley Regional Development Commission (OVRDC) is the Local Development District for the Southern Region of Appalachian Ohio. It provides the region with planning assistance and funding programs from various government organizations. This includes administering Community Block Grants and small business loans, as well as organizational efforts between local governments and agencies (Ohio Valley Regional Development Commission (OVRDC), 2010). The U.S. Economic Development Administration also requires that the OVRDC complete a Comprehensive Economic Development Strategy every 3 years (OVRDC, 2010). This analysis can be viewed as a status update to their 2009 study. Data and results can be compared to show changes, support current initiatives, or identify other possible programs and policies they are not currently pursuing.

The Southern Region of Appalachian Ohio is in need of economic development to rise above its history of poverty. This is possible if the Region can draw from the suburban growth to its west and work together to target industries that can support and grow its economy. Coupling industrial and workforce analysis will provide insight and guidance to the Southern Region and the Ohio Valley Regional Development Commission as they work towards economic growth. This analysis will provide a report the OVRDC and other local institutions can use to help guide economic and workforce development policy and decisions.

Southern Appalachian Ohio County Profiles

- ❖ **Adams**
- ❖ **Brown**
- ❖ **Clermont**
- ❖ **Gallia**
- ❖ **Lawrence**
- ❖ **Highland**
- ❖ **Jackson**
- ❖ **Lawrence**
- ❖ **Pike**
- ❖ **Ross**
- ❖ **Scioto**
- ❖ **Vinton**

Adams County

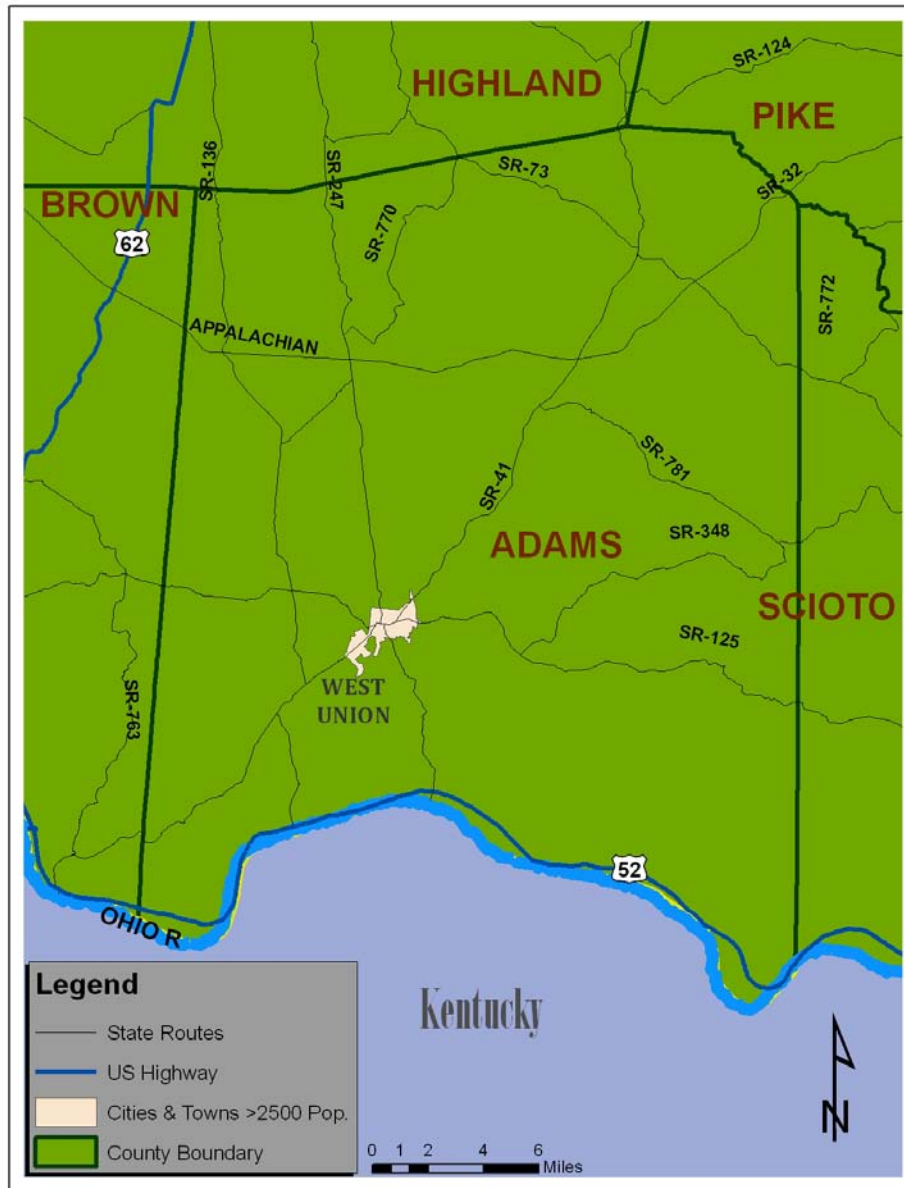


Figure 4 – Adams County, Ohio

- **Location:** Along the Ohio River between Brown and Scioto Counties with Highland County to the north.
- **2009 Population:** 28,043
- **Largest City:** West Union Village, pop. 3,093
- **2009 Population age 65 and over:** 13.4%
- **Projected 2020 population:** 31,490
- **Projected 2020 Population age 65 and over:** 16.4%
- **Median Income:** \$25,542/\$35,889 (Ohio)

- **Major Highways:** The Appalachian Highway (SR 32) (Appalachian Highway), US 52. West Union lies in the middle of the county at the junction of State Routes 41, 125, and 247.
- **Major Employers:** Adams County Government, Adams County Hospital, Adams Co/Ohio Valley Local Schools, DPL Inc/Dayton Power & Light Co, Eagle Creek Nursing Center, General Electric Co, Maca Plastics Inc, Wal-Mart Stores Inc. (ODD 2009 & ODD, 2009).
- **Economic Assets & Issues:** Dayton Power and Light also has a major presence in the county (ODD 2009). They operate two coal plants along the Ohio River. They employ 580 full time employees plus a minimum of 100 contractors. The company is proposing a landfill for gypsum, a byproduct of electricity production, within Adams County. This would provide 8 to 12 full time positions along with an undetermined amount of construction jobs (Weyrich, 2011). While providing employment, it also raises environmental and health issues.

The Adams County Regional Medical Center in Seaman is the only hospital in the county. It employs over 300 people, including 84 doctors and registered nurses (ARCM, 2010). A Portion of the Shawnee State Forest falls within its borders. Adams Lake State Park, a 47 acre lake just north of West Union, is also located in Adams County (ODNR, 2010).

Perhaps its biggest attraction is the ancient Serpent Mound, a quarter mile earthen serpent effigy and accompanying burial mounds during the Adena Culture (800 BC – 100 AD). The Ohio Historical society operates the park and associated museum located north of Peebles off State Route 71 (Ohio Historical Society, 2011).

Brown County



Figure 5 – Brown County, Ohio

- **Location:** West of Adams and Highland County and East of Clermont. Clinton County is located to the north.
- **2009 Population:** 44,003
- **Largest City:** Georgetown Village, pop. 3,398
- **2009 Population age 65 and over:** 11.6%
- **Projected 2020 population:** 53,290
- **Projected 2020 Population age 65 and over:** 14.3%
- **Median Income:** \$29,509/\$35,889 (Ohio)
- **Major Highways:** The Appalachian Highway (SR 32), US 62, US 68, US 52

- **Major Employers:** Brown County General Hospital, Eastern Local Schools, Milacron LLC, Ohio Valley Manor, RULH Local Schools, Southern State Community College, Surgical Appliance Industries, Western Brown Local Schools (ODD 2009 & ODD, 2009).
- **Economic Assets:** Brown County General Hospital is a 127 bed facility in Georgetown with branch offices and clinics throughout the county (BCGH, 2011). Natural, cultural, and historic resources within Brown County include three wineries Kinkead Ridge Estate Winery, Meranda-Nixon Winery, and La Vigna Estate Winery all offer tours and tastings and are part of a growing wine industry in southern Ohio. There are several other wineries within a short distance of Brown County as well. Georgetown was also the boyhood home of Ulysses S. Grant, the 18th President of the United States. Grant's boyhood home and schoolhouse have been restored and are open for tours. Each year Georgetown holds their U.S. Grant Celebration every April. The village of Ripley, on the Ohio River, also has an extensive collection of homes, buildings, and artifacts from the Underground Railroad. Other villages and areas in Brown County also have connection to the Underground Railroad (The News Democrat et al., 2011).

Clermont County



Figure 6 – Clermont County, Ohio

- **Location:** The western most county in Appalachian Ohio, east of Cincinnati and Hamilton County, west of Brown County.
- **2009 Population:** 196,364
- **Largest City:** Union Township, pop. 44,503
- **2009 Population age 65 and over:** 9.4%
- **Projected 2020 population:** 225,340
- **Projected 2020 Population age 65 and over:** 13.5%
- **Median Income:** \$35,844/\$35,889 (Ohio)

- **Major Highways:** I-275, US 50, US 52, The Appalachian Highway (SR 32) (ODD 2009 & ODD, 2009).
- **Major Employers:** Total Quality Logistics, a freight logistics company, and American Modern Insurance Group both employ over 1000 people. Siemens PLM, a software company, and International Paper both employ over 600 people. Tata Consultancy Services, a computer programming company employs 400. Milacron also has a plastics manufacturing plant in Clermont that employs 350 people (Clermont County, Ohio, 2011). Mercy Hospital Clermont in Batavia provides medical services to Clermont County. It also is a large local employer with a staff of 500 people. HealthSource of Ohio based in Milford is also a health care provider in Clermont County. It employs 175 people with Clermont County branches in Goshen Township, Cincinnati, Batavia, and New Richmond (Clermont County, Ohio, 2011; and HealthSource of Ohio, 2007).
- **Economic Assets:** University of Cincinnati Clermont is located in Batavia (ODD, 2009). The County is home to two State Parks. East Fork State Park near Bethel is a 4,870 acre park with camping, hiking, and boating. Stonelick State Park near Pleasant Plain offers another 1,058 acres of natural amenities (ODNR, 2011). Clermont County is also home to 3 of its own wineries. Lakeside Winery near Felicity, McIntosh Winery & Restaurant in Bethel, and Harmony Hill winery also in Bethel add to the cultural attractions of the growing wine region (Ohio Department of Agriculture, 2008). The county also shares in the life history of Ulysses S. Grant with the Presidents birthplace in Pt. Pleasant. The county also contains several house museums devoted to agriculture and river life (Clermont County, Ohio Convention and Visitors Bureau, n.d.). Clermont County also has a large retail presence with the Eastgate mall, located just off I-275 and The Appalachian Highway. It contains over 100 stores, restaurants, hotels, and a movie theater (CBL & Associates Properties, 2010).

Gallia County



Figure 7 – Gallia County, Ohio

- **Location:** The eastern most county in the Southern Appalachian Ohio Region. The Ohio River forms its Eastern boarder while Lawrence and Jackson Counties boarder it to the west with Vinton and Meigs County to the north.
- **2009 Population:** 30,694
- **Largest City:** Gallipolis Village, pop. 4,107
- **2009 Population age 65 and over:** 13.4%
- **Projected 2020 population:** 33,360
- **Projected 2020 Population age 65 and over:** 17.0%
- **Median Income:** \$twenty-nine,463/\$35,889 (Ohio)
- **Major Highways:** US 35, State Route 7 (ODD 2009 & ODD, 2009).

- **Major Employers:** Holzer Medical Center and Holzer Clinic together employ over 2,000 people. Wal-Mart employs over 400 people in the county. Rockwell Automation employs 273 people in motor manufacturing while GKN Sinter Metals employs 163 people in auto parts manufacturing. Ohio Valley bank employs 281 people. The University of Rio Grande is also a large employer with 212 employees. Power companies also have a large presence in the area. American Electric Power's Gavin Power Plant employs 271 people while Ohio Valley Electric's Kyger Creek Power Plant employs 303 people (Gallia County Chamber of Commerce, 2008).
- **Economic Assets:** Gallia County is also home to the Gallia-Meigs Regional Airport located just north of Gallipolis. This is also across the Ohio River from Point Pleasant, West Virginia, which is connected to Ohio via the Appalachian Highway. Gallipolis location on the River makes it a possibility for port and transportation activity on the Ohio River (Gallia County Economic Development, n.d. a). The Dan Evans Industrial Park is strategically located near US 35 and houses many important businesses (Gallia County Economic Development, n.d. b). Portions of the Wayne National Forest are located in the western portion of Gallia County, offering camping, hiking and other outdoor recreational opportunities (USDA, 2009). This includes the Crown City Wildlife Area near Crown City in the southwestern corner of the County. This provides over 11,000 acres for public recreation and hunting and fishing (ODNR, 2011). Gallia County is also Home to Bob Evans Farms. The Homestead Museum in Rio Grande provides a history of the Evans farm and family along with the history of Gallia County and Southeastern Ohio (Gallia County Convention and Visitors Bureau, 2011).

Highland County

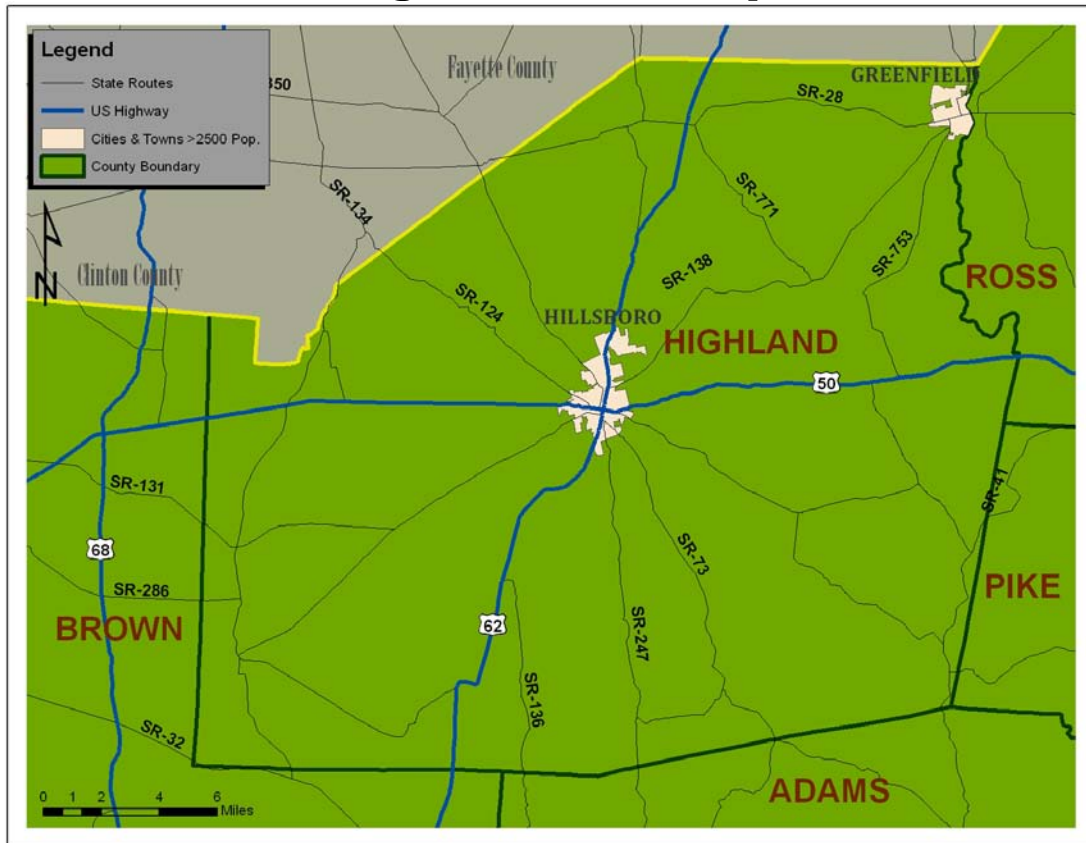


Figure 8 – Highland County, Ohio

- **Location:** Bordered by Southern Appalachian Region counties Brown, Adams, Pike, and Ross on its east, south, and western borders. Clinton and Fayette counties bound Highland County to the north.
- **2009 Population:** 42,178
- **Largest City:** Hillsboro, pop. 6,666
- **2009 Population age 65 and over:** 13.7%
- **Projected 2020 population:** 48,220
- **Projected 2020 Population age 65 and over:** 15.8%
- **Median Income:** \$28,697/\$35,889 (Ohio)
- **Major Highways:** US 50, US 62, State Route 28
- **Major Employers:** Highland County's major employers are heavily focused in the manufacturing sector. This includes Huhtamaki Packaging Worldwide, Illinois Tool Works/Hobart Corp, Lancaster Colony/Candle-Lite Inc, RR Donnelley & Sons/Banta Corp, and Toyo Denso Co/Weastec Inc. Wal-Mart is also a major employer in the county (ODD 2009 & ODD, 2009).
- **Economic Assets:** Hillsboro is also the location of the main campus of Southern State Community College. Great Oaks, a career and technical education institution, also serves Highland County. A twenty-nine mile stretch of rail crosses the northern section of the county

and connects to CSX north/south line. Highland also has a county airport. The county's medical needs are served by two hospitals. The 25 bed, critical access Highland District Hospital is located in Hillsboro, while the 25 bed, critical access Adena Greenfield Medical Center in Greenfield is the only certified stroke rehabilitation facility in southern Ohio. Highland is also home to Rocky Fork State Park and Paint Creek Lake State Park, offering over 13,600 acres of lake and land for recreation combined (Highland County Economic Development Office, 2010).

Jackson County

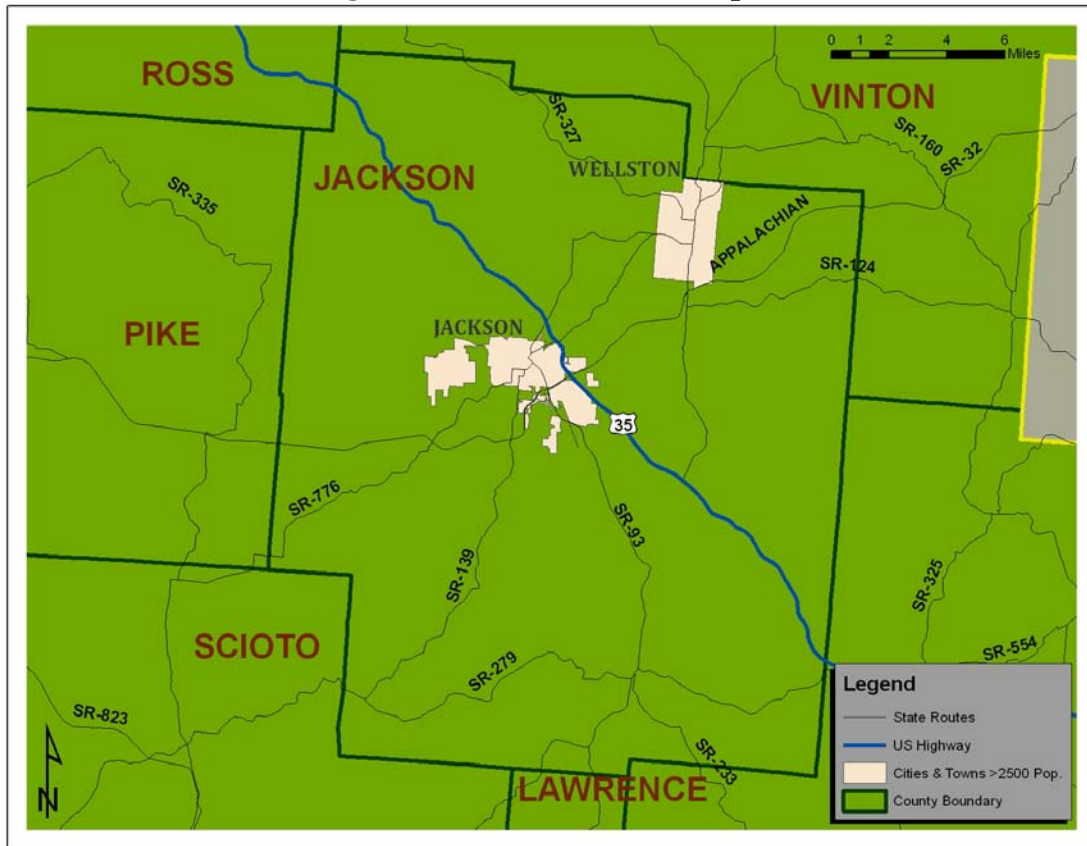


Figure 9 – Jackson County, Ohio

- **Location:** Located in south-central Ohio, Gallia, Lawrence, and Scioto Counties lie to its south, Pike and Ross to the west, and Vinton to the north.
- **2009 Population:** 33,440
- **Largest City:** Jackson, pop. 6,164
- **2009 Population age 65 and over:** 13.6%
- **Projected 2020 population:** 35,060
- **Projected 2020 Population age 65 and over:** 15.7%
- **Median Income:** \$25,910/\$35,889 (Ohio)
- **Major Highways:** US 35 and The Appalachian Highway (SR 32) (ODD 2009 & ODD, 2009).
- **Major Employers:** Bellisio Foods employs 1,315 people producing Michelina brand frozen entrees. General Mills employs 1,200 people producing frozen pizza products. Merillat Industries employs 200 people creating cabinet frames and Osco Industries employ 120 people in iron foundries and casting work. Wal-Mart employs 400 people in Jackson County. Holzer Medical Center and Holzer Clinic employ 405 people and supply medical care to Jackson County (Jackson County Economic Development Board, 2010).
- **Economic Assets:** The City of Jackson owns the rail line that starts in the southern end of the county and continues north through the length of both Jackson and Vinton Counties. Jackson

also has an airport just 5 miles to its south. Downtown Jackson has a historic district with many retail shops. The city also has a shopping center anchored by a national grocery chain, regional department store, a national discount merchandise retailer. Jackson County is also home to the Cooper Hollow Wildlife Area, Jackson Lake State Park, Lake Alma State Park, and the Lake Katharine Nature Preserve, all providing thousands of acres for outdoor recreation. The county also offers historic and cultural amenities such as the reconstructed Buckeye Furnace iron blast-furnace, ancient Native American petroglyphs, and the Welsh-American Heritage Museum (Jackson County Economic Development Board, 2010).

Lawrence County

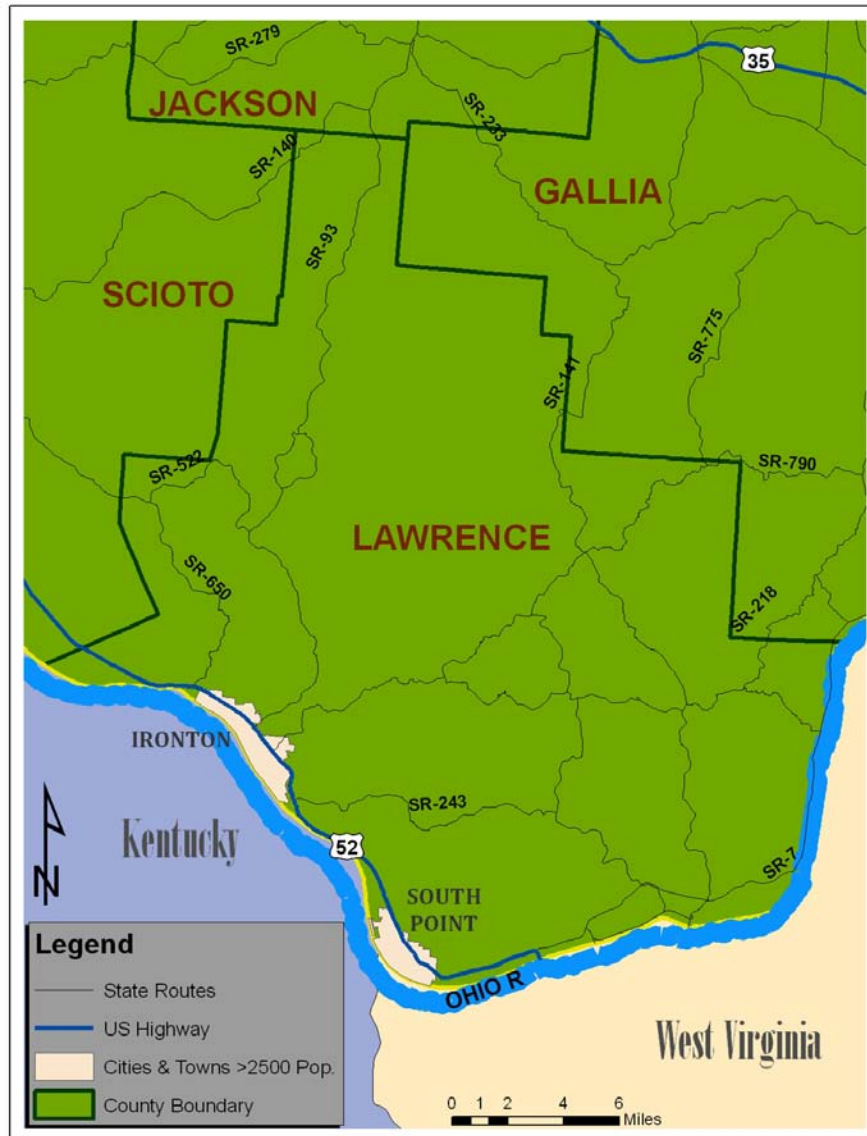


Figure 10 – Lawrence County, Ohio

- **Location:** The southernmost county in the State of Ohio. Scioto County borders it to the west while Jackson and Gallia County form its north and east borders respectively.
- **2009 Population:** 62,744
- **Largest City:** Ironton, pop. 11,282
- **2009 Population age 65 and over:** 14.4%
- **Projected 2020 population:** 63,830
- **Projected 2020 Population age 65 and over:** 16.4%
- **Median Income:** \$27,367/\$35,889 (Ohio)
- **Major Highways:** US 52 and State Route 93

- **Major Employers:** Leibert Corp has 436 employees in industrial air conditioning. Sunoco and Dow Chemical employ over 300 people combined in petroleum and chemical industries. McGinnis Inc and Superior Marine Inc both employ over 100 people in harbor service and boat repair (Greater Lawrence County Area Chamber of Commerce, 2011). County government and schools, including Ohio University, are also major employers in the area (ODD 2009 & ODD, 2009).
- **Economic Assets:** There is the Holzer Clinic in Proctorville and the Kings Daughter's Medical Center in South Point. An urgent care and radiological facility is located in Ironton (VillageProfile, 2006). A new 16,500 square foot family medical center was opened in Ironton in 2010 (The Herald-Dispatch, 2010). Also in 2010, ground was broken on the 46,000 square foot medical center in Ironton near the intersection of US Highway 52 and State Route 141. This is projected to meet most of Lawrence County's health care needs and create more than 50 health care jobs (Hendricks, 2010).

Lawrence County has a small airport within the county and is also located near the Tri-State Airport in Huntington, offering commercial services (Greater Lawrence County Area Chamber of Commerce, 2011). The Point industrial park in South Point offers existing utility infrastructure and multi-modal transportation options with access to highways, rail, and the Ohio River (Greater Lawrence County Area Chamber of Commerce, 2011). The Wayne National Forest has a branch office located in Ironton. Vesuvius Lake is the "premier developed site" in for the National Forest, offering camping, fishing, hiking and other recreation opportunities. Wayne National forest also showcases the areas important ironworks history (USDA, 2009).

Pike County

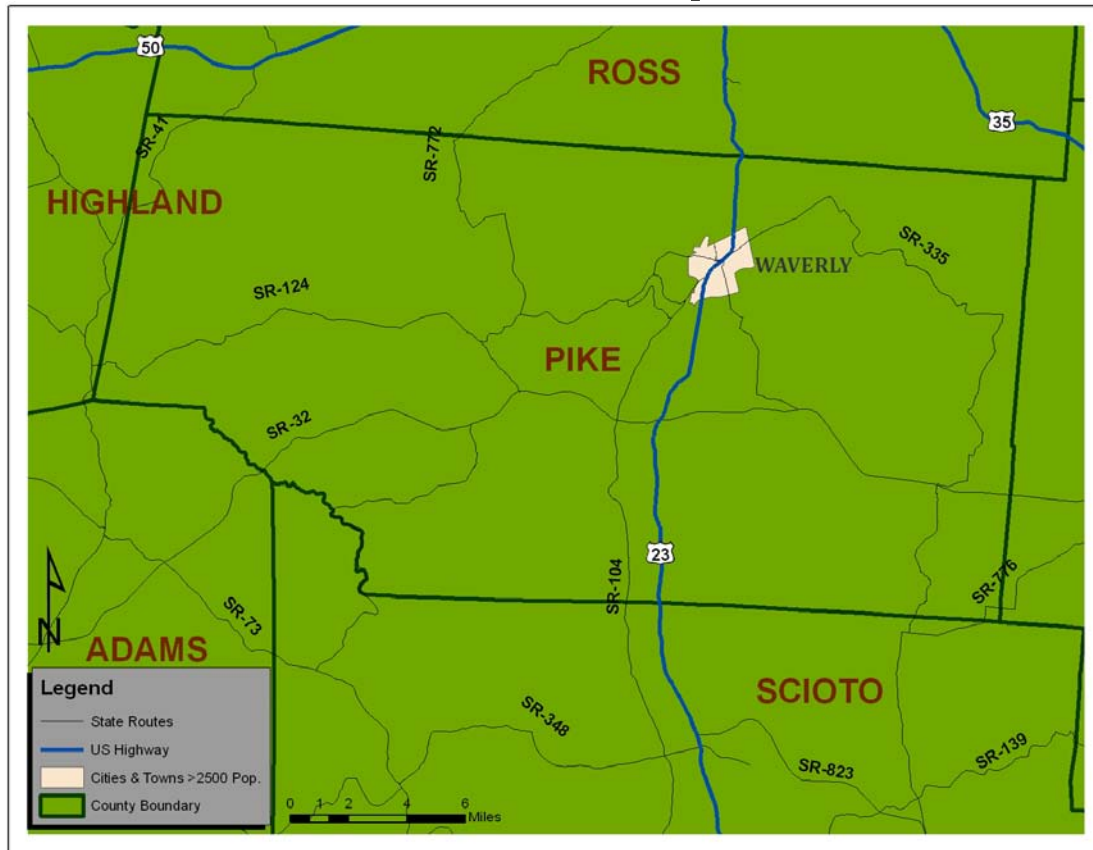


Figure 11 – Pike County, Ohio

- **Major Highways:** US 23, The Appalachian Highway (SR 32), and State Route 124
- **Location:** Centrally located in Southern Appalachian Ohio, Scioto and Adams County lie to the south, Highland to the west, Ross to the north and Jackson to the east.
- **2009 Population:** 27,722
- **Largest City:** Waverly City, pop. 4,480
- **2009 Population age 65 and over:** 13.5%
- **Projected 2020 population:** 31,080
- **Projected 2020 Population age 65 and over:** 15.5%
- **Median Income:** \$21,163/\$35,889 (Ohio)
- **Major Employers:** Eastern Local Schools, HCF/Pleasant Hill Manor, Ohio Valley Electric Corp, Pike Community Hospital, Pike County Government, Pike County JVS, Scioto Valley Local Schools, USEC/United States Enrichment Corp, Wal-Mart Stores Inc, Waverly City Schools, Western Local Schools (ODD 2009 & ODD, 2009).
- **Economic Assets:** The County's natural resources have lead to strength in wood and natural product industries, including the company Mills Pride. Other industries located in the county work in the paper, automotive components, modular housing, and fuel enrichment industries (Pike County Chamber of Commerce, 2011).

Pike also has a county airport, and is also located only an hour away from the Columbus International Airport. The Ohio River ports in Portsmouth are only a half hour to the south. Zahn's Corner industrial park offers 140 empty acres of land in an Empowerment Zone with 700 adjacent acres all open for development. The county has access to both CSX and Norfolk Southern railways (Pike County Chamber of Commerce, 2011). Pike County is also home to Lake White and Pike's Lake State Parks (ODNR, 2010). Pike is also part of the Appalachian Adventure Trail, contains the Ohio-Erie Canal Historic Trail, and also has 8 places listed on the National Register of Historic Places (Pike County Convention and Visitors Bureau, 2010).

Ross County

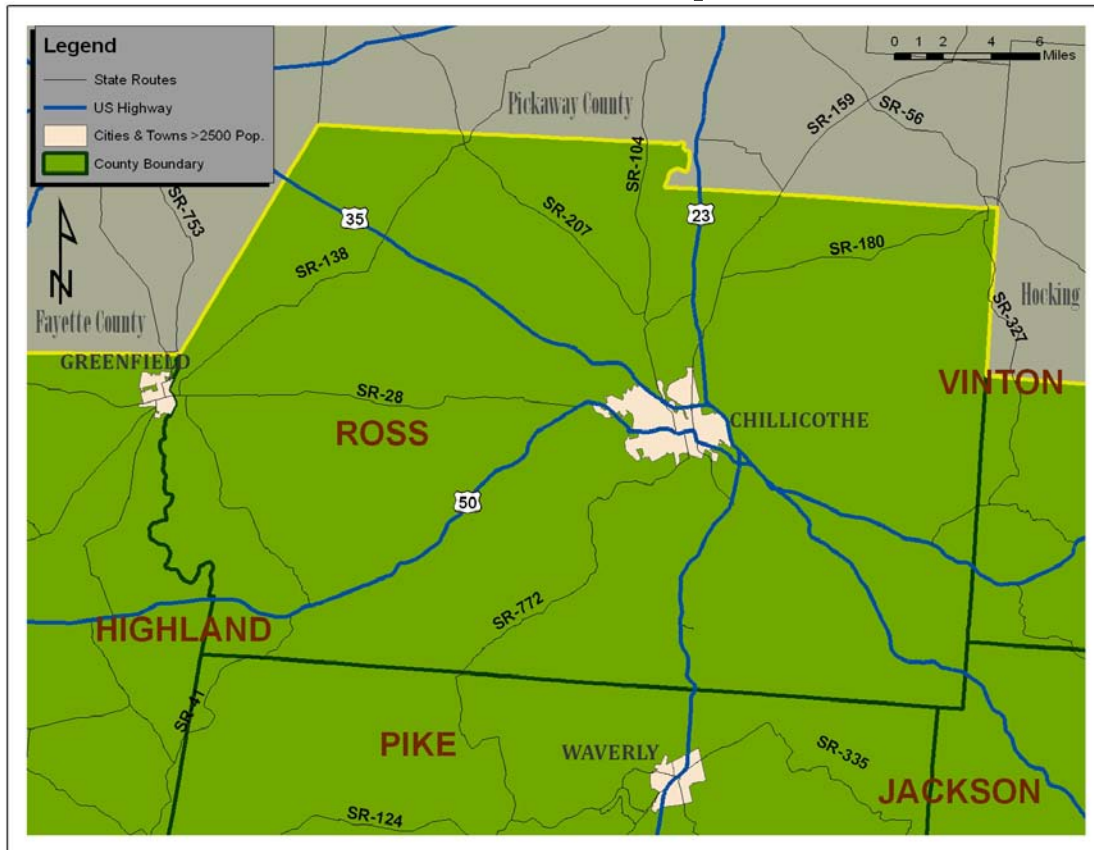


Figure 12 – Ross County, Ohio

- **Major Highways:** US 23, US 35, US 50. All three meet in Chillicothe (ODD 2009 & ODD, 2009).
- **Location:** The northernmost county in Southern Appalachian Ohio. North of Pike County, west of Vinton, Hocking and Jackson, east of Highland and Fayette, and South of Pickaway.
- **2009 Population:** 75,972
- **Largest City:** Chillicothe, pop. 22,193
- **2009 Population age 65 and over:** 12.1%
- **Projected 2020 population:** 82,930
- **Projected 2020 Population age 65 and over:** 14.6%
- **Median Income:** \$28,195/\$35,889 (Ohio)
- **Major Employers:** Glatfelter, a paper company, employs 1,500 people. Kenworth Truck Co has a plant that employs 1,200 people in Ross County. Adena Regional Health System is by far the largest employer with 2,150 employees. Ross County also has a Veterans Affairs Medical Center employing 1,100 people. Ross Correctional Institution and Chillicothe Correctional Institution both employ 550 people, providing a large amount of employment in prisons. Schools are also a major employer, including Pickaway-Ross Career and Technical Center with 250 employees and Ohio University-Chillicothe with 170, employees. Chillicothe based Horizon Telecom also

employs 200 (EDASO, 2011). Horizon telecom recently received a \$66.4 million Federal grant to extend broadband internet Appalachian Ohio (EDASO, 2011).

- **Economic Assets:** The Ross County Shoemaker Airport has a 5,000 foot runway and can accommodate airplanes up to 60,000 pounds. CSX and Norfolk Southern both have rail running north and south through the county (EDASO, 2011). The county is home to four different State Parks including Great Seal, Tar Hollow, Scioto Trail, and Paint Creek (ODNR, 2010). Chillicothe is home to the Hopewell Culture National Historic Park, documenting and presenting earthen mounds, artifacts, and culture of the Hopewell Indians who lived in the region from 200 BC to 500 AD (National Parks Service, 2010).

Scioto County

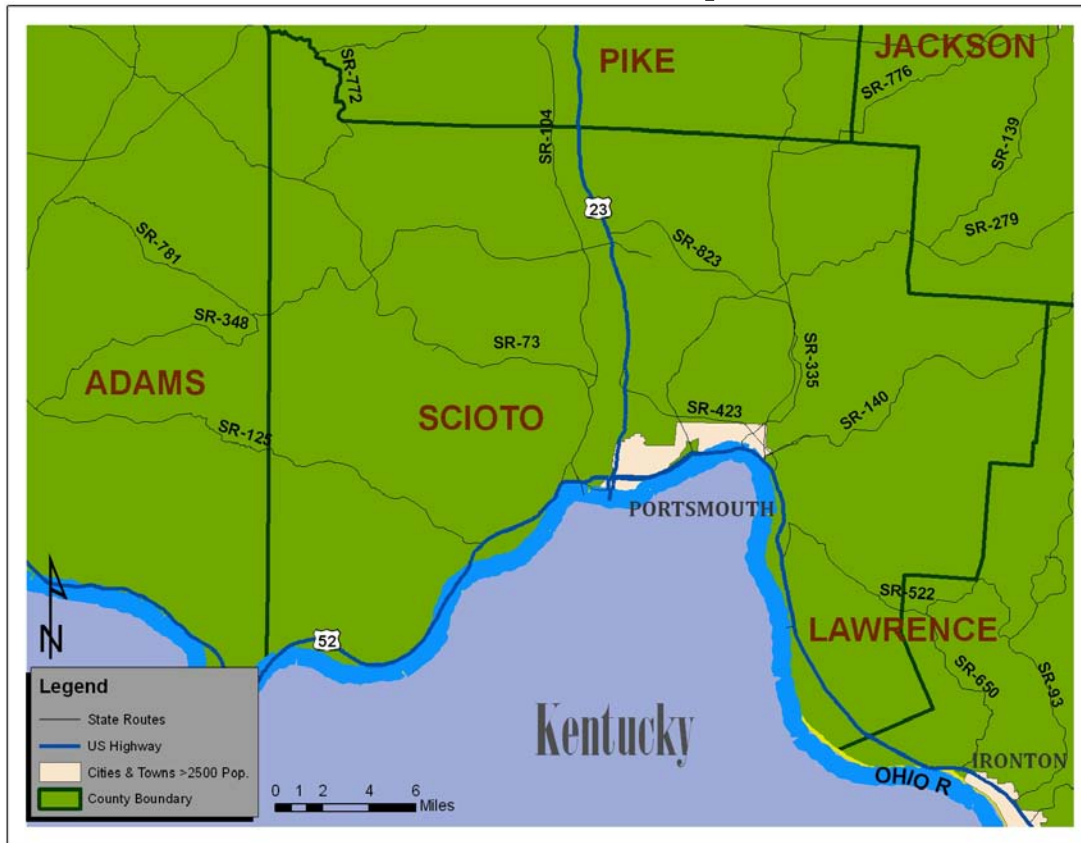


Figure 13 – Scioto County, Ohio

- **Location:** On the Ohio River south of Pike County, east of Adams, west of Lawrence.
- **2009 Population:** 76,335
- **Largest City:** Portsmouth, pop. 20,352
- **2009 Population age 65 and over:** 14.9%
- **Projected 2020 population:** 78,330
- **Projected 2020 Population age 65 and over:** 16.9%
- **Median Income:** \$27,561/\$35,889 (Ohio)
- **Major Highways:** US-23, US-52, and State Route 79 all meet in or near Portsmouth.
- **Major Employers:** G&J Pepsi-Cola Bottlers, Inc, Mitchellace Inc, OSCO Industries, Portsmouth City Schools, Scioto County Government, Shawnee State University, Southern Ohio Medical Center, State of Ohio, Sunoco Inc/SunCoke Energy, Taylor Lumber Inc, Wal-Mart Stores Inc (ODD 2009 & ODD, 2009).
- **Economic Assets:** Scioto County is home to Shawnee State University. Southern Ohio Medical Center Employs 150 physicians along with 2,000 other staff providing quality healthcare to the region. Portsmouth Regional Airport, with a 5,000 foot runway, is Scioto County. Scioto County is also home to Shawnee State Park, offering outdoor recreational opportunities. Portsmouth is also home to many cultural and tourist attractions including its 2,200 foot Floodwall Murals and historic downtown (Southern Ohio Growth Partnership, 2011 & 2011).

Vinton County

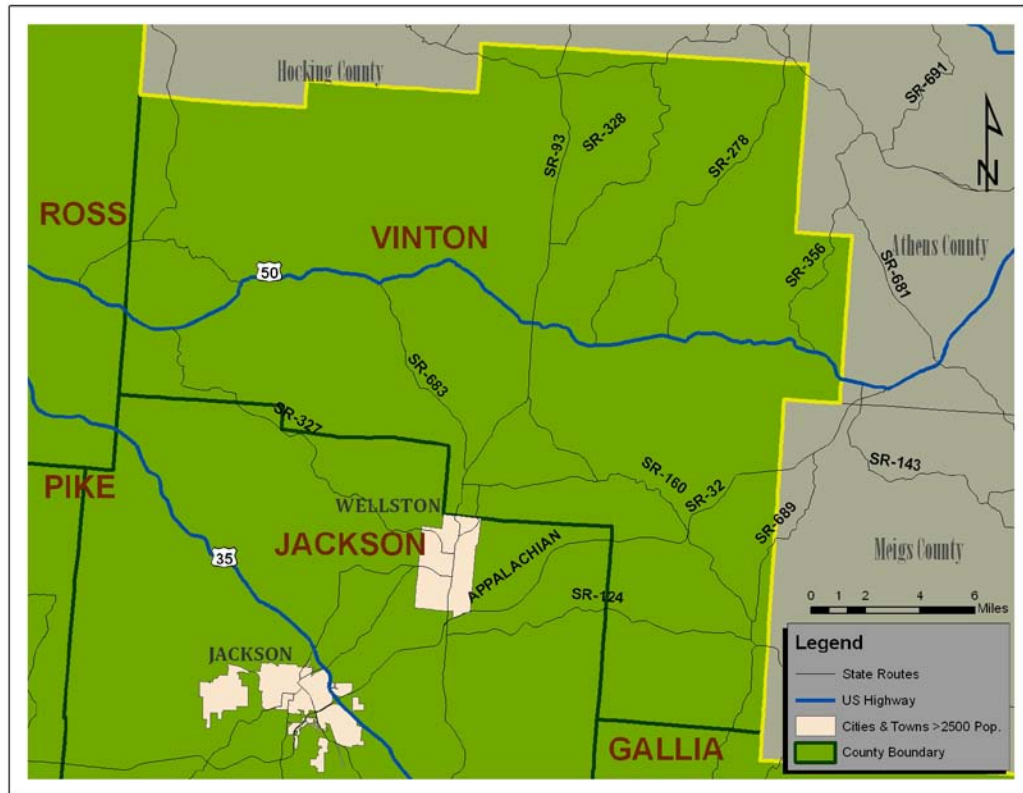


Figure 14 – Vinton County, Ohio

- **Location:** In the northeastern corner of the Southern Appalachian Ohio region.
- North of Gallia and Jackson Counties, east of Ross, south of Hocking, west of Athens and Meigs.
- **2009 Population:** 13,228
- **Largest City:** McArthur village, pop. 2,005
- **2009 Population age 65 and over:** 12.2%
- **Projected 2020 population:** 14,710
- **Projected 2020 Population age 65 and over:** 14.7%
- **Median Income:** \$22,505/\$35,889 (Ohio)
- **Major Highways:** The Appalachian Highway (SR 32) (Appalachian Highway), US 50 and State Route 93.
- **Major Employers:** Austin Powder Co, Community Bancshares Inc, Crownover Lumber Co Inc, Huston Nursing Home, Sands Hill Coal Co, State of Ohio, Vinton County Local Schools (ODD 2009 & ODD, 2009).
- **Economic Assets:** Vinton County remains 70 % covered in forest providing a wealth of natural amenities and outdoor recreation. It is home to Lake Alma and Lake Hope State Parks. It also contains portions of Tar Hollow and Zaleski State Forest. It also contains 5 historic covered bridges and a County Quilt Barn Trail featuring 27 barns (Vinton County Convention and Visitors Bureau, 2011, b, c, & d).

Overview of Rural Development Literature

This review is intended to highlight some of the recent thoughts, issues and research in the field of rural economic development. Rural development literature can focus on particular development issues or on entire development strategies. Whether the literature focuses on a particular tool or rural development in general, common themes emerge. This review will discuss the major themes in the current direction of rural development practice and thought.

Throughout all of the literature and discussion on rural development and the previous topics there have been two main themes as a focus for moving forward in rural development. The first theme is an emphasis on *working regionally*. The second theme is creating a *fresh approach that develops strengths*. This review then focuses on the tools and concepts important in pursuing these two themes.

Regional Collaboration

There are several main reasons for this regional approach to rural development. “Regional cooperation efforts can increase the power of local governments in negotiating the demands of firms and interacting with the national government, and can provide economies of scale for training programs and other demand side activities, such as revolving loan funds and local business support programs (Deweese et al. 2003, p 196).” Regional collaboration is also essential for rural regions. It will allow regions to create a “competitive edge in global markets” as the best chances for these opportunities occur when counties work together (Drabenstott 2010, p. 52). Brian Dabson, president of the Rural Policy Research Institute, believes that regionalism is the “antidote to diseconomies of scale” and should be an integral part of any rural development strategy (RUPRI, p. 107). A common benefit recognized by cooperation is that “rural communities will achieve more when they pool resources, identify common assets, and work together to develop the regional economy (Brown-Graham and Lambe 2008, p.7).”

Literature that focuses on regional development shares a similar theme with social capital regarding the importance of networks and connections. Karl Stauber writes, "If rural communities are to survive, they must figure out ways to connect to each other and to robust urban areas (2001 p. 52)." Dabson also calls for collaboration between urban and rural areas (RUPRI p. 108-109). The need of rural areas to create networks linking local economies to stronger urban economies is a common sentiment echoed by other authors (Galston and Baehler 1995, p. 47)." Rural areas are quite adept at forming networks which provide many benefits to rural areas. Networks decrease isolation, help achieve economies of scale, move to higher levels of production, increase global competitiveness, increase business knowledge, and support entrepreneurs (Rosenfeld 2001, p. 109-111). In the discussion of education, increased collaboration with community colleges and training institutions was seen as an important issue. The development of connections and supportive networks will play an important role in the economic development of regions.

While regions may hold the key to rural economic development, developers must take care to distinguish between the many characteristics that define places. Karl Stauber sees a problem with the tendency of many to view rural areas as all the same. He divides rural America into four parts, the urban periphery, sparsely populated, high amenity, and high poverty. He feels by dividing rural areas by these characteristics, policy and development strategy can more effectively reach its desired outcomes (2001, p. 48). The traditional approach to creating rural regions by grouping counties based on things such as location or size is also criticized. Grouping in this way can be misleading in that there is real differentiation between rural economies. Rather, grouping counties should be done based on industrial structure. This could lead to more sound development practice, based on actual shared economic characteristics (Wojan and Pulver 1995, p 19). Michael Porter notes that in much of the literature he has reviewed there have been increasing use of different methods to classify rural areas. He feels this shows an increasing recognition of the fact that rural areas are much more complex (2004, p. 9).

Some point to the fact that economic growth in rural areas is dependent on or determined by its proximity to urban areas (Partridge, 2007; Wu & Gopinath, 2008). This is a condition that seems to be implicitly accepted by much of the rural development literature. However, some literature has pointed out that remoteness is not a death sentence and the effects of distance might be overstated in some cases. Economic goals such as prosperity and the location of high growth industry are possible even if you are not located next to an urban area (Isserman, 2007; Wojan & Pulver, 1995). While areas near cities may benefit the most, creating regional linkages between urban and rural areas can help to draw those benefits further into the countryside.

Even with the call for more regional thinking, there are some warnings. Timothy Borich's study of Iowa multi-community development organizations found them very poorly resourced and that they produced few results (1994, p. 20-21). It has also been found that increases in regional economic growth disproportionately distributed income growth to high and medium income households. Those households receive over 60 % and 30 % of the income growth respectively. Low income households on the other hand received only 3 to 4 % income growth. While this growth will compound over time for low income households, it continues to perpetuate the disparities between income groups (Leatherman & Marcouiller, 1999 p 43-44). Many of these rural areas are not used to collaborating. They have typically competed in business recruitment and this is a hurdle that many areas will have to overcome if they want to work as a region (Drabenstott 2010, p. 61).

Regional collaboration and linkages can allow for communities to increase power, increase demand, and pool resources to attract growth and development. However, attention must be paid to the distinct characteristics and issues that affect a region and regional collaboration. If they are not approached carefully, development in rural areas will continue to lag behind.

New Approaches to Develop Strengths

The second main theme about the future of rural development deals with moving past traditional rural development practice in order to develop regional strengths. Michael Porter is critical of traditional policies that were aimed at “reducing the disadvantages of rural regions rather than identifying and building competitive advantages.” He proposes the development of a framework that would “highlight local strengths, incorporate linkages between the rural region and nearby urban areas, and address particular local disadvantages in the context of an overall strategy (2004, p. 59-60).”

There is much opposition to the traditional “protective approach” that perpetuates rural regions reliance on agriculture instead of helping them develop valuable production and businesses. The United States should lead the charge in reducing agricultural subsidies and instead, invest those subsidies in place-based rural development (Stauber 2001; Atkinson 2004). There is a need to move beyond policy that simply tries to support poor regions and focus development on creating strengths and developing the competitiveness of a region (Drabenstott 2010, p. 44, 52). Also, the benefits of new technology and innovation are constant themes throughout much of the literature (Stauber, 2001; Drabenstott, 2010; Brown-Graham & Lambe, 2004; Porter 2004; Galston & Baehler 1995). Regions must tap these new resources and be creative in order to promote rural development. Traditional development methods alone will only maintain the disparity in rural American economies. It is clear that it is going to take creative strategies to finally solve the problems with rural development.

While there are many approaches to working in a forward looking, regional approach, the literature highlights several emerging areas of focus. The important areas for rural development highlighted in the literature include: education; social capital; entrepreneurship; industry clusters; telecommunications infrastructure; natural amenities, and renewable energy.

A common target for development in rural areas is human capital, focusing mainly on education. The lack of a highly educated workforce is commonly seen as a barrier to economic growth and

development. One goal of rural development then should be to increase the educational attainment of its population. Rural areas have been shown to lag behind their urban counterparts when it comes to educational attainment (Drabenstott, 2010; Council of Economic Advisors, 2010). Robert Atkinson notes that rural areas have a less educated workforce and that this hinders them in their attempt to attract high-tech manufacturing (2004, p. 5). The link between low education and high poverty in rural areas is also recognized as a development barrier (Stauber 2001, p. 51). As a development tool, it has been shown that businesses respond to changes in human capital. Thus, increasing human capital through education could lead to growth in rural areas (Wu and Gopinath, 2008 p. 403-404). Also, a more educated population and higher public expenditures on education have been linked with economic and earnings growth (Aldrich and Kusmin, 1997 p. 3). It is important, especially for poor areas that “communities must build the organizational capacity of education and training institutions, provide opportunities for on-the-job training, and foster mentoring at all levels (Brown-Graham & Lambe, 2008 p. 2).”

Another theme within the education focused literature was the importance community colleges can play in economic development. Community colleges in rural areas can take an expanding role in economic development. Apart from education, community colleges can help to form connections and collaboration between businesses and rural agencies to create programs to train workers and support local business and economic development (Garza & Eller, 1998, p. 38-40). Community colleges are also seen as a vital part in educating and training a highly skilled, specialized workforce geared towards industry clusters (Rosenfeld, 2001; Rosenfeld, Jacobs, & Liston, 2003). Community colleges and other local training facilities can also play a role in the development of local entrepreneurs (Goetz, 2008, p. 9).

Despite the benefits and need of education in rural areas, there is some conflict about whether increased educational attainment is the major issue. While it has been found that there are positive economic returns on investment in education, rural areas do not get the fullest benefit from those

returns. The primary reason for this is because of their low population density. The returns they do get on educational investment may not be worth the financial cost. (Goetz and Rupasingha 2004, p. 255-256). Some studies have shown that the problem is not necessarily education achievement as much as it is the out-migration of educated individuals. Metropolitan areas gain college educated population at the expense of rural areas (Galston and Baehler 1995; Artz 2003). The implication is that rural areas need to also find ways to retain and attract an educated population. Simply increasing education investment may only facilitate out-migration.

The aspect of social capital was also a prominent theme in rural development literature. Research in the area of “civic society” has shown that “communities with higher levels of civic engagement consistently have lower levels of poverty, lower levels of income inequality, higher median family incomes, fewer crimes, and better indicators of public health (Mencken et al. 2006, p. 110).” The same study found a positive relationship between civic engagement and economic growth (Mencken et al. 2006, p. 117-120). Other studies also find that social capital has a significant positive effect on economic growth and increased income (Rupasingha, Goetz and Freshwater 2002; Goetz and Rupasingha 2004). Jan Flora and his colleagues use the term Entrepreneurial Social Infrastructure (ESI) to describe a “format for directing or converting social capital into organizational forms that encourage collective action (1997, p. 627).” Their analysis of ESI found that communities with greater ESI were more likely to have successfully completed an economic development project (1997, p. 634).

Collaboration and social networks are similar topics brought up in many writings regarding social capital. “This form of capital facilitates collaboration and social networks that create economic value and opportunities for individuals, firms, industries and jurisdictions (Morgan et al. 2009, p. 7).” Local development organizations were found to have broader connections with community and business organizations than local governments. As a result they are often more successful in attracting and retaining business. Network connections were found to be important for both local development

organizations and local governments (Green et al., 2002 p 407-412). Flora describes the function of networks as the “mechanism through which trust is developed and legitimacy established (1998 p. 492-493).” Networks cannot flourish without trust and that social infrastructure is important to the development of networks (Rosenfeld 2001, p. 111).

Rural development can no longer focus on traditional factors of production such as human resources and capital. There should be a shift to incorporate “social learning and collective action (Galston and Baehler 1995, p. 47).” There is a large section of literature that feels rural development should also focus on the institutions and civic infrastructure that allow people within a community to interact and work towards action.

An important and growing section of rural development literature focuses on the topic of entrepreneurship and rural self-employment. The shift towards entrepreneurship is a growing response to the difficulty many towns and areas are having trying to attract new businesses. The number of self-employed workers in rural areas has doubled since the 1980s and totaled 5.66 million non-farm self-employed workers in 2006. On average, 81,500 self-employed jobs were created each year since 1969 (Goetz 2008, p. 2-3). In encouraging local entrepreneurs, rural areas will gain more control over their economic future. They can focus on “leveraging local assets” rather than relying on attracting outside business (Morgan et al. 2009, p. 5). The Appalachian Regional Commission views entrepreneurial development as a way to build “self-sustaining communities” in a region hit hard by declining industries (Rural Policy Research Institute, 2008 p. 3). Entrepreneurial development is about “transformation” and “changing the culture of rural places.” Entrepreneurship “holds the community responsible for creating development from within” and is a way communities can “take a proactive approach to determining their own futures (Markley 2006, p. 4).”

Many authors echo Markley’s tone when they write about promoting entrepreneurship as part of their rural development strategy. Drabenstott puts forth the idea of developing a “world-class

entrepreneurial climate” as part of his strategy (2010, p. 57). Lynn Ryan MacKenzie describes the “characteristics of entrepreneurial environments” that are needed for entrepreneurial efforts to succeed (1992, p 40). One of the recommendations of James Johnson and Pamela Santos for rural development is to “cultivate an entrepreneurial climate” (2003, p. 56). The Appalachian Regional Commission refers to it as an “enterprise culture” (Rural Policy research Institute, 2008 p. 5). Entrepreneurial development is about creating a business atmosphere where local entrepreneurs can flourish.

The link with innovation is also common in entrepreneurial literature. Drabenstott’s “world-class entrepreneurial climate” is part of his strategy to kick-start the Midwest’s dormant ability to innovate (2010, p. 54-60). Entrepreneurs are important for innovation in industry clusters because they do not suffer the same impediments to innovation that larger industries do. They are even usually supported by larger companies who benefit from their innovation (Porter 2000, p. 25). Innovation is also seen as key for rural workers and entrepreneurs to make them competitive in the global marketplace by differentiating and improving products, and training workers (Brown-Graham and Lambe 2008, p. 9). Entrepreneurs are also important because they “pursue fresh opportunities.” Entrepreneurs that are innovators and uncertainty bearers are the ones most responsible for growth (Falcone and Wilson 2008, p. 244).

Despite the growing importance of entrepreneurial development, there are some concerns. While rural self-employment is growing, the income of self-employed workers is not equal to that of wage and salary workers. In 2005 average self-employment income was \$16,851 compared to average wage-and-salary income of \$31,596 (Goetz 2008, p. 4). A study on the Appalachian Regional Commission’s Entrepreneurship Initiative also finds that income is lagging for rural entrepreneurs. It is believed that the program may be producing more entrepreneurs, but not necessarily strong and prosperous ones (Rural Policy Research Institute 2008, p. 6). Another issue is that rural areas can only

support a small number of retail and service businesses and that if economic growth is the goal, communities need to target firms that can export their goods and services (Galdwin et al 1989, p. 1313). There are also many authors whose studies remind us that for the greatest benefit and success, economic development strategy should include traditional business attraction, as well as local business and entrepreneurial development. Entrepreneurship alone will not suffice (Besser, Recker, & Parker, 2009; MacKenzie, 1992; Leaman, Cook, & Stewart, 1992). The consensus seems to be that developing rural entrepreneurship is a strategy of growing importance for rural development, but should be only one part of an overall development strategy.

The concept of industry clusters has become a generally accepted idea in the field of economic development. Michael Porter describes clusters as “geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions in a particular field that compete but also cooperate (2000, p. 15).” He also notes that they are present in economies and areas of different sizes, as well as rural areas (2000, p. 18). Clusters have become important in an era where “regional competitiveness” is the new standard for economic development (Drabenstott 2010, p. 50). Many rural areas have naturally developed an open system of networking that leaves them in position to greatly benefit from developing cluster industries. Together, networking and clustering can work together for rural development (Rosenfeld, 2001 p. 114, 117). As a result of the acceptance and popularity of industry clustering, many regions have begun to use industry clustering as a way to target industry sectors and promote economic development.

Clusters enhance competitiveness of regions by improving productivity, fostering innovation, and facilitating the ability of firms to profit from innovation (Porter 2004, p. 45). They also provide benefits that include cost savings to firms within a cluster, facilitating the adoption of new technologies, facilitating the reorganization of large firms into smaller firms, encouraging firms to cooperate for competitiveness and prosperity, and that they allow regions to more efficiently use their economic

development resources by focusing strategies on particular industries (Barkley and Henry 2001, p. 5-8). It is believed that cluster identification can focus regional industrial marketing strategies, stressing the benefits and advantages of specialization that clustered industries provide to businesses. Knowledge of local industry clusters can identify missing links in the cluster that can further focus industry targeting efforts (Anderson 1994, p. 27). It was found that industries located in clusters in Canada performed better in regards to employment growth, income, and unemployment than industries not clustered (Spencer et. al. 2010, p. 707). A study of the Appalachian Region of the United States showed that clusters are associated with higher rates of new business formation in technology intensive industries (Feser, Renski, & Goldstein 2008, p. 343).

Despite the popularity and benefits described by cluster proponents. Some literature findings would support a cautious, more thorough approach to their use. Even with their positive effect on new business development in Appalachia, there was no evidence that spatial clustering promoted employment growth in technology sectors more than similar industries in non-clustered locations (Feser, Renski, & Goldstein 2008, p. 342). The type and variety of clusters can also have a significant impact on economic impact of each cluster (Spencer et. al. 2010, p. 711). Also, it has been shown that rural areas are at a significant disadvantage in attracting high tech industry clusters (Goetz & Rupasingha 2002, p. 1235). Industry clusters are a good starting point for analysis, but some insist that clustering by occupation yields a more in-depth, useful result (Currid and Stolarick 2010, p. 351). It is difficult to determine the right clusters to target and that the support system needed to grow clusters is not easily formed. This suggests that targeting clusters can be a strong development tool, but success may lie in how well developed clusters already are (Barkley and Henry 2001, p. 5-8).

The findings from clustering literature support the idea that it is a useful economic development tool, but is not an economic development cure by itself. Used as part of a comprehensive industrial and economic development program, cluster identification and development can yield positive results.

For many rural areas, the largest challenge they face is their distance from economic activity. Many researchers and developers have looked to the technological advances in communications to reduce the negative effects of distance and isolation in rural economic growth. Increased access to the internet and telecommunication technology is important for rural development. It has made businesses more mobile and can be beneficial in attracting new business (Olfert & Partridge 2010; Atkinson 2004; Fox & Porca 2001; Kandilov & Renkow 2009). Recent studies on broadband internet access have shown that rural counties with early access to broadband experienced greater economic growth (Sternberg et al. 2009; Kandilov & Renkow 2010). Broadband is also associated with higher income for the self-employed (Goetz, 2008). Broadband was also found to play a significant role in telehealth, allowing better medical access and saving rural hospitals an average of \$370,000 per year (Sternberg et al. 2009 p. 24). Despite all the possible advantages, there are still significant challenges to providing access to rural areas.

There are some issues in providing broadband to rural areas. Areas such as the Appalachians and the Ozarks face significant topological issues in providing broadband access (Sternberg et al. 2009, p. 19). The low population density and high cost of providing service is also a major factor in expanding access to broadband (Sternberg et al. 2009; Kandilov & Renkow 2009; Fox & Porca 2001). The positive impacts experienced from the initial broadband loan program by the USDA were mostly seen in communities located in metro areas. It was also found that the second USDA loan program has yet to have any decipherable effect (Kandilov and Renkow 2009, p. 176, 178). Gains from infrastructure can often be small and should only be undertaken if it is cost effective or as part of a broader development strategy (Fox and Porca 2001, p. 120). Low density and remoteness is not only an obstacle for economic development, but also for the development of infrastructure that has the potential to mitigate the effects of remoteness.

Natural amenities have received a lot of attention for their role in fueling growth in some rural

areas. “A natural amenity is a physical attribute of a location that enhances the location as a place of residence (Henderson & McDaniel 2005, p. 82).” However, there is no consensus on the role natural amenities can play in a development strategy. Natural amenities are positively associated with employment and population growth, but also note that their findings still show the continued economic struggles of agriculturally dependant rural areas (Deller et. al. 2001, p. 363). It has been found that natural amenities do promote employment growth, but mostly in the retail and service sector, with little effect on manufacturing employment (Henderson and McDaniel 2005, p. 93). A study has found that high amenity counties have been shown to have higher income. The same study shows that socioeconomic disadvantaged groups can benefit greatly from amenity-driven growth. This is most likely due to increases in low skilled service and retail jobs. However, it was also noted that economic growth in these areas is offset by increasing costs of living (Hunter et al. 2005, p. 465-466).

A different study has shown that economic factors are still more important than amenities in attracting growth. Communities should strengthen their economy if they hope to attract or retain jobs and population (Ferguson, Ali, Olfert, & Partridge 2007, p. 98-99). A study of the Upper Great Lakes States Michigan, Wisconsin and Minnesota found no strong association between natural amenities and population, employment or income growth (Kim, Marcouiller, & Deller 2005, p. 290.).

The literature on rural amenities suggests that areas that possess natural amenities such as lakes, mountains, or warm climate can exploit these for economic growth with appropriate development strategies.

The literature on rural development covers a range of issues with many promising strategies, but they still must be approached thoughtfully and with caution. No single economic initiative or general policy will cure the problems facing rural areas. Rural development requires a fresh approach that incorporates many different tools as part of a larger strategy. Working regionally to develop strengths holds promise for new growth and economic strength in poor areas with few resources. However,

regions must get past their traditional rivalries and development practices, and work together. They must specifically target the strengths and problems of a region. “We begin with the premise that each region is unique, whether it is urban or rural. While the same general framework can be applied to any region, the unique characteristics of each region will determine the priorities for improving competitiveness (2004, p. 5).”

Economic Analysis Methodology

This section describes the methodology used to perform industrial targeting analysis for the Southern Appalachian Region of Ohio. It also delineates the data sources used to complete the analysis. Results of this analysis will be used to identify and inform recommendations for potential target industries in the region.

Data & Methods

This analysis involves using several techniques to identify the industrial strengths of the Southern Appalachian Region of Ohio. Location quotient and shift-share analysis will be used in conjunction to identify important and potential growth industries. This method has been adapted from a professional report for the New Hampshire Lakes Region in 2007 by Camoin Associates. Due to the small populations of some counties, industrial employment data is sometimes suppressed. Therefore, the analysis will be completed on data at the county level which will then be regionally compared. The selection of target industries will be based on strong industries common to multiple counties.

Analysis will be based on employment data for industries based on their North American Industry Classification System (NAICS) codes. These range from 2 digits to 6 digits based on the level of detail desired. Employment data for the U.S., Ohio, and all Ohio Counties was obtained as text in comma delimited format from the Quarterly Census of Employment and Wages annual averages by the Bureau of Labor Statistics for the years 2008 and 2004. Data was imported into Excel using a Template provided by the Bureau of Labor Statistics. That worksheet was then imported into an Access database where employment data totals were aggregated for all industries to the 3 Digit NAICS code. This was done for the National and State levels, and for the 11 Southern Appalachian Ohio Counties.

Once this was completed, the cleaned and processed tables were exported back into an Excel workbook with County, National, and State data for each year in its own worksheet. Analysis will be

performed in a separate worksheet for each county then transferred into Access where the data can be aggregated before further analysis is performed.

The first set of data analysis will be shift-share analysis. This process determines employment growth or decline that can be attributed to local conditions. Positive shift-share results indicate a local competitive advantage and a possible target industry. To account for the suppression of data in each county, shift-share will be performed for each county. Those 3 digit NAICS Industries that are reported for at least eight counties will then be selected and compared regionally. Industries with a positive median local shift-share will be considered as possible target industries.

Location quotient and shift-share analysis, combined with overall employment and employment growth, will then be used to determine the key and growth industries for each county. This will provide further depth to the analysis and guide targeting recommendations. This data will allow for industries that have a strong presence in the area to be determined even if data suppression for some counties prohibits shift-share analysis for those industries at a regional level.

Key and growth industries will be defined as follows:

- 1) **Key Industry:** These are industries that have positive changes in employment, LQ, and positive local share. For this analysis they will also have 250 or more employees.
- 2) **Growth Industry:** These industries also have positive changes in LQ and positive local share. They also have experienced job growth of 20 % or greater. However, they have less than 250 employees.
- 3) **Dormant Industry:** A dormant industry has significant employment that is decreasing while its location quotient is increasing over time. Employment of 200 is used for this analysis.

Industries identified as strong through either the shift share analysis or through the Key and Growth Industry classification process represent potential target industries for the region and counties in Southern Appalachian Ohio. Additional research through government economic development

websites, local chambers of commerce, visitor bureaus, and local news sources will supply other necessary information on the economic conditions in the region. This will allow for better informed recommendations and will help to identify strong and important industries to target. It will also help to identify counties that can collaborate in targeting certain industries.

It is important to note that data for this analysis is taken from the most recent available at the beginning of this analysis. Once target industries are determined, further research will be needed to determine the viability of each industry based on current developments. This is especially necessary because the full effects of the recent economic recession are not captured in the data. Resources such as local news, chambers of commerce, visitor and convention bureaus, and county and local government websites will be used to determine current economic conditions and further guide industrial targeting recommendations.

This analysis will allow the region to target important growing industries and work together to attract and grow these industries. Approaching this project regionally will allow these rural counties to create a critical mass to promote the region and its communities as strong candidates for industry location.

Data Analysis

Shift-share and location quotient analysis was performed using 2008 and 2004 Quarterly Workforce and Employment data from the US Bureau of Labor Statistics for all 11 counties in the Southern Appalachian Ohio area. The results of these analyses identified industries of regional strength and will be used to make recommendations for industrial targeting and location.

Shift-Share Results

Shift-share analysis was run for all 3 digit NAICS industries in each county. Twenty-nine industries reported shift-share results in at least eight counties. Of those twenty-nine industries, eleven industries reported a positive median local share percentage (Table 1). The following table shows the median share percentage for those industries reporting positive share. Complete shift-share results for the twenty-nine industries reported regionally, along with descriptions of the 3 digit NAICS industries in this report can be found in the Appendix.

Table 1 – Positive Medial Local Share Industries

Southern Appalachian Ohio Positive Median Local Share			
Local Share for Industries With At Least 8 Counties Reporting Positive Local Share			
NAICS Code	NAICS Title	Counties	Median Local Share %
238	Specialty Trade Contractors	10	8.84%
444	Building Material and Garden Equipment and Supplies Dealers	10	8.38%
445	Food and Beverage Stores	10	3.37%
491	Postal Service	11	3.27%
522	Credit Intermediation and Related Activities	10	3.74%
621	Ambulatory Health Care Services	10	10.12%
721	Accommodation	9	2.99%
814	Private Households	8	86.84%
921	Executive, Legislative, and Other General Government Support	11	4.78%
922	Justice, Public Order, and Safety Activities	11	7.30%
924	Administration of Environmental Quality Programs	10	10.12%

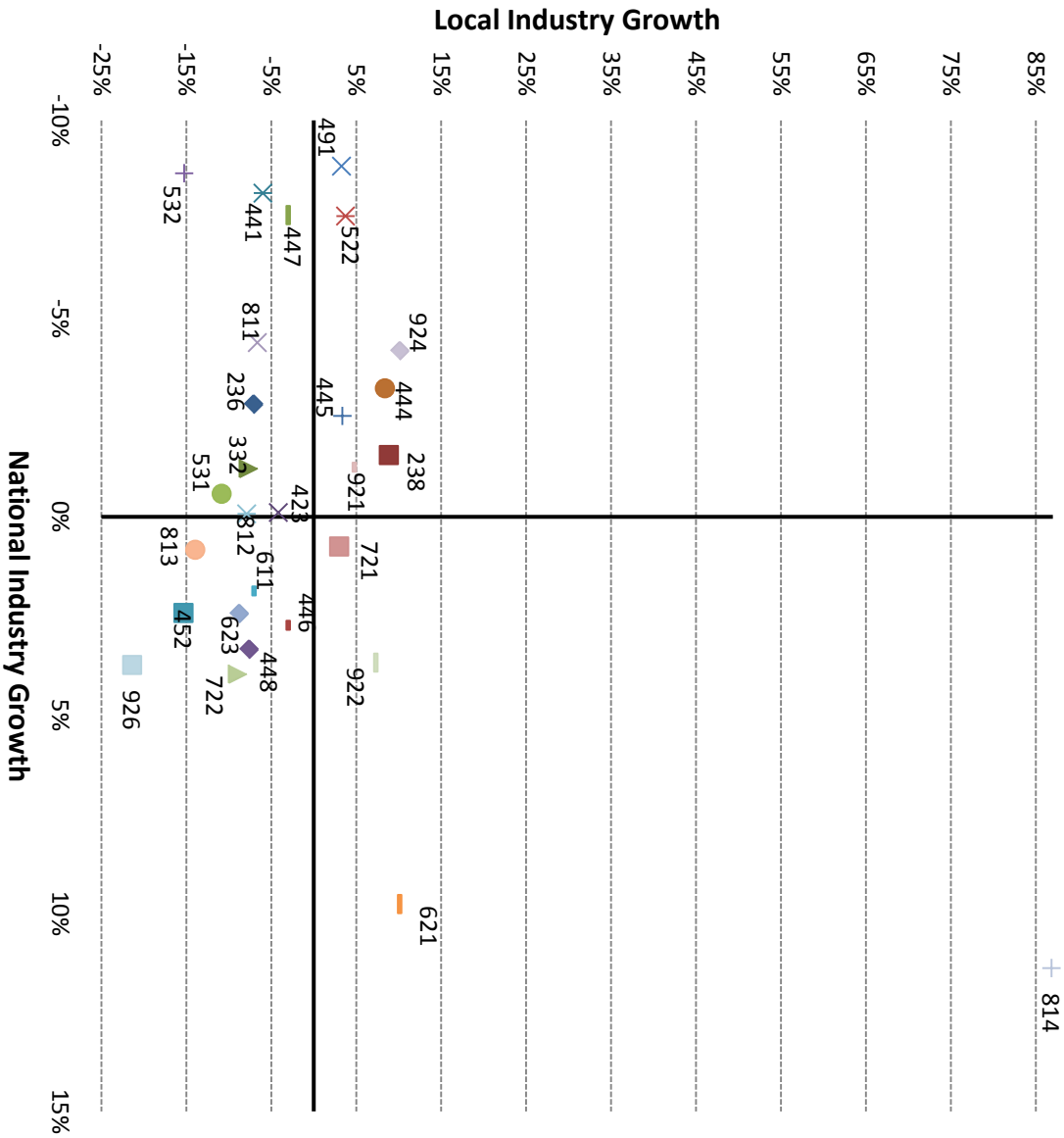
Three of the industries, 921, 922, and 924 are all industries that fall under the 2 digit industry sector Public Administration. They cover government employment and show positive local share in the region. The highest median local share percentage reported is 86.8% for industry Private Households 814. The US Census Bureau describes employment in this industry as activities involved in the everyday running of private households, including cooking, cleaning, maintenance, and landscaping.

Ambulatory Health Care Services was reported for all counties except Vinton. It had a very strong median local share percentage at 10.1%. Industries Specialty Trade Contractors 238 and Building Material and Garden Equipment and Supplies Dealers 444 are reported for 10 counties each and have large median share percentages of 8.8% and 8.4% respectively.

Ambulatory Health Care Services was reported for all counties except Vinton. It had a very strong median local share percentage at 10.1%. Industries Specialty Trade Contractors 238 and Building Material and Garden Equipment and Supplies Dealers 444 are reported for 10 counties each and have large median share percentages of 8.8% and 8.4% respectively.

To further determine the strength of potential target industries, median local share percentage is compared to the industry share percentage. Industry share measures whether an industry is growing nationally, independent of employment explained by overall growth or decline of the national economy. Industries growing both nationally and due to local share represent strong target industries. Industries that are growing locally but declining nationally may indicate local competitive advantage and a possible target industry. Figure 4 shows the twenty-nine industries reported by at least eight counties comparing local and industrial share. Appendix C lists results in table format.

Figure 15 – Regional Shift-Share Results
National and Median Local Share



- ◆ 236 Construction of Buildings
- 238 Specialty Trade Contractors
- ▲ 332 Fabricated Metal Product Manufacturing
- × 423 Merchant Wholesalers, Durable Goods
- × 441 Motor Vehicle and Parts Dealers
- 444 Building Material and Garden Equipment and Supplies Dealers
- + 445 Food and Beverage Stores
- 446 Health and Personal Care Stores
- 447 Gasoline Stations
- ◆ 448 Clothing and Clothing Accessories Stores
- 452 General Merchandise Stores
- ▲ 453 Miscellaneous Store Retailers
- × 491 Postal Service
- × 522 Credit Intermediation and Related Activities
- 531 Real Estate
- + 532 Rental and Leasing Services
- 611 Educational Services
- 621 Ambulatory Health Care Services
- ◆ 623 Nursing and Residential Care Facilities
- 721 Accommodation
- ▲ 722 Food Services and Drinking Places
- × 811 Repair and Maintenance
- × 812 Personal and Laundry Services
- 813 Religious, Grantmaking, Civic, Professional, and Similar Organizations
- + 814 Private Households
- 921 Executive, Legislative, and Other General Government Support
- 922 Justice, Public Order, and Safety Activities
- ◆ 924 Administration of Environmental Quality Programs
- 926 Administration of Economic Programs

The results of this comparison show that 4 of the 11 industries reporting positive median local share are also growing nationally. Industry Private Households 814 has the highest industry share percentage at 11.38% and the highest median local share percentage at 86.84% for all reported industries. Ambulatory Health Care Services 621 reported a strong industry share of 9.76% to compliment its strong local share of 10.12%. Industry Justice, Public Order, and Safety Activities 922 has experienced growth of 3.67% due to industry share and strong growth due to local share of 7.3%. Industry Accommodation 721 was not as strong as the other three industries and showed only slight industry share growth of .74%. It did have a slightly stronger median local share at 2.99%. All four industries had a median local share of growth greater than the industrial share. These four industries represent prime industries for regional targeting due to the national growth of the industry and their local competitive advantage.

Several industries were declining nationally but growing locally demonstrating possible competitive advantage. Specialty Trade Contractors 238, Building Material and Garden Equipment and Supplies Dealers 444, and Executive, Legislative and Other General Government Support 921 all had significant median local shares of 8.84%, 8.38%, and 10.12% respectively. Of those industries, Specialty Trade Contractors 238 experienced the least decline due to industrial share around -1.5%.

Several industries were declining nationally but growing locally, demonstrating possible competitive advantage. Specialty Trade Contractors 238, Building Material and Garden Equipment and Supplies Dealers 444, and Executive, Legislative and Other General Government Support 921 all had significant median local shares of 8.84%, 8.38%, and 10.12% respectively. Of those industries, Specialty Trade Contractors 238 experienced the least decline due to industrial share around -1.5%.

There are a few notable industries that are declining slightly at the local level, but have experienced growth nationally. Most notably industry Health and Personal Care Stores 446 is growing at

about 2.5% nationally while declining at about the same rate locally. Clothing and Clothing Accessories Stores (NAICS 448) is also growing strong nationally, but is experiencing local decline at greater than 5%. Industries 722, 623, and 611 are all growing between 2% and 5%, but are declining locally between 5% and 10%. This is interesting because businesses in 623, Nursing and Residential Care Facilities and 611, Educational Services were often cited as major employers in these counties. While each of these industries is showing a decline regionally, the case may be different for each county. In many cases, this may indicate these industries as targets for retention strategies.

Local share can also be analyzed in terms of the employment growth or decline due to local share. Table 2 shows the median industry and local share of jobs gained or lost for the eleven industries reporting positive median share. Complete results for each county are located in Appendix C.

Table 2 – Job Growth and Decline for Positive Local Share Industries

Southern Appalachian Ohio Shift-Share Results						
Median Jobs Growth Or Decline						
NAICS Code	NAICS Title	Median Industry Share	Median Local Share	Highest Local Share	County	
238	Specialty Trade Contractors	-4	22	212	Scioto	
444	Building Material and Garden Equipment and Supplies Dealers	-6	8	196	Clermont	
445	Food and Beverage Stores	-8	12	307	Clermont	
491	Postal Service	-7	3	16	Clermont	
522	Credit Intermediation and Related Activities	-21	7	372	Clermont	
621	Ambulatory Health Care Services	50	38	436	Lawrence	
721	Accommodation	1	4	68	Scioto	
814	Private Households	2	12	38	Gallia	
921	Executive, Legislative, and Other General Government Support	-2	5	98	Clermont	
922	Justice, Public Order, and Safety Activities	5	13	78	Clermont	
924	Administration of Environmental Quality Programs	0	1	5	Scioto	

Private Households 814 has a median local share of 86.6% but only a median local share growth of 12 jobs. Its highest local share job gain was 38 in Gallia County. Justice, Public Order, and Safety Activities 922 experienced similar median local share job growth of 13 and a high employment gain of

78, despite much lower share percentages than Private Households. Industry Ambulatory Health Care Services 621 shows strong growth with its median local share gain of 38 jobs combined with a median industrial share employment gain of 50. Its high local share growth was 436 in Lawrence County. This further solidifies its importance as a target industry.

Specialty Trade Contractors 238 had a declining industrial share, but had a median local share of 22 jobs gained and a high of 212 gained in Scioto County. This further indicates the strong local advantage of this industry. Building Material and Garden Equipment and Supplies Dealers 444 and Administration of Environmental Quality Programs 924 were also industries that had a negative industrial share but a positive median local share greater than 5%. Building Materials and Garden Equipment Supplies Dealers had a median local share growth of 8 with a high growth value of 196. It should also merit consideration. While industry 924 had similar share percentages it showed small overall growth with a median gain of 1 job and a high of 5, eliminating it from further consideration.

Location Quotient Analysis

Location quotient analysis was preformed for the same twenty-nine industries that reported positive share for at least eight counties. Only two industries with positive local and national share identified by the shift-share analysis had any county report a location quotient of 1 or greater. Ross County reported a location quotient of 2.16 for Justice, Public Order and Safety Activities 922. This was one of the highest location quotients reported and is due to the location of two State prisons in the county. Industry Ambulatory Health Care Services 621 reported three counties with a location quotient over 1. Gallia County reported a location quotient of 1.4, with Lawrence and Scioto counties reporting location quotients of 1.1 and 1.12 respectively. However, the median location quotient was only. Locally strong industry Building Materials and Garden Equipment Supplies Dealers 444 reported two counties with location quotients over 1, Highland at 1.29 and Lawrence at 1.15. It also reported one of the higher median location quotients at .65. This further demonstrates its local strength even with national decline.

Table 3 – Location Quotients for Regionally Reported Industries													
Southern Appalachian Ohio Counties Location Quotient Analysis													
Location Quotients for Industries With At Least 8 Counties Reporting Shift-Share													
NAICS Code	NAICS Title	Adams	Brown	Clermont	Gallia	Highland	Jackson	Lawrence	Pike	Ross	Scioto	Vinton	Median LQ
236	Construction of Buildings				1.54			0.91	1.27				0.56
332	Fabricated Metal Product Manufacturing		1.19	1.18									0.37
441	Motor Vehicle and Parts Dealers			0.9									0.56
444	Building Material and Garden Equipment and Supplies Dealers					1.29		1.15					0.65
445	Food and Beverage Stores		0.97										0.61
446	Health and Personal Care Stores												0.62
447	Gasoline Stations	3.35	1.13		1.01	0.9	1.49	1.61	1.34		1.01	1.93	1.13
452	General Merchandise Stores	1.22		1.07	0.93	1.02	0.9	1.19		0.95			0.94
453	Miscellaneous Store Retailers									0.91			0.36
491	Postal Service	0.92										1.05	0.55
522	Credit Intermediation and Related Activities												0.47
611	Educational Services											0.93	0.5
621	Ambulatory Health Care Services				1.14			1.1			1.12		0.46
623	Nursing and Residential Care Facilities		1.51		1.14	0.99	0.9	1	1.23		1.08		1
922	Justice, Public Order, and Safety Activities									2.16			0.57

Table 3 presents the counties in Southern Appalachian Ohio whose location quotient for specific industries was .9 or greater. Complete location quotient results are located in Appendix D.

Construction of Buildings 236 had two counties, Gallia and Pike, with quotients over 1. Lawrence County also had a quotient near 1 of .91. It had a median quotient was .56, however. Specialty Trade Contractors showed strength locally, but did not have any location quotient over 1 reported. Despite its local strength, it is not an export industry for any county. This most likely signifies an abundance of small independent contractors. Accommodation 721 was in a similar position in that its location quotients were very small. Private Households 814 reported the strongest local and national shares in the region, but also reported very low location quotients. The industry maintains a relatively small importance to the region. However, this could signal that they it is primed for growth.

Three industries reported location quotients greater than .9 for a majority of the counties. They are Gasoline Stations 447, General Merchandise Stores 452, and Nursing and Residential Care Facilities 623. This is not surprising for the later two industries because Wal-Mart and various nursing facilities were commonly listed as major employers for these counties. The combination of the strength of Ambulatory Health Care Services and Nursing and Residential Care Facilities signifies the importance medical service industries can have in rural areas.

A surprising result is that the neighboring counties of Brown and Clermont report location quotients over 1.1 for the industry Fabricated Metal Product Manufacturing 332. This same industry was declining both nationally and locally based on shift-share analysis. This may signify that these are industries that need to focus on retention strategies to remain strong.

Industry Classification

In order to gain a better understanding of important industries in each county and guide the placement of new development, the results of the shift-share and location quotient analyses were combined with industry employment to classify key and growth industries. Key industries have employment of 250 or more and have increasing employment and location quotient with a positive local share. Growth industries have employment less than 250 but have employment and location quotient

growth or greater than 20% along with positive local share. Dormant industries are those that have significant employment of 200 or more with a decline in employment, but a growth in location quotient.

Table 4 shows the complete industry classification results for each county. It is important to note that Vinton County had no industry that met key or growth criteria.

Table 4 – Key & Growth Classification

Southern Ohio Appalachian Counties Common Key & Growth Industries													
3-Digit NAICS Industries Grouped by 2-Digit NAICS													
NAICS Code	2007 NAICS US Title	Adams	Brown	Clermont	Gallia	Highland	Jackson	Lawrence	Pike	Ross	Scioto	Vinton	Count
236	Construction of Buildings				K			K	K		K		4
238	Specialty Trade Contractors	K	K					K	K		K		5
321	Wood Product Manufacturing		G	G					D		K		5
327	Nonmetallic Mineral Product Manufacturing			K				G					2
332	Fabricated Metal Product Manufacturing	G		K									2
425	Wholesale Electronic Markets and Agents and Brokers			K			G			G			3
441	Motor Vehicle and Parts Dealers									K	K		2
443	Electronics and Appliance Stores						G	G					2
444	Building Material and Garden Equipment and Supplies Dealers	G		K		K		K			D		5
445	Food and Beverage Stores			K		K	K	K					4
446	Health and Personal Care Stores			K	G								2
447	Gasoline Stations	D							G				2
448	Clothing and Clothing Accessories Stores			K		G							2
452	General Merchandise Stores		G	K						K	K		4
484	Truck Transportation							K		K			2
488	Support Activities for Transportation							K			G		2
517	Telecommunications			K		G							2
522	Credit Intermediation and Related Activities			K	K	K				D	K		5
531	Real Estate			K				G					2
541	Professional, Scientific, and Technical Services									K	K		2
561	Administrative and Support Services							K	G	D			3
562	Waste Management and Remediation Services		G	G				G	G				4
611	Educational Services			K						K	D		3
621	Ambulatory Health Care Services	K	K			K	K	K	K				6
623	Nursing and Residential Care Facilities			K	K	D				D			4
624	Social Assistance				G			K					2
721	Accommodation		G						G		G		3
722	Food Services and Drinking Places		K	K									2
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations								G		G		2
814	Private Households				G		G	G	G	G			5
921	Executive, Legislative, and Other General Government Support			K						K	K		3
922	Justice, Public Order, and Safety Activities	G		K	G		G				K		5
924	Administration of Environmental Quality Programs	G	G	G					G				4
928	National Security and International Affairs								G	G			2

K=Key, G=Growth, D=Dormant

The results of industry classification confirm the results of the shift-share analysis. Three of the four industries growing both locally and nationally were reported as key or growth for at least 5 counties. The fourth, Accommodation 721, was reported as a growth industry for three counties, Brown, Pike, and Scioto.

Ambulatory Health Care Services was listed as key for six counties, the most of any industry. However, two of the counties reporting the largest location quotients, Gallia and Scioto, did not classify it as key or growth. Further examination shows that they both had negative local share. Those counties may want to consider retention strategies, rather than new growth. Lawrence County reported a location quotient of 1.1 and Adams County reported one of the higher quotients at .8. They represent strong candidates for target placement. Highland County reported Ambulatory Health Care Services as key and Nursing and Residential Care as dormant. This shows the importance of medical services to the county's economy. Together, these industries represent an important need for Southern Appalachian Ohio, especially with aging of the region's population.

Clermont County reported four Public Administration industries as key or growth. This is most likely due to its large and growing population. Justice, Public Order and Safety Activities 922 was listed as key in Clermont and Scioto Counties and growth in Adams, Gallia, and Jackson. Ross County reported the highest location quotient at 2.16 but had a negative local share, suggesting retention strategies may be appropriate. No other county stood out with a high location quotient. The industry Administration of Environmental Quality Programs 924 also appears several times. Adams, Brown, Clermont, and Pike all classify this industry as growth. Brown, Clermont, and Pike also list Waste Management and Remediation Services. The growth of industry 924 may be partly in response to the growth in Waste Management. This may also have to do with the presence of power plants, the presence of State Parks and other natural resources, and industry along the Ohio River.

Industry Specialty Trade Contractors 238 showed its regional strength in this analysis. Despite negative industry share it was listed as a key industry for five counties. Construction of Buildings 236 was also listed as key for four counties. Three counties, Lawrence, Pike, and Scioto, reported both industries as key. Gallia County reported the highest location quotient for the industry at 1.54. Lawrence and Pike also reported location quotients near or above 1 for Construction of Buildings. This represents a strong area of focus for these counties.

The strength of those two industries can have a big impact on industry Building Materials and Garden Equipment Supplies Dealers 444. It was classified as a key industry in Clermont, Highland, and Lawrence Counties and growth in Adams. Highland and Lawrence also reported location quotients of greater than 1. Pike County reported it as a dormant industry, showing its local economic importance. Strength in the Construction industries could have spillover effects, pushing growth in this retail sector.

The retail sector shows strong potential in several counties. Besides being strong in the Building Materials industry, Lawrence County also listed Food and Beverage Stores (445) as key and Electronic and Appliance Stores as growth. A new retail development centered on these types of stores could be a possible strategy for the county. Highland, Jackson, and Clermont also list several retail sectors as key or growth and could also pursue such development.

Clermont, Jackson and Ross share industry Wholesale Electronics Markets and Agents and Brokers 425 as growth and key industries. This presents a possible collaborative opportunity for the neighboring counties of Ross and Jackson to work with the strong economy, and large market, of Clermont County. Another possible collaboration could be done between Clermont and Adams County in Fabricated Metal Product Manufacturing (332). This is a growth industry in Adams and key in Clermont and is also important to Brown's economy as it reported a location quotient of 1.19. This industry may represent an opportunity to grow and protect an industry in these three neighboring counties.

The other manufacturing industry that has a strong presence in the region is 321 Wood Product Manufacturing. It's a growth industry in Brown and Clermont, a key industry in Scioto, and a dormant industry in Pike and Vinton. A regional strategy could be developed to grow the industry in Brown and Clermont, and retain and strengthen the industry in the three other counties. It would also build on a traditional regional industry with abundant wood resources and would likely enhance economic growth in industries in natural resources extraction and furniture retail.

Industry Accommodation 721 was listed as a growth industry in Brown, Pike, and Scioto Counties. However, it had low location quotients in each county. Scioto County did experience significant local share growth of 68 jobs. Despite not showing as strong as other industries, the fact that it has positive national and median local share, combined with the many natural and cultural amenities in those and surrounding counties, warrants further exploration as a potential development area. The growth in industry 813 Religious, Grant making, Civic, and Professional Organizations in Pike and Scioto counties, as well as its central location in the area, and its direct access to population and larger populations in the area, might make it an ideal place for attracting tourist and conventions.

Private Households 814 showed the greatest local and national shares. It was also classified as a growth industry in Gallia, Jackson, Lawrence, Pike, Ross, and Scioto. However it scored low location quotients. The lack of definition and informality of the work within the industry may make targeting this industry difficult. However, along with industry 722, the relatively small importance of these industries now does not mean they cannot fuel future economic growth.

Regional Industry Targets and Location Analysis

Based on the results of the data analysis, several industries were identified as regional strengths. Some of these industries present an opportunity for regional collaboration and regional growth. Other industries represent better economic development opportunities if only certain counties pursue them. Further research and local analysis on some industries indicate that they represent poor opportunities

or would require further analysis before economic recommendations could be made. This section of the analysis uses industrial and local research to further determine the viability of industries identified as regional targets. It is also used to single out, where necessary, the actual counties that represent the best locations for targeting strategies to be used.

Industries and clusters that offer viable economic and collaborative opportunities to individual counties are not discussed here but will be covered in the recommendations for each of those counties

Medical Services: This industry was identified as one of the strongest industries in the region. It was a key industry in six of the 11 counties, including Adams, Brown, Highland, Jackson, Lawrence, and Pike. According to the U.S. Census Bureau, this industry includes the offices of physicians, dentists, chiropractors, optometrists, and various therapists. It also includes outpatient care centers, medical and diagnostics laboratories, and home health care services (U.S. Census Bureau, 2010). Not only is this a key industry in Southern Ohio Appalachia, it is an area of great projected growth. The Ohio Department of Development projected an industry growth rate of 40.8% between 2006 and 2016 (Ohio Department of Jobs and Family Services, 2009). This has no doubt been slowed by the economic downturn, but short term projections to 2011 for the entire State of Ohio still indicate strong growth of 3.6%, equaling over 8,000 jobs statewide (Ohio Department of Jobs and Family Services, 2010).

Economically, health care industries can be viewed as a basic industry for rural areas. Health care services act as a basic industry by attracting Social Security and Medicare/Medicaid dollars, which is Federal money, to be spent in the region. Also, doctors, nurses, and other medical workers support many service activities and purchase local goods. The quality and availability of health care in a county or region can also play an important role in attracting other business and investment (Scorsone, 2001). Developing ambulatory health care services presents a strong opportunity for Southern Appalachian Ohio to attract economic growth. Of the six counties that classified this industry as key, the counties of Lawrence and Adams stood out with the highest location quotients and two of the highest

local share percentages. Their locations also lend provide great access to growth in this field. They represent the best opportunities to target concentrated growth in the health care sectors. Other counties in the region may look to partner with these areas to increase their services or focus on retention strategies for local hospitals and clinics. Specific recommendations will be made for both Adams and Lawrence Counties.

Wood Product Manufacturing: This industry was identified as key in Scioto County and growth in Brown and Clermont. Although it went unclassified in Vinton County, it was the largest employer in the region and had a location quotient over 17 and a positive local share. Unfortunately the high location quotient declined from over 31 in 2004. Despite that drop, the industry remains vital to a county that unfortunately reported little else economically.

The Southern Appalachian Ohio region has over 2,000,000 acres of forest lands with Lawrence Scioto and Vinton over 70% covered in forest (OVRDC, 2010). This provides an abundance of raw material for this and other wood related industries. The industry focuses on production of raw materials that could then be used in other industries such as furniture manufacturing or homebuilding. The Ohio Valley Regional Development Commission has spent much effort in marketing these products for export to other regions and countries, surely helping the industry. However the OVRDC also notes that there are quite few secondary businesses, those that use the raw wood products, in the region compared to the primary production of wood materials (OVRDC, 2010). Focusing on further developing the Wood Product Manufacturing industry in the region should also be accompanied with regional development in those secondary industries, with each industry supporting growth in the other.

Examples of major employers in secondary industries that use raw wood products include Mills Pride, a cabinet manufacturer in Pike County, Merillat, also a cabinet manufacturer, in Jackson County, and Glatfelter is a large paper company in Ross County. Location of secondary industries in the region would benefit from lower transportation costs and the efficiency of being located near the businesses

producing the raw materials they use. The location of these industries in counties that did not classify Wood Products Manufacturing shows the immense possibility of regional collaboration in this area.

The success of the Amish furniture industry in Holmes County, Ohio should serve as a blueprint on how to create a thriving secondary wood product market in Brown, Pike, Scioto, Vinton and Clermont Counties. The Amish furniture industry utilizes small firms with cooperation between firms in the supply of products, quality craftsmanship, and a distribution of stores throughout Ohio, Pennsylvania, Indiana that specialize in selling their product. They also allow some customization of products which is valued by customers (Bumgardner, Romig, and Luppold, 2007). The fact that businesses tend to be small could greatly benefit the Southern Appalachian Region counties because they could focus on developing small businesses through local entrepreneurship, rather than focusing on attracting large businesses to locate in the region. The creation of furniture or other wood products from local craftsmen with local wood lends itself to marketing efforts. Proximity of Holmes County to the region may create competition, but may also offer the opportunity to collaborate in sales, marketing, and the supply of raw materials.

Specific recommendations will be made for the counties showing strength in industry Wood Product Manufacturing and those who have major employers in wood industries. This does not preclude other counties from participating in regional collaboration in this industry.

Retail: Retail sectors and clusters were identified in several counties in the region. Targeting this industry is heavily dependent upon the available markets to sell these goods on this analysis and the locations and populations of some of these counties. Retail is more feasible in some counties than in others. Clermont County had a large retail sector with five industries reported as key. Only Food and Beverage Stores 445 reported a location quotient near 1. Its local share was positive, and often large, for each of them. Also, with it having the largest population, and expecting so much growth, targeting the retail sector presents a great economic opportunity.

Highland and Lawrence Counties also showed emerging retail sectors. Both share industries 444 Building materials and Gardening Equipment and Supplies Dealers and Food and Beverage Stores 445 as key industries. 448 Clothing and Clothing Accessory Stores was a growth industry in Highland County while Electronics and Appliance Stores 443 was growth in Lawrence. Both counties had location quotients over 1 for industry 444. This industry presents a great opportunity for these areas to target retail development around this industry and also try to incorporate the other key and growth retail sectors in the county.

Other counties also identified retail areas as possibilities. Adams signified Building Materials and Garden Equipment Supplies Dealers 444. However it has such a small population and is located near other counties that have much better retail potential to recommend it as growth strategy. Gallia and Jackson also indicate retail areas as growth, but their location quotients are modest and the overall retail sector in those counties is weak. Their locations near counties with better opportunities also limit their ability to pursue this as a viable strategy.

The Recommendations section of this report will have more detailed description of the types of retail designated counties should target and specific actions to pursue.

Construction of Buildings 236 and Specialty Trade Contractors 238: These two industries naturally fit together and represent a strong regional presence. These two industries were identified as key in Lawrence, Pike and Scioto Counties. Construction of Buildings 236 was also very strong and a key industry in neighboring Gallia County while Specialty Trade Contractors 238 was also key in Adams and Brown County, showing the widespread importance of the construction industry to the region. However, the analysis and current economic conditions do not point to all of these counties targeting this cluster.

The construction industry was hit hard by the Great Recession and the housing bust. The Ohio Valley Regional Development Commission also notes that construction jobs in the region have been declining or growing slowly since 2001. They also recognize that the housing bust has had a large impact

on employment in construction industries (OVRDC, 2009). While housing does not encompass all areas where building construction and trade contractors can work, it has shown to play a large role in driving construction employment. Keeping that in mind, targeting in this industry would succeed best in areas where housing and growth are still strong.

Residential building permits are one way to gauge the strength of the construction industry. Gallia only had three permits issued in 2009 (U.S. Census Bureau, 2010). This may signify that Gallia's strength in the construction industry was focused on commercial and industrial building. Its high location quotient of 1.54 signifies it as an export industry possibly meaning that much of the work in this industry could have been taking place outside the county. Gallia's location next to multiple counties with this as a key industry represents mixed possibilities both cooperation and competition involved. However, its strength as an export industry means it should be considered, further.

Brown reported 52 new permits issued in 2009 (U.S. Census Bureau, 2010). While permits do not always equal actual buildings built, it is a healthy sign. Brown's location next to Clermont County, means it is may be experiencing extended suburban growth from Cincinnati. Clermont County issued 457 permits in 2009 and neighboring Highland County also issued 46 (U.S. Census Bureau, 2010). These were also counties where retail is showing strength and could target new development. These three counties have significant projected population growth which can also drive construction in many industries. This industry may have potential to serve the larger Cincinnati area and growing Clermont County.

Adams County showed a significant positive local share and had one of the highest location quotients for Specialty Trade Contractors 238, but only reported 3 new residential permits (U.S. Census Bureau, 2010). This may signify that the total effects of the recession were not captured in the analysis. More information on the industry and employers in the county would be needed to target any growth.

This leaves Lawrence, Pike, and Scioto Counties shared the Building Construction and Specialty Trade Contractors cluster and are all next to each other in the central portion of the region. Lawrence had a decent location quotient in Building Construction at .91, but a small quotient in Specialty Trade contractors at .43. Similarly, Pike had a location quotient of 1.27 in Building Construction but only a quotient of .41 in Specialty Trade Contractors. Scioto had the lowest Building Construction quotient at .63, but had the highest quotient of any county in the region for Specialty Trade Contractors at .67.

Lawrence only reported 5 building permits issued in 2009, a drop from 19 in 2008 and 12 in 2007 (U.S. Census Bureau, 2010). However, Lawrence has a significant population around 63,000 and is also located across the Ohio River from both Ashland, Kentucky and Huntington, West Virginia. Its location quotient near 1 may indicate the ability of that industry to export its work not just to neighboring Ohio counties, but also into Northern Kentucky and West Virginia. The location of chemical and petroleum industries in the county may also give them the opportunity to develop specialty contractors devoted to servicing those industries.

Pike has the smallest population of the three counties at 27,722, but is located along the major corridors of US-23 and the Appalachian Highway. It is also bordered by several counties with the largest populations in the region. Scioto, to the south, has a population over 76,000 and Ross, to the north, is just under 76,000. Ross and Scioto also have two of the largest cities in the region in Chillicothe and Portsmouth, both with populations over 20,000. Pike also reported 80 residential permits issued in 2009 and its neighbor Jackson County issued 46 (U.S. Census Bureau, 2010). This indicates that a healthy residential construction sector along the Appalachian Highway corridor and may be driving Pike Counties high location quotient of 1.27.

Scioto County building permits show a trend of permitting for multiple-family housing apartments while issuing very few single family permits (U.S. Census Bureau, 2010). This may signify the possibility of a specialization of local builders or an ability to do so. Their location on US-23 and US-52

provides excellent access to the region. Because its location quotient was low in Building Construction, but the highest in the region in Specialty Trade Contractors, its best opportunity may lie in expanding Specialty Trade Contractors to provide services for the Building Construction industry that is stronger in Pike and Lawrence, and even Gallia Counties.

Private Households 814: This industry reported a large median local share percentage for the region and industry classification showed as a growth industry for 6 counties. Further look into the local share location quotient data showed that while growth percentages were high, actual jobs created were very low, in most cases less than 10. Location quotients were very small with the highest location quotient reported being .49. Due to the fact that employment is dependent upon individual household demand and ability to pay for certain services, it is difficult to make recommendations on attracting and promoting this industry.

Unfortunately there is no distinction in employment made at the lower 4 and 5 digit NAICS sectors of this industry. Growth was found in more often in rural counties as opposed to in urban and suburban areas. Clermont County has the largest population and the largest median income in the region and would have the most households with the ability to pay for such services. However, it had a negative local share and a location quotient of .08. It may be that child care and other services may be more available to urban areas than rural areas. This results in the need of rural families to employ nannies and other caretakers for their children. A study by the US Department of Health and Human Services has shown that children in rural areas were less likely to attend “center programs”, but were still in care for as many hours a week as urban kids (Swenson, n.d.). Rural parents may be making up for lack of child care services by hiring their own care-takers. Also, it is possible that in areas with high unemployment, people may be turning to domestic service as a way to find work and employment. This would still be dependent upon households being willing and able to pay for this service.

Due to the lack of a more specific breakdown on employment in this industry, and the low actual employment, it is not recommended to actively target this industry. Household income, population growth, child care availability, and other employment options could all affect growth in this industry. The fact that this industry is not growing in Clermont County, with a large and growing population, and a significant median household income, signifies that demand for this industry in Southern Appalachian Ohio may be a response to other economic issues. Local government resources would be better used in targeting better defined economic growth opportunities.

Also, more research should be conducted to see what child care options are available to counties in the region. Child care may be less likely to be effected by income because working families need child care even if it is unavailable through child care centers. If options are limited, this could explain some of the growth in this industry. Economic growth and better services might be better targeted by creating child care facilities and educating child care workers.

This section identified target industries for the region. The “Recommendations” section will provide specific recommendations for each county to include regional targets if identified as prime targets. Recommendations will also be made for other industries or smaller clusters of industries that were identified for each county through the analysis.

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Adams County

Results of the data analysis for Adams County reveal some potential opportunities for industrial targeting and economic development. One of the strongest industry opportunities is in the Ambulatory Health Care Services industry. Adams had the second highest location quotient of counties classifying the industry as key and its central location in the region would provide access to a broad area of Southern Appalachian Ohio.

The Adams County Regional Medical Center (ACRMC) employs over 300 people including 80 physicians. Newly constructed in 2007, it provides a full range of services including emergency, surgical, and outpatient services (ACRMC, 2010). Its location in Seaman, Ohio provides great access to the surrounding area and counties as it is located just off of the James H. Rhodes Appalachian Highway connecting it to the growing Brown and Pike Counties to the west and east, and State Route 247 connects it to West Union to the south and to Hillsboro and growing Highland County to the north. Its location and access to the Appalachian Highway puts it an area convenient to local populations and future growth.

Adams, Brown, and Highland Counties are projected to have a percentage of population over 65 of 16.4%, 14.3%, and 15.8% respectively, equaling over 20,000 residents and over 2% growth in the demographic in each county (Ohio Department of Development, 2009) If health care options are not available locally, residents, especially the elderly, would have to travel to Cincinnati or other areas to see doctors or specialists. Adams County residents received almost \$46.5 million in Federal medical assistance payments (Ohio Department of Development, 2009). This represents a large source of expenditures that the local economy needs to capture.

Despite the strength of this opportunity, growth should be targeted at certain medical services. Both Brown and Highland counties have their own county hospitals. Emergency and trauma services are

not specifically needed. Services that may be harder to find in the area such as medical specialists, cancer treatment facilities, and diagnostic and testing facilities would provide services that may not be widely available in surrounding counties. Building them around the new facility would provide a central location with regional access to receive any needed medical service. It would also allow the hospital to utilize and cooperate with the specialized doctors and services. These facilities could also support nursing centers in the region, which also represent major employers in these counties and also serve the aging population.

Investment in this area could also support local businesses such as Surgical Appliance Industries located in Brown County, offering them an expanded local market. Local medical services could keep and attract residents who could then support local retail by providing business for restaurants and shops during their visits or for local pharmacies and drug stores by filling prescriptions and buying medical needs after visits.

Adams County should work with the surrounding counties and hospitals to analyze and identify medical service needs and develop support and investment for providing those services near the ACRMC. This could include new testing facilities, primary care physicians, or medical specialist offices for care not provided for by local options. Locating health care services in Seaman around the ACRMC would create a health care hub in Adams County that could service Highland and Brown Counties as well. This would provide local economic growth and keep health care expenditures within the region, rather than being spent in Cincinnati, Columbus, or another area outside the region.

The growth industry of Administration of Environmental Quality Programs 924 presents an interesting scenario for the residents of Adams County. The growth in this industry could be in response to the environmental concerns raised by the location of two power plants along the Ohio River. This is compounded by the proposal of a gypsum landfill to dispose of byproduct of the power generation process. The possible health and environmental effects posed by presence of power companies

demands the presence of those who monitor those plants. If demand for power grows, there could be demand to expand these plants, increasing their potential effects. While power plants and landfills represent potential economic development, they must be weighed against their potential effects. With these power plants already located there, they represent an opportunity to leverage State and Federal funds to initiate environmental programs, possibly creating new jobs in the Administration industry, or pumping funds in to local businesses to support environmental monitoring, clean-up and protection. Research on available grants and funding programs should be conducted to find any possible funds that could be obtained.

Another strong development opportunity for Adams County lies in Fabricated Metal Manufacturing 332. This industry was identified as a growth industry in the county and was also identified as a key industry in Clermont County. Also, one of the largest employers in Brown and Clermont Counties, Milacron LLC, is a precision machining company, operating in this industry sector. Despite the fact that the industry has negative share in both the region and nationally, Clermont and Adams both had local shares over 35%. Brown did see a slight decrease in local competitiveness with a -8% local share. These three counties are located next to each other and are connected by the Appalachian Highway. The location of this industry in these three counties could represent the location of a cluster in this industry. It is recommended that Adams County work in conjunction with Brown and Clermont Counties, Milacron LLC, and any other identified businesses in this industry to further study the existing conditions and dynamics of this industry. This would inform Adams County on whether it should focus on developing similar machining industries, or focus on developing support industries that supply those industries. Location of a cluster may also be beneficial in targeting industries that use these metal products and services.

Adams County also listed industry Specialty Trade Contractors 238 as key. Despite its strength in this industry, only two residential building permits were issued in 2009 (US Census, 2010). There may be

ways to leverage this industry through Home Repair and Home Ownership Assistance programs through the USDA and even through weatherization and energy efficiency tax credits through the American Recovery and Reinvestment Act (Brown County, Ohio, 2011; U.S. Department of Energy, 2011). Promoting and utilizing these programs can allow homeowners to hire contractors to perform this work; giving homeowners tax breaks and providing contractors with work. This method would again capture Federal money and put it into the local economy.

Industry 336 Transportation Equipment Manufacturing was also listed as key for Adams County. It was the only county that listed this industry, although Kenworth Trucks are manufactured in Ross County, possibly providing a link between the two businesses. Further research would be needed to decide if this represents a strong targeting possibility or if there is any interaction between the industries in the two counties. Results of further analysis should determine whether retention and strengthening of current firms should be the priority or indicate if this industry is strong enough to target new growth.

Justice, Public Order, and Safety Activities 922 also represented a growth industry in the county, however, with employment in this industry dependent upon government funding, this industry will be competing with other government departments for funding. Adams County has a small population projecting only modest growth. Fire services in rural areas are often provided by volunteer departments. Police service needs must be weighed with other government service obligations. This is an area where Adams County and local governments should research their projected needs for police services and budget accordingly. Even if the budget does not go to the police or other justice services, it may go towards employment in another government sector.



Adams County Regional Medical
Center, Seaman, Ohio.
www.acrmc.com



J M Stuart Power Plant
www.dpandl.com



Maca Plastics Inc. Winchester, Ohio.
www.macaplastics.com



Serpent Mound, Adams County
www.DiscoverOhio.com

Brown County

The manufacturing industry Wood Product Manufacturing 321 represents a great opportunity for regional collaboration in a traditional Appalachian industry. Brown County shows a growing strength in this industry and is primed to play an important role in its regional development.

The success of the Amish furniture industry in Holmes County, Ohio should serve as a blueprint on how to create a thriving secondary wood product market in Brown, Pike, Scioto, Vinton and Clermont Counties. The Amish furniture industry utilizes small firms with cooperation between firms in the supply of products, quality craftsmanship, and a distribution of stores throughout Ohio, Pennsylvania, Indiana that specialize in selling their product. They also allow some customization of products which is valued by customers (Bumgardner, Romig, and Luppold, 2007). The fact that businesses tend to be small could greatly benefit the Southern Appalachian Region counties because they could focus on developing small businesses through local craftsmen and entrepreneurship, rather than focusing on attracting large businesses to locate in the region. The creation of furniture or other wood products from local craftsmen with local wood lends itself to marketing efforts. Proximity of Holmes County to the region may create competition, but may also offer the opportunity to collaborate in sales, marketing, and the supply of raw materials.

For Brown County, it is recommended that they focus on working with Clermont County, who also showed growth in this industry, in developing secondary business such as furniture or cabinet retail. Their location near and connection to Cincinnati presents an excellent opportunity to be a retail center for Appalachian hardwood products. Retail stores could team with furniture, cabinet, and other wood product manufacturers in Pike, Scioto, Vinton, and other counties to sell their products to the large market in Cincinnati and Northern Kentucky.

Brown County could use this as part of a plan to grow tourism in the county. Industries Accommodation 721 and 722 Food Services and Drinking Places were identified as growth and key industries, respectively. Brown County also has a growing wine industry and has three wineries located within its borders. Several other wineries are located in adjacent counties and the region is part of the Nicholas Longworth Wine Trail that connects southwestern Ohio. The county also has many cultural and heritage sites such as Ulysses S. Grant's boyhood home and school house, and sites related to the Underground Railroad.

Being located near Cincinnati and next to suburban Clermont County, Brown County could develop as a tourist destination for those wishing to escape the city. Promoting the county as a weekend getaway through the development of small bed & breakfasts, local restaurants, and furniture shops showcasing their communities' natural and cultural charms would draw tourism dollars into the local economies. Brown County government officials and local business leaders should focus on developing entrepreneurial businesses geared towards accommodation, food service, and local retail featuring products from local craftsman and artisans. A new marketing campaign aimed at nearby cities of Cincinnati, Dayton, and even Columbus could help to draw weekend travelers to enjoy local food, wines, and shopping.

Fabricated Metal Manufacturing is an important industry for Brown County to target. Surrounding counties of Clermont and Adams have identified this industry as important. Brown also has a major presence in this industry as Milacron LLC is one of the largest employers in the county. The location of this industry in these three counties could represent the location of a clustered industry. It is recommended that Brown County work in conjunction with Adams and Clermont Counties, Milacron LLC, and any other identified businesses in this industry to further study the existing conditions and dynamics of this industry. This would inform Brown County on whether it should focus on developing similar machining industries, or focus on developing support industries that supply those industries.

Location of a cluster may also be beneficial in targeting industries that use these metal products and services. The declining local share of this industry in Brown County should also move local economic development officials to focus their efforts on retention strategies for those identified businesses. Working in conjunction with neighboring counties will strengthen and grow the industries and help in the development of retention programs in Brown County.

Brown County has also identified General Merchandise Stores 452 as a growth industry. This presents a possible opportunity to target the placement of such a store in the county. While its current population is modest, Brown County is expected to grow by almost 10,000 people by 2020 (Ohio Department of Development, 2009), expanding its market possibilities.

Georgetown is the largest village in the county and may present a good option for such a store to serve the rest of the county. It is centrally located providing access to the southern and eastern portions of the county. More research into the process of targeting and placing one of these stores should be completed. Brown County, in conjunction with local communities should complete a market feasibility study that could help determine if the county could support such a store and where it would best be located.

It should be noted that while these stores provide jobs, they are often low wage and often compete with local retail. The location or specific placement of a large general merchandise store, such as Wal-Mart, could seriously affect other local retailers which may hamper any effort to develop a tourist economy as recommended previously. A general merchandise store may provide an initial boost in jobs, but a strategy to grow and support local retail may be a more beneficial strategy. These are factors that must be considered before a store is targeted, or in determining where it should be located.

The final recommendation for Brown County deals with the growth industries of Waste Management and Remediation Services 562 and Administration of Environmental Quality Programs 924. There are several factors that could be driving the strength or growth in these industries. The fact that

Brown County is experiencing significant population growth means that there is more need for garbage collection and recycling services. These issues will only grow as Brown County grows. Brown County is home to the Brown County Sanitary Landfill, a facility that received 670 tons of waste daily in 2007 and had only 379,000 tons of capacity left. There is a proposed addition of 74,000,000 tons of capacity (Ohio EPA, 2008). The combination of population growth and landfill expansion could be the driving force behind the creation of jobs related to environmental quality programs.

While landfills do support jobs, and a growing county is in need of waste disposal facilities there is significant value in the benefits of a healthy environment. Brown County and its residents must weigh the costs and benefits of having a large landfill in the county. They also need to make sure that they are not being used as a dumping ground for Cincinnati's trash. If the landfill goes forward and the county experiences growth that may threaten environmental health, then Brown County should look to leverage these issues through seeking Federal and State funds to administer environmental monitoring programs or to employ environmental clean-up and protection. These funds could create jobs or be used to employ local companies to perform these duties.



Ulysses S. Grant boyhood home,
Georgetown, Ohio.
www.ohiohistorycentral.org



Milacron machining plant in Mt.
Orab, Ohio.
www.milacronmanufacturing.com

Clermont County

Clermont County hosts the strongest economy in the Southern Appalachian Ohio Region. Its location next to Cincinnati has propelled its growth. Economic analysis shows that it has many industries which it can target and many areas in which it can collaborate with neighboring counties to help extend growth and prosperity into the region.

Clermont has the greatest population of all the counties in Southern Appalachian Ohio with over 195,000. It is projected to grow to over 225,000 by 2020. This provides an expanding market for retail services. Four retail sectors are key in Clermont County. They are Building Material and Garden Equipment and Supplies Dealers 444, Food and Beverage Stores 445, Clothing and Clothing Accessories Stores 448, and General Merchandise Stores 452. Clermont also listed 722 Food Service and Drinking Places as a key industry. This industry should also be included in the inventory and market analysis because this industry includes restaurants that are often associated with malls and other commercial retail developments.

Although it has the strongest economy, being a suburb of Cincinnati presents its own challenges to economic development. Access to the Cincinnati provides many opportunities to expand markets and provide cheaper land and a strong workforce. However, the Clermont economy must also compete with the city and other suburbs to land prime development and industrial opportunities. This means that local officials need to work harder and become more creative in how they approach economic development, in order to distinguish themselves from other areas.

In Clermont County's strategic plan, one of its goals is to redevelop and strengthen the Eastgate Mall area to better meet the needs and desires of its residents. They propose market and consumer surveys along with cooperation between the county, retailers, and developers as a way to meet this goal (Clermont County Board of Commissioners, 2010). It is recommended that Clermont County completes

these assessments, but should also expand its assessment to cover the entire county. This should include an inventory of retail establishments in order to identify the stores they have and where they are located. The inventory should also identify available retail space and areas zoned for retail but undeveloped. Those results could then drive market analysis to identify the viability of targeting and placing specific retail industries identified as strong by this analysis. This analysis would help to guide County leaders and developers in redeveloping the Eastgate area as well as if they should target a new development in new and underserved areas of the county.

While Clermont has the largest and most appealing market in the region, developing more retail in the county may take some development opportunities away from counties where a new home and garden center or large general merchandise store may be more economically valuable. Clermont County needs to coordinate their analysis with neighboring counties Brown, Adams, and Highland to ensure that any placement does not take away a valuable development opportunity in one of those counties. Due to its size and suburban nature, Clermont should focus on the feasibility of targeting higher end, specialized retailers. Retail development in this area could set them apart from other retail developments in the Cincinnati area and draw retail dollars back into the county. This would also allow neighboring counties to develop their retail sector with less competition with Clermont.

This strategy could also work in targeting grocery stores. Including grocery stores in the county retail market study may identify the ability to target and support specialty grocery stores such as Whole Foods or other ethnic markets. A farmers market may also be a way to increase employment in this sector while also opening up a market for local farmers and gardeners to sell their meat and produce.

The analysis also identifies the possibility of a manufacturing cluster between Clermont, Brown and Adams Counties in the industry Fabricated Metal Manufacturing 332. This industry was identified as a Key industry in the county and was also identified as a growth industry in Adams County. Also, one of the largest employers in Clermont County, Milacron LLC, is a precision machining company, operating in

this industry sector. Milacron is also one of the largest employers in Brown County, even though it did not classify the industry as key or growth. Despite the fact that the industry has negative share in both the region and nationally, Clermont and Adams both had local shares over 35%. Brown did see a slight decrease at -8%. These three counties are located next to each other and are connected by the Appalachian Highway. The location of this industry in these three counties could represent the location of an industry cluster. It is recommended that Clermont County work in conjunction with Brown and Adams Counties, Milacron LLC, and any other identified businesses in this industry to further study the existing conditions and dynamics of this industry. This would inform Clermont County on whether its strength would be in targeting more metal product manufacturer, or if it should focus on developing support industries that supply those businesses. With its size and proximity to Cincinnati, it may also represent an opportunity to target industries that use the metal products produced in the area. Working together in this industry may also be able to help Brown County reverse its local decline.

Wood Product Manufacturing 321 was also identified as a growth industry in the county, along with several other counties in the region. This represents a great opportunity for Clermont County to use its market to help the poorer economies of other counties. Neighboring Brown County also lists this industry as growth, presenting an opportunity to collaborate both locally and regionally.

The success of the Amish furniture industry in Holmes County, Ohio should serve as a blueprint on how to create a thriving secondary wood product market in Brown, Pike, Scioto, Vinton and Clermont Counties. The Amish furniture industry utilizes small firms with cooperation between firms in the supply of products, quality craftsmanship, and a distribution of stores throughout Ohio, Pennsylvania, Indiana that specialize in selling their product. They also allow some customization of products which is valued by customers (Bumgardner, Romig, and Luppold, 2007). The fact that businesses tend to be small could greatly benefit the Southern Appalachian Region counties because they could focus on developing small businesses through local craftsmen and entrepreneurship, rather than focusing on attracting large

businesses to locate in the region. The creation of furniture or other wood products from local craftsmen with local wood lends itself to marketing efforts. Proximity of Holmes County to the region may create competition, but may also offer the opportunity to collaborate in sales, marketing, and the supply of raw materials.

For Clermont County, it is recommended that they focus on working with Brown County in developing secondary business such as furniture or cabinet retail. Their location next to Cincinnati presents an excellent opportunity to be a retail center for Appalachian hardwood products. Retail stores could team with furniture, cabinet, and other wood product manufacturers in Pike, Scioto, Vinton, and other Counties to sell their products to the large market in Cincinnati and Northern Kentucky. This should also be a key piece in their retail inventory and analysis and would dovetail nicely with their strength in the retail sector.

The growing population in Clermont County is most likely the driving force behind several growth and key industries. These include the four 92--- Public Administration industry sectors as well as Waste Management and Remediation Services 562. Industries Executive, Legislative, and Other General Government Support 921, Justice, Public Order, and Safety Activities 922, and Administration of Environmental Quality Programs 924 represent government employment. This means that the jobs in these sectors are dependent upon government budgets. It also means that they are competing with each other for funding. Where local funding should be spent will depend upon the needs of the county. The appearance of these industries may indicate that these are areas of growing importance due to a growing population.

Providing safety services, including police and fire, will be a priority for a growing county. So will staffing general government functions to provide the basic services the county needs. It is recommended that Clermont County work with local municipalities to complete in-depth studies and projections of future needs in fire, police, and other general services so that local governments can plan

their budgets accordingly as the county grows. It should also work with those municipalities to provide options for cooperation if budgets cannot support their needs so services, especially in police and fire, do not suffer.

The growing population may also be putting pressure on the local environment and increasing the need for waste management services. Waste Management and Remediation Services 562 could be grown by locating a landfill in the county. This would provide employment and services for a growing county. However, landfills bring many environmental and public health concerns with them. A Landfill in Clermont would also most likely attract a lot of use from residents in Cincinnati. The County should look into alternative measures of dealing with waste. Studying the problem and planning for it now would be a great benefit for the future of the county. The pressures of development and waste from a growing population need to be accounted for and closely monitored. In this industry, Clermont County should look to leverage Federal and State funds to clean up and protect environmentally sensitive areas. Searching and applying for grants or programs to fund environmental protection or monitoring should be conducted. While it is not as remote and heavily forested as other counties in the region, it should still work to protect and preserve its remaining environmental amenities.



Milacron plant in Batavia, Ohio.
www.milacron.com



Clermont County Courthouse,
Batavia, Ohio.
www.clermontcommonpleas.com



American Micro Products Inc.
Clermont County.
www.american-micro.com

Gallia County

One of the strongest industries in Gallia County is Construction of Buildings 236 with a local share of 72.3% and a location quotient of 1.54. With these numbers, this sector was one of the strongest in the entire region. Gallia County should focus on defining a clear idea of the types of buildings contractors in their county specialize in. Once this is discovered, the county can work in conjunction with local Chambers of Commerce, the builders, and construction trade groups in the area to develop a strategy to market their expertise and connect builders with potential clients. This partnership could be used to develop a regional marketing tool to champion their expertise to the larger region, including places outside the region like Columbus, Cincinnati, northern Kentucky, and western West Virginia.

Lawrence, Pike, and Scioto Counties also identified Construction of Buildings as a key industry and would provide an opportunity for collaboration. Cooperation between these four counties could be possible, but the competitive nature of bidding for and winning contracts could prohibit extensive cooperation between firms. Local officials need to work hard to find areas business and business development that could support a broad, regional industry. This may mean focusing on helping businesses to expand the range of where they work. Promotion and marketing in northern Kentucky, West Virginia, and central Ohio could expand their market allowing the industry to grow and thrive. Gallia's best opportunity for collaboration would be in developing relationships with firms in industry Specialty Trade Contractors 238 where Scioto, Lawrence and Pike showed strength. Economic Development officials should work on creating a regional trade association to facilitate a symbiotic relationship where both industries work together and help to produce jobs and construction opportunities for each other.

Gallia County showed strength in 621 Ambulatory Health Services with a high location quotient of 1.14. Negative shift-share results signify that Gallia County's priority should be on the retention of its

existing medical businesses. With Holzer Medical Center and Clinic being one of the largest employers in the county, it is imperative to keep those establishments strong. They need to determine if the hospital is operating properly or is just not able to attract and retain nurses, physicians, and specialists. They should be in open communication with the administrations of all medical facilities to ensure that they are doing everything they can to ensure strength in this industry. Priority one in this area should be stabilizing this industry.

It is also recommended that Gallia County analyze its ability to provide for the needs of elderly patients. Gallia's strength in Nursing and Residential Care Facilities 623 indicates that this is an important industry. Gallia is only projecting modest growth to approximately 33,360 by 2020. However, the percentage of population 65 and over is expected to grow from 13.4% in 2009 to 17% in 2020. Gallia County needs to work with local facilities to ensure that there are services in place to meet the needs of elderly residents. County, hospital, and other medical service officials need to work together to create a needs assessment and strategic plan to provide these services. This type of targeting in the health services industries would provide a very specific area to grow medical services and employment. Targeting medical services in such a way may also be useful in strengthening the decline in the Ambulatory Health Care Services industry.

There is a strong presence of power utility companies in Gallia County and they represent major employers in the region. The presence of the University of Rio Grande offers a resource to engage these power companies in helping to develop clean energy technology. Local development officials should bring the university and power companies together to pursue developing local programs and educational offerings geared towards green technology. This type of innovation would create a highly trained, technical workforce in the county geared towards servicing power utilities. The power companies could also benefit from technology development aimed at making their plants cleaner and more efficient. This would also be beneficial to local communities worried about the environmental

impacts of these plants. Working to develop such programs and cooperation could create a green energy niche in Gallia County. It could also be used to attract other power utilities and green technology businesses, or to spur local business ventures. County and local development officials must be forward thinking and innovative in the way they use the assets in the county. Bringing together important economic entities and pursuing emerging industries in such a way is vital to developing strong economy in the county and region.

Gallia should also seek to take part in the development of the regional Wood Products industry. There is ample opportunity for each county to take part in growing this important industry. Gallia has the opportunity make their own niche in the market and at the same time strengthen the recognition and economic power of this industry in the region and beyond. Focusing on value added production, such as furniture and cabinetry, can help to grow primary timber industries and also benefit local tourism and retail industries. Working regionally will allow Gallia County to develop working relationships that can be used to take advantage of other economic opportunities in the future.

To target the wood product industry, Gallia County and the Ohio Valley Regional Development Commission should engage State and local entrepreneurial initiatives such as ACENet, Enterprise Appalachia, the Appalachian Regional Entrepreneurship Group at Ohio University Athens, the ICAN! Entrepreneurship Advancement Initiative, Adena Ventures, and other entrepreneurial support groups. This will provide a network of support for local residents to start their own businesses and to grow existing start-ups. Supporting entrepreneurship will provide an opportunity for residents to create their own economic opportunity, building on the strength of the wood and wood products industries in the region. With support, those businesses can grow to add even more value to the Wood Product Manufacturing sector.

The Ohio Valley Regional Development Commission should then facilitate regional cooperation between entrepreneurs in eastern counties and retailers in Clermont and Brown Counties. This would

allow them to supply and sell their goods in a much larger market, while also maintaining and supporting local retail and tourism. This would create a truly regional industry that that supports local natural resource production as well as secondary industries that use those products.

Gallia County would benefit greatly by promoting entrepreneurship as an overall development strategy. This would allow local governments and residents to take more control over their economies and create their own thriving businesses. Valuable resources and programs are made available through the State, Appalachian Regional Commission non-profit groups that offer assistance to local entrepreneurs. Local government officials need to be well versed in the administration and use of these programs. They must be able to connect eager entrepreneurs to the right funding sources and business supports. Gallia County officials and local chambers of Commerce should work to create a central repository and assistance office or specialist to aid individuals eager to start their own business.

County officials should also work to develop business incubator space for local entrepreneurs. Developing unused buildings or space into offices or areas with cheap rent, reduced taxes, or other incentives where local entrepreneurs can develop and grow their businesses. Creating local business centers that offer access to conference rooms, internet, fax machines, printing, and shipping services would also greatly benefit local entrepreneurs as they start or look to expand their business and may not have access to these services. The expansion of broadband internet into rural areas could also help to expand the business opportunities rural entrepreneurs.

Growing local businesses can serve as a supplement to industrial attraction, creating a broader, more robust economic development strategy for the county. It also engages those in the community to take control of their own economic situation. In order to gain the most benefit from this strategy, economic development officials must provide the support necessary to help small businesses grow. These growing businesses can become a major engine in the overall economic growth of Gallia County.



Holzer Clinic, Gallia County, Ohio.
www.growgallia.com



James M. Gavin Power Plant
Gallipolis, Ohio.
www.bloomberg.com



University of Rio Grande, Rio Grande, Ohio
www.rio.edu

Highland County

The most significant potential for development in Highland County is in the retail sector.

Highland is in a similar position to Clermont County where its location near Cincinnati provides positive benefits for population and industry growth. The county is projecting to grow by over 6,000 residents by the year 2020. This growth should be able to fuel an expanded local retail sector. The access to Cincinnati and other retail centers also means that economic development officials will have to work hard to not only attract these retailers, but also attract and retain shoppers in the area. The fact that Highland is not located directly adjacent to Cincinnati or Clermont County may diminish some of these effects, and a growing local population will be able to demand and support retail locally.

Highland listed industries Building Material and Garden Equipment and Supplies Dealers 444, Food and Beverage Stores 445, and Clothing and Clothing Accessories Stores 448 as key and growth industries. Highland also had the highest location quotient in the region with a 1.29, signifying an export industry. The growth industry of Clothing and Clothing Accessories also had a strong quotient of .9. This signifies the potential opportunity to create a retail development in Highland County focused around these industries.

The establishment that stands out of industry 444 is the Home and Garden Center best represented by a Lowe's or a Home Depot type of retail store. The Lowe's in Chillicothe, Ohio, employs 105 people (Chillicothe Ross Chamber of Commerce, 2005). The addition of a home center to a Highland County would conceivably add a similar amount of jobs to the area.

US Highways 50 and 62 along with State Highways 73, 124, and 138 converge in Hillsboro in Highland County. This provides great access from the surrounding region including the growing counties of Clermont and Brown while Highland itself expects significant population growth. With this expected population growth and the strength of the industry in the county Highland economic development

officials should focus on trying to attract a home and garden center into Hillsboro. While Lowe's already has a presence in the county, a competing national chain such as Home Depot, or a more local chain, such as Menard's could be targeted to increase the presence of the industry in the region. In 2006, Menard's aggressively expanded its presence in Central Ohio to compete with Lowe's and The Home Depot (Showalter, 2006). Hillsboro's location between Cincinnati and Columbus could offer Menard's an opportunity to expand and strengthen their presence in the region. Access provided by US and State highways, strong projected population growth, location to growing counties, and its proven strength in the industry should make researching the placement of a new home and garden center in Highland County a strong priority.

Local economic development staff should perform a market study to determine the feasibility of placing a home center in Hillsboro. Location suitability analysis should also be conducted to determine the best site for development. They should also be in contact with potential retail chains to see if they provide any assistance in the process of developing these studies and to find the procedures necessary for placing a new store in their area. Typically well over 100,000 square feet, many of these traditional sized stores may be much too large to be supported by rural populations. The typical Lowes runs around 122,000 square feet while a typical home depot runs around 117,000 square feet. Menards often opens stores over 200,000 square feet (Heher, 2008, and Bond, 2007). In contacting these companies, local officials should look into the placement of smaller sized centers, as both Home Depot and Lowe's have been testing smaller store layouts to serve smaller markets (Heher, 2008, and Bond, 2007). This could provide an alternative that would be profitable for the store and still add jobs even if it is found that these two locations cannot support full size stores. If the county and market continue to grow, these smaller stores could then be expanded.

A home center would provide an excellent anchor to develop other retail around. The market analysis done for the home center should also be accompanied by a general retail market inventory and

analysis for Highland County. This would be used to determine if the other retail sectors of Food and Beverage Stores 445 or Clothing and Clothing Accessory Stores 448 would also be viable additions. It will also inform officials if they need to look into developing a new shopping center or if they should focus on filling vacancies in available commercial properties.

An opportunity for industrial collaboration in Highland County involves capitalizing on other major employers and industries in the region. Highland County has a strong presence of manufacturing industries among their major employers. Several of those businesses can be complemented by other industries and businesses in the region. RR Donnelly and Sons/Banta Corporation is a printing company in Highland County. Ross County is home to Glatfelter, a very large paper company. The region as a whole has a long history in the production of trees and wood products. This chain of industry represents a possible avenue to connect counties and different industries within the same region to provide locally produced products and services. Highland is also home to Illinois Tool Works/Hobart Corporation, Weastec Inc. and other manufacturing industries that may benefit from collaboration with metal product manufacturing industries. Clermont, Brown, and Adams Counties have identified Fabricated Metal Product Manufacturing 332 as a strong and growing industry sector. This would represent a possible collaboration point to connect these industries and businesses to strengthen regional economies.

Highland County economic officials should inventory businesses and business needs of their manufacturing sectors and seek to identify major regional industries and businesses that can supply products or services to the major businesses in the county. They should also look to find major industries in the region that their manufacturing sector could supply. Officials should then work to forge connections between businesses and industries to create linkages between higher levels of production and service. This process could create strong regional industrial clusters that support and

fuel growth in related industries. Seeking out and connecting local industries can help to strengthen Highland Counties economy, and the economy of Southern Appalachian Ohio as a whole.

Highland County would also benefit greatly by promoting entrepreneurship as an overall development strategy. This would allow local governments and residents to take more control over their economies and create their own thriving businesses. Valuable resources and programs are made available through the State, Appalachian Regional Commission non-profit groups that offer assistance to local entrepreneurs. Local government officials need to be well versed in the administration and use of these programs. They must be able to connect eager entrepreneurs to the right funding sources and business supports. Highland County officials and local chambers of Commerce should work to create a central repository and assistance office or specialist to aid individuals eager to start their own business.

County officials should also work to develop business incubator space for local entrepreneurs. Developing unused buildings or space into offices or areas with cheap rent, reduced taxes, or other incentives where local entrepreneurs can develop and grow their businesses. Creating local business centers that offer access to conference rooms, internet, fax machines, printing, and shipping services would also greatly benefit local entrepreneurs as they start or look to expand their business and may not have access to these services. The expansion of broadband internet into rural areas could also help to expand the business opportunities rural entrepreneurs.

Growing local businesses can serve as a supplement to industrial attraction, creating a broader, more robust economic development strategy for the county. It also engages those in the community to take control of their own economic situation. In order to gain the most benefit from this strategy, economic development officials must provide the support necessary to help small businesses grow. These growing businesses can help to fuel growth in the larger economy.



Candle-lite Inc. Leesburg, Ohio
Highland County Board of Commissioners
highlandcountyeconomicdevelopment.co.highland.oh.us/



Weastec Inc. Hillsboro, Ohio.
www.weastec.com

Jackson County

Jackson County is in excellent position to take advantage of the Wood Product Manufacturing Industry that has been proven as a strong and growing regional industry. Jackson is centrally located in the region and Merillat Industries, a cabinet manufacturer, is one of the largest employers in the county. Jackson County development officials should focus on engaging Merillat for the purposes of expanding that business. There should be communication with Merillat to ensure that it tries to use as much local product as possible in its manufacturing, supporting local wood industries. Jackson County should also leverage the strength of the Wood Products Manufacturing industry, and the location of an established business, as tool to attract other manufacturers to locate there. The location of Mills Pride, another cabinet manufacturer, in Pike County provides further evidence of the strength of wood producing and using industries. Pike and Jackson County officials should work with both Mills Pride and Merillat to identify their strengths and needs. This could help attract other cabinet or wood product manufacturers or in developing supporting industries to provide better services to the existing industries.

To benefit the entire economy, especially the wood product industries recommended here, Jackson County and the Ohio Valley Regional Development Commission should engage State and local entrepreneurial initiatives such as ACENet, Enterprise Appalachia, the Appalachian Regional Entrepreneurship Group at Ohio University Athens, the ICAN! Entrepreneurship Advancement Initiative, Adena Ventures, and other entrepreneurial support groups. This will provide a network of support for local residents to start their own businesses and to grow existing start-ups. Attracting a new paper plant or furniture plant may be difficult. Supporting entrepreneurship will provide an opportunity for residents to create their own economic opportunity, building on the strength of the wood and wood products industries in the region. With support, those businesses can eventually grow and add even more value to the Wood Product Manufacturing Sector.

The Ohio Valley Regional Development Commission should then facilitate regional cooperation between entrepreneurs in eastern counties and retailers in Clermont and Brown Counties. This would allow them to supply and sell their goods in a much larger market, while also maintaining and supporting local retail and tourism. This would create a truly regional industry that that supports local natural resource production as well as secondary industries that use those products.

Jackson County returned one of the more interesting development opportunities for the region in Wholesale Electronics Markets and Agents 425. This industry uses the internet, or works through brokers, to sell and distribute goods between. It includes business to business sales as well as third party agents facilitating the sales (U.S. Census Bureau, 2010). Jackson County shares strength in this industry with both Clermont and Ross Counties. Clermont most likely excels in this industry due to the strength of its industrial and commercial sectors. Ross County also has a more developed economy than most counties in the region signifying need for these services. The fact that Jackson County was one of only three counties to signify this as a growth industry means that it represents a prime development opportunity. Jackson could position itself as a leader in the region at supplying businesses and industries in Southern Appalachian Ohio with the goods they need to operate. Because of its location next to Ross County and connection via US-35 it may also represent an opportunity to work together to broaden the industries reach throughout the State.

The first step in targeting this industry would be to assess the nature of firms in the industry and the type of wholesale markets they serve. County officials should seek out these businesses and work to define the nature of their work and business needs. This will help to identify strengths and weaknesses in the industry as well as opportunities to direct growth. With internet wholesale trading being covered in this sector, extension of broadband services throughout the county may be a priority. This will help existing business as well as encourage local entrepreneurs.

Collaboration with Ross County could include engaging Ohio University's Chillicothe Campus to

develop business classes catered to this industry. Ross and Jackson County's economic development officials and Chambers of Commerce could collaborate to develop a system, such as a website, to facilitate matching these brokers with businesses in need of their services. They could then expand this system to the other counties and businesses in the region, especially where this industry and its services are less available. The establishment of this industry could facilitate the development of many of the other industries recommended in this analysis by ensuring that new businesses have the services they need to buy and sell their goods.

Another recommendation for Jackson County regards the presence of Food Manufacturing industries in the county. Both Bellisio Foods and General Mills employ over 1,000 people. However the industry did not return any classification. A closer look at shift share and location quotient analysis reveals that employment has declined and local share is negative. With this industry representing a major employment sector in the county, it is imperative that Jackson County officials work with these companies to develop retention strategies to strengthen these industries. Analysis and communication between the businesses and local government are imperative to assess the conditions that have lead to this decline. Local officials can then work with these businesses to address these issues and create a plan for returning to growth.

Finally, Jackson County would benefit greatly by promoting entrepreneurship as an overall development strategy. This would allow local governments and residents to take more control over their economies and create their own thriving businesses. Valuable resources and programs are made available through the State, Appalachian Regional Commission non-profit groups that offer assistance to local entrepreneurs. Local government officials need to be well versed in the administration and use of these programs. They must be able to connect eager entrepreneurs to the right funding sources and business supports. Jackson County officials and local chambers of Commerce should work to create a central repository and assistance office or specialist to aid individuals eager to start their own business.

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Growing local businesses can serve as a supplement to industrial attraction, creating a broader, more robust economic development strategy for the county. It also engages those in the community to take control of their own economic situation. In order to gain the most benefit from this strategy, economic development officials must provide the support necessary to help small businesses grow. These growing businesses can help to fuel growth in the larger economy.



General Mills, Wellston, Ohio.
www.geigerbrothers.com



Merrillat's framing plant in Jackson, Ohio
www.geigerbrothers.com

Lawrence County

Lawrence County has several clustered industries within the county that represent excellent opportunities for targeted economic development. Like Clermont and Highland Counties, Lawrence showed strength in several retail industries. Electronics and Appliance Stores 443 was indicated as a growth industry while Building Material and Garden Equipment and Supplies Dealers 444 and Food and Beverage Stores 445 were indicated as key industries. The Strength of these industries signifies an opportunity for commercial development anchored by national retail chains. Industry 443 could be represented by a store such as Best Buy or an HH Gregg retail chain. 444 could be represented by a large home and garden center such as a Home Depot or a Lowe's. 445 could be the placement of supermarket or supercenter containing both a grocery and general merchandise store. This type of development could be located in one area creating a retail center that could also allow room for other retail or restaurant development.

Lawrence has one of the largest county populations in Southern Appalachian Ohio. Its projected 2020 population is just over 63,800 people. It is also located directly across the Ohio River from the cities of Huntington, West Virginia and Ashland, Kentucky. US Route 52 runs along the Ohio River providing access to the County Seat of Ironton. US Route 52 runs along the north edge of Ironton and connects with State Route 92, providing East-West and North-South access to Ironton. Placement near this intersection would provide excellent access.

Despite its strength in industry Building Material and Garden Equipment and Supplies Dealers 444, there are no major home centers located in Lawrence County. A Lowe's is across from Ironton in Russell, KY, and the nearest Home Depot is in Huntington, West Virginia (Lowe's, 2011 and The Home Depot, 2011). Residents of Lawrence County must leave the State to actually shop at these stores, taking their money and tax revenue with them. Locating a home and garden center in Ironton would provide new employment and help keep retail and sales tax dollars in the State and County.

Similarly, the nearest Best Buy is located in Huntington. The nearest HH Gregg is in Chillicothe. Sears has a department store in Ashland, Kentucky and a smaller “hometown” store in Wheelersburg, Ohio in Scioto County. With the limited presence of HH Gregg in the region, and the nearby markets of Ashland, Kentucky, and Huntington, West Virginia, Lawrence County should pursue the placement of a store before another area is able to.

Ironton also has several small regional groceries and food stores, but no major supermarket chain. Ashland, Kentucky is home to two Kroger, so it may not represent a market for them. This may be an opportunity to attract a grocery chain that has limited presence in Southern Ohio. It may also be an opportunity to attract a specialty store such as Whole Foods that has no presence in a region with a significant population. Such a unique store may also attract shoppers from surrounding areas.

Lawrence County officials should team up with local government officials in Ironton to complete a retail market analysis. This should also be accompanied by a land suitability analysis. Focus should be given to the intersection of US-52 and State Route 93, but land analysis and local input may prove another area more suitable to development. The retail market analysis should focus on the types of retail industries indicated in this analysis, but a more general study would also be beneficial.

If the market studies show that development of these retail stores is feasible, officials should then seek out target stores and begin the process of locating them. Officials should seek out any assistance these stores offer in the process of locating a store in the community. If the analysis show that a large retail development complex is feasible, it may be appropriate to contact a specialized retail developer. They may be able to help design, attract, and fund such a project. Having the market analysis and land suitability analysis complete could aid in the creation of a development plan that could be used to sell a developer or targeted company on locating in Lawrence County. However, officials should also plan for the targeting of individual stores as well. It may be difficult to attract several stores at once. A plan that can be built in stages will account for scenarios where retailers may decline to locate here.

Industry Ambulatory Health Care Services 621 was also identified as a key industry in Lawrence County. Its strength in local share and location quotient, as well as a large county population, also made it a viable candidate to target and expand this industry. Economically, health care industries can be viewed as a basic industry for rural areas. Health care services act as a basic industry by attracting Social Security and Medicare dollars, which is Federal money, to be spent in the region. Also, doctors, nurses, and other medical workers support many service activities and purchase local goods. The quality and availability of health care in a county or region can also play an important role in attracting other business and investment (Scorsone, 2009). Developing ambulatory health care services presents a strong opportunity for Southern Appalachian Ohio to attract economic growth. Lawrence County stood out with one of the highest location quotients.

In 2001, River Valley Health Systems closed its Ironton hospital, leaving Lawrence County as the largest county in Ohio without a hospital (Malloy, 2008). Currently Lawrence County is served by two family medical centers located near Ironton. More comprehensive medical services can only be obtained by leaving the state and traveling to hospitals in Ashland, Kentucky or Huntington, West Virginia (Villageprofile.com, 2006). Not only do residents need to leave the region to get the health services they need. They have to leave the State. This represents potential revenue, including Federal Medicare/Medicaid funds, leaving the State and county.

In 2010, the 16,500 square foot King's Daughters Medical Center opened in Ironton providing on-site primary care and medical lab and testing facilities (The Herald Dispatch, 2010). Also in 2010, ground was broken on a 46,000 square foot medical center in Ironton near the intersection of US Route 52 and State Route 141. This is projected to create more than 50 health care jobs and provide most of the health care services Lawrence County residents need (Hendricks, 2010). In the absence of a hospital and complete medical services, Lawrence County has recognized its need to provide health care services to its residents.

The location of several hospitals near Lawrence County in neighboring Ashland, Kentucky and Huntington, West Virginia, combined with the recent medical center developments means Lawrence no longer needs to target the building of a full service hospital. Lawrence should focus on providing emergency and primary care needs for its residents. Lawrence County officials need to analyze existing services and study their projected needs. Lawrence County is projected to only grow by just over 1,000 people by 2020, yet its percentage of population 65 and over will grow by 2% to 16.4% overall. Services and specialists in the new medical facility need to provide the medical attention senior citizens will need. Lawrence County should engage hospital officials throughout the area to facilitate cooperation in providing services. This could include staffing or sharing specialists with the new facility or providing testing services.

Also, much of the medical development has focused on the Ironton Area. Similar services should be developed in other areas of Lawrence County. Proctorville, Ohio is located directly across from Huntington, West Virginia and is the intersection of State Highways 7, 243, and 775. Ohio residents in that area must still leave the State or travel to Ironton in the western part of the county. Proctorville and the other Huntington suburbs located in Ohio would benefit from the location of a medical center with primary, specialty, and laboratory testing services. Lawrence County should initiate studies to determine the size and services needed for the population in the eastern part of the county. The county should work to engage the new medical clinics in Ironton to develop and support branch offices and facilities. This would provide local jobs and medical services for the eastern part of Lawrence County and also help to keep jobs and business in the county.

Another strongly reported cluster is in the Construction industry. Lawrence County reported both 236 Building Construction and Specialty Trade Contractors 238 as key industries. Economic development in these industries should be a concerted collaborative effort along with Pike, and Scioto who shared this strength. Economic development officers should bring together businesses and trade

groups in those three counties to further analyze their strengths and weaknesses. Industry SWOT analysis would allow the region to assess where it has potential to grow, what challenges they face, and how these industries can work together. The economic development agencies in the counties should also work to create a regional coalition of businesses and trade groups to disseminate information about industry news and trends and communicate business and cooperative opportunities. Making building companies aware of the tradesmen and contractors working in the area can allow them to make decisions and advise clients on any needs they may have after their building is constructed. This could then develop into working relationships between companies.

Lawrence and Scioto officials should also work with State agencies and local companies to resolve any issues there may be with working across State lines and facilitate any licensing or permitting needs. This could be done through the industry coalition.

The county should also engage the industry and local colleges and trade schools to develop or strengthen educational and training programs. Shawnee State University, O C Collins Center, Ohio University Southern Campus, Pike County Joint Vocational School, and Scioto County Joint Vocational School are all located within these three counties. The University of Rio Grande and Ohio University Chillicothe are also located in neighboring counties. A regional network could be created that taught trades, offered certifications, or even developed degree programs focusing on these construction industries.

These industries are not guaranteed investments. The nature of the business often involves competition for projects. If the housing market does not pick up growth may be very slow, eliminating a major sector of work. Housing market data has given reason for optimism and concern. Mortgage delinquency rates have dropped to their lowest level since 2008, but number homes in some stage foreclosure has risen back to record highs. The volume of low priced foreclosed homes is also suppressing home values and hurting the housing market (El Boghdady, 2011). The news gives reason

for optimism, but growth may remain slow. If the economy dips back into recession and consumer spending decreases, it could hurt demand for new industrial and commercial development.

Targeting construction industries in this economy is a risk. It must include a concerted effort to also target housing and commercial markets. Brown County does promote a USDA program for providing loans for upgrading rural housing and both Brown and Clermont have Community Housing Improvement Programs that offer assistance to lower income residents in buying and renovating homes (Brown County, Ohio 2010 & 2010, and Clermont County Ohio, 2010). Greater promotion and assistance with these programs could increase housing construction. Another possible policy would be for local governments to buy up foreclosed homes and renovate them for resale. This would depend heavily on the availability of funds for such projects but also holds promise of recoup on investment. Funds from the American Recovery and Reinvestment Act also provide funds for weatherizing and improving homes for low-income families. Actively pursuing and promoting these types of programs through the industry and in communities can be a way to offset some of the struggles put in place by the slumping housing market.

The final industry recommended for Lawrence County to target is a cluster in 484 Truck Transportation and 488 Support Activities for Transportation. Both industries were identified as key. Lawrence County is home to many industrial companies who use its location on the Ohio River as a vital transportation link. The Point Industrial Park in South Point provides road, rail, and river transportation and is only a short distance from the Tri-State Airport in Huntington. Its major employers include McGinnis Inc and Superior Marine Inc both cater to harbor and boat repair.

Lawrence County Economic Development needs to continue its focus on marketing The Point as an excellent industrial development site. Site inventory and analysis should be conducted to ensure all transportation infrastructure and facilities are of the highest quality. Analysis should also include an assessment of the amount and type of cargo moved through The Point. This would help determine the

existing capabilities and existing needs. It may also point to the need to expand its services or to enhance specific transportation services that are in growing in demand.

Lawrence County and The Point officials should reach out to other industrial parks, ports, and transportation industries, and State and Federal agencies in the region to engage in creating a long-term plan to provide greater connectivity and transportation services and funding to the region. This increased connectivity will help to strengthen the region economically, and will also allow the strength in transportation services in Lawrence County to grow and serve the regions needs.



Rendering of new St. Mary's Medical Center in Ironton
www.herald-dispatch.com



Map of The Point industrial park,
South Point, Ohio.
www.lawrencecountyohio.org

Pike County

While Pike County did not report a lot of industrial targets, the few that it did represent a wide range of economic development opportunities and issues. The most intriguing economic development opportunity in the entire region focuses on the development of the tourism industry in Pike and Scioto Counties. These counties share Accommodation 721 as a growth industry. While its location quotients and local shares were small, it was one of only four industries growing both nationally and locally. This industry includes hotels and motels, casino hotels, bed and breakfasts, RV parks and campgrounds, and recreational parks and camps (U.S. Census Bureau, 2010). Utilizing natural amenities and targeting tourism industries like Accommodation has been shown to be a good way in which rural areas can generate economic growth (Hunter, Boardman, and Saint Onge, 2005; Henderson and McDaniel, 2005; Deller et. al. 2001). While not in the heart of the Appalachian Mountains, Southern Appalachian Ohio still provides an abundance of natural and cultural amenities that could be used to attract visitors, create local jobs, and support recreation and tourism in the region.

Pike and Scioto Counties create a natural opportunity for collaboration in developing this industry due to their adjacency to each other and the surrounding attractions. US Route 23 runs through both counties and is one of the few major highways in the region. It connects Portsmouth and Chillicothe and to the State Capital of Columbus. The Appalachian Highway also runs east-to west through Pike County, connecting the area to the greater Cincinnati region and acting as a gateway to the rest of Appalachia. These routes are key to development of any tourism industry by providing easy access to the regions amenities and attractions.

Within Pike and Scioto counties there are three State Parks. This includes the 63,000 acre Shawnee State Park in Scioto County, and Lakes White and Pike in Pike County (Ohio Department of Natural Resources, 2010). Scioto also contains a large portion of the Wayne National Forest (U.S.

Department of Agriculture, 2010). Scioto County is also home to the historic river town of Portsmouth. Portsmouth contains many attractions including the Historic Boneyfiddle District, the Southern Ohio Museum, Portsmouth Brewery, Verne Riffe Center for the Arts, the Shawnee State University Campus and Clark Planetarium, floodwall murals, and other historic and cultural offerings (Portsmouth Scioto County Visitors Board, 2010). Pike County is part of the Appalachian Adventure Trail, contains the Ohio-Erie Canal Historic Trail and also has 8 places listed on the National Register of Historic Places (Pike County Convention and Visitors Bureau, 2010). Surrounding counties also provide many cultural and natural amenities that would be attractive to visitors. Outdoor recreation and cultural amenities in this area present an excellent opportunity to develop accommodations that cater to visitors seeking to enjoy the many amenities and attractions in the region.

Pike and Scioto Counties should form a joint convention and visitors bureau to work with local governments and businesses to promote the areas many attractions and amenities. In targeting and building Accommodation establishments, the area should focus on those types that support the natural and historic amenities they contain. This would include bed and breakfasts and RV and camping facilities. Placement of these establishments may vary, but should be focused on providing access to either the natural amenities or the local historical and cultural offerings.

Targeting these types of accommodations would also be an opportunity to develop and assist local entrepreneurs. County and local government officials should work with organizations like the Appalachian Center for Economic Networks (ACEnet) which helps to provide loans, business development, and marketing assistance to entrepreneurs and small businesses (ACEnet, 2010). They could assist entrepreneurs in opening their own bed & breakfasts or camping lodges. The joint visitor's board should maintain profiles of these new and existing enterprises and work to promote them as part of the areas attractions. Targeting these types of establishments can utilize the many natural and cultural amenities in the region and help grow tourism for small businesses and local attractions.

Along with creating a joint convention and visitors bureau, that bureau should work to develop a joint convention center to service the region. Both Pike and Scioto Counties also listed industry Religious, Grantmaking, Civic, and Professional Organizations 813 as growth industries. A convention center could be used to attract and host conventions and meetings for groups in this growing industry. The central location of these counties provides great access as a meeting and convention center for any local group or organization. Also being connected to both Columbus and Cincinnati means that it could also attract convention and weekend retreat opportunities from businesses and groups from the broader region. Being located in the Appalachian hills it would represent a relaxing and possibly less expensive alternative to hold such business activities.

Cooperation will definitely be needed in placing and designing such a facility. The facility itself should be designed to provide all the needs convention goers would need. This includes hotel rooms, meeting rooms, restaurants and lounges, and media rooms. This would create an all-inclusive center that would cater to weekend retreats and conventions, but could also serve as a hotel or resort area. Scioto County has the larger population and Portsmouth is over 20,000 people, over two-thirds the entire population of Pike County. However, US-23 and The Appalachia Highway intersect in Piketon in Pike County. It is also close to mid way between the two major cities in the region, Chillicothe and Portsmouth, and closer to Columbus and Cincinnati. Placement should occur around Piketon near the intersection of US-23 and the Appalachian Highway to keep the center close to the major traffic corridors, and provide easy access to Portsmouth and Scioto County. It is advised that the center be located outside of a city or village, unless such a spot can be found to take advantage of natural scenic beauty. Placement may need to be moved somewhat away from the major highways to accommodate such requirements, but would greatly benefit the site as an all inclusive convention center and hotel. Location in Piketon also means the center could cater to visitors to Lake White, just north of Piketon.

A land suitability analysis should be completed to find a specific location, but effort must be

made to find a fair resolution that takes the needs of both counties into account. Other sites found by the analysis outside the recommended zone should be studied further but should again account for a fair placement. While placing the center in Portsmouth might also make sense, its location there may provide no benefit at all to Pike County. Locating it in Piketon could serve as gateway to Portsmouth. In any case the site selection process should be comprehensive and open to the communities, businesses, and organizations located in these two counties.

Pike County also classified the industries Construction of Buildings 236 and Specialty Trade Contractors 238 as key industries. Economic development in these industries should be a concerted collaborative with Lawrence and Scioto Counties that shared this strength. Economic development officers should bring together businesses and trade groups in those three counties to further analyze their strengths and weaknesses. Industry SWOT analysis would allow the region to assess where it has potential to grow, what challenges they face, and how these industries can work together. The economic development agencies in the county should also work to create a regional coalition of businesses and trade groups to disseminate information about industry news and trends and communicate business and cooperative opportunities. Making building companies aware of the tradesmen and contractors working in the area can allow them to make decisions and advise clients on any needs they may have after their building is constructed. This could then develop into working relationships between companies.

Lawrence and Scioto officials should also work with State agencies and local companies to resolve any issues there may be with working across State lines and facilitate any licensing or permitting needs. This could be done through the industry coalition.

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Targeting construction industries in this economy is a risk and must include a concerted effort to target housing and commercial markets. Brown County does promote a USDA program for providing loans for upgrading rural housing and both Brown and Clermont have Community Housing Improvement Programs that offer assistance to lower income residents in buying and renovating homes (Brown Count, Ohio, 2010; Brown County, Ohio, 2010; and Clermont County, Ohio, 2010). Greater promotion and assistance with these programs could increase housing construction. Another possible policy would be for local governments to buy up foreclosed homes and renovate them for resale (Baca, 2009). This would depend heavily on the availability of funds for such projects but also holds promise of recoup on investment. The American Recovery and Reinvestment Act provides funds for weatherizing and improving homes for low-income families. Actively pursuing and promoting these types of programs through the industry and in communities can be a way to create business in slumping housing market.

The last several industries identified for Pike County represent development opportunities, but

also bring serious issues. Industries Waste Management and Remediation Services 562, Administration of Environmental Quality Programs 924, and 928 National Security and International Affairs were all identified as growth industries in Pike County. The possible interplay between these three industries means that Pike County officials and residents will need to make key decisions on targeting any growth in these industries.

The strength in waste management industries in Pike County is likely affected by the location of the Pike Sanitation Landfill. In 2007 it took in 763 tons of waste a day and had a capacity of 18,000,000 tons remaining. There is also a proposed expansion of 1,200,000 tons (Ohio EPA, 2008). The tricky part about landfills, especially in Ohio is that a lot of the waste is imported. In 2008, Ohio imported 3.5 million tons of solid waste (Ohio EPA, 2011). In 2009, Pike County accepted over 128,000 tons from outside its sanitation district compared to just 26,000 tons from within (Ohio EPA, 2011). Landfills do create jobs and economic opportunity, but this must be weighed by the proposition of filling your land with others waste.

The growth in waste management industries may be a driving force behind the growth in Administration of Environmental Quality Programs 924. Filling and expanding a landfill an environmental issue and growth in industry 924 could be a response those concerns. County officials should press State and Federal programs hard for funding environmental services and programs. They should also reject any proposal to expand the landfill or except more waste, even though it may create jobs for both industries. Economic development opportunities exist elsewhere and the natural environment is one of Pike's and Appalachia's greatest assets.

One other development in Pike may be driving growth in both the Administration of Environmental Quality Programs 924 and 928 National Security and International Affairs industries. This is the presence of the American Centrifuge Plant. This plant is used to enrich uranium for use in nuclear power plants. The site was the former home to the Portsmouth Gaseous Diffusion Plant. Transition to

the American Centrifuge Plant required environmental cleanup of the former site. The entire site is now being marketed as a commercial nuclear energy park (USEC, Inc 2010 & 2011). The cleanup this site and its transition to a nuclear fuel generation facility would very well necessitate the addition of environmental quality and national security programs. While this process did clean an old industrial site, the many questions revolving around basing economic growth around nuclear energy are immense.

It is imperative that Pike County officials fully weigh the possible negatives involved in this process. Safety should be the top priority. A comprehensive understanding of American Centrifuge and any future energy industries that move into the complex needs to be fully developed. Transparency must also be given to the community so that they understand the possible health, environmental, and safety issues associated with these industries. New placement of such industries is only recommended after thorough analysis of its cost, benefits and potential problems.

With American centrifuge already located there it is still highly recommended that county officials work with American Centrifuge and State and Federal officials to ensure thorough standards are met and that funding and access to available safety and environmental programs is available. Officials should ensure efficient safety and monitoring staff are employed. Pressing for this and seeking federal funds to employ these jobs is one way to leverage this industry for potential employment. If this industry is going to be located there, it is in the best interest of Pike County to take advantage of government funding for jobs in these industries.

Pike County is also in good position to take advantage of the Wood Product Manufacturing Industry. The cabinet company Mills Pride is located in Pike County along with other industries in wood product industries. County officials should promote local primary wood products to Mills Pride and try to ensure that it use as much local product as possible in its manufacturing, supporting local wood industries. Pike County should also leverage the strength of the Wood Products Manufacturing industry and the location of an established business as tool to attract other manufacturers to locate

there. The location of Merillat, another cabinet manufacturer, in Jackson County provides further evidence of the strength of wood producing and using industries. Pike and Jackson County officials should work with both Mills Pride and Merillat to identify their strengths and needs. This could help attract other cabinet or wood product manufacturers or in developing supporting industries to provide better services to the existing industries.

To benefit the entire economy, especially the wood product industries recommended here, Pike County and the Ohio Valley Regional Development Commission should engage State and local entrepreneurial initiatives such as ACEnet, Enterprise Appalachia, the Appalachian Regional Entrepreneurship Group at Ohio University Athens, the ICAN! Entrepreneurship Advancement Initiative, Adena Ventures, and other entrepreneurial support groups. This will provide a network of support for local residents to start their own businesses and to grow existing start-ups. Attracting a new paper plant or furniture plant may be difficult. Supporting entrepreneurship will provide an opportunity for residents to create their own economic opportunity building on the strength of the wood product industry in the region. With support, those businesses can eventually grow and add even more value to the Wood Product Manufacturing Sector.

The Ohio Valley Regional Development Commission should then facilitate regional cooperation between entrepreneurs in eastern counties and retailers in Clermont and Brown Counties to supply and sell their goods in a much larger market, while also maintaining and supporting local retail and tourism. This would create a truly regional industry that that supports local natural resource production as well as secondary industries that use those products.



Pike Lake near Bainbridge, Ohio.
Ohio Department of Natural Resources
www.dnr.state.oh.us



Emmitt House Restaurant & Tavern
Waverly, Ohio.
Pike County Chamber of Commerce
www.pikechamber.org



Mills Pride production facility,
Waverly, Ohio.
www.woodworkingnetwork.com



American Centrifuge Plant, Piketon, Ohio.
www.usec.com

Ross County

As a major economy in the region with access to US 23 and the Greater Columbus region, Ross County is in position to play an important role in the economic growth of the region. Ross County has already take advantage of the Wood Product Manufacturing and related industries. The paper company Glatfelter is located in Ross County and employs 1,500 people. There should be communication with Glatfelter to ensure that it tries to use as much local product as possible in its manufacturing, supporting local wood industries. Ross County should also leverage the strength of the Wood Products Manufacturing industry and the location of an established business as tool to attract other manufacturers to locate there.

To benefit the entire economy, especially the wood product industries recommended here, Ross County and the Ohio Valley Regional Development Commission should engage State and local entrepreneurial initiatives such as ACEnet, Enterprise Appalachia, the Appalachian Regional Entrepreneurship Group at Ohio University Athens, the ICAN! Entrepreneurship Advancement Initiative, Adena Ventures, and other entrepreneurial support groups. This will provide a network of support for local residents to start their own businesses and to grow existing start-ups. Attracting a new paper plant or furniture plant may be difficult. Supporting entrepreneurship will provide an opportunity for residents to create their own economic opportunity building on the strength of the wood product industry in the region. With support, those businesses can eventually grow and add even more value to the Wood Product Manufacturing Sector.

The Ohio Valley Regional Development Commission should then facilitate regional cooperation between entrepreneurs in eastern counties and retailers in Clermont and Brown Counties to supply and sell their goods in a much larger market. This would create a truly regional industry that that supports local natural resource production as well as secondary industries that use those products.

One area where Ross County showed strengths that could benefit the region is in industry Management of Companies and Enterprises 551, as was industry Professional, Scientific, and Technical Services 541. Industry Administration and Support Services 561 was a dormant industry. The strength of industries in these sectors shows that Ross County leads the region in service industries. Many counties reported strength in retail and a few manufacturing industries, but Ross was unique in identifying this service industry cluster.

This gives Ross an advantage in targeting service industries, showing that they have the type of work force available to support these industries. It also means that Ross can use its strength to mentor and advise other county's leadership. The Ohio Valley Regional Development Commission needs to engage Ross County economic development leadership, including the Economic Development Alliance of Southern Ohio, Chillicothe-Ross Chamber of Commerce, and local government officials to initiate a regional mentorship program. This program should work to mentor local businesses and entrepreneurs and work to promote the region to other service industries. Connecting business leaders throughout the region will work to strengthen local business and make the region more attractive to further economic development.

Ross County shares Professional, Scientific, and Technical Services 542 industry in common with Scioto County. This presents another opportunity for the development of professional coalition to strengthen and promote the industry for potential economic development. It is also recommended that these counties conduct a more in-depth analysis of this industry. Subsectors in this industry range from lawyers and engineers to computers systems design and scientific research companies. Analysis and inventory of businesses in this sector will better aid officials and industry leaders in connecting with similar firms and developing mentorship programs.

Additionally, Educational Services 611 was identified as a dormant industry. Ohio University Chillicothe and the Pickaway-Ross Joint vocational School are located in Ross County, along with its

public elementary and secondary schools. Educational institutions represent excellent economic assets. They provide a trained workforce and often serve as centers for community activity. Economic officials in Ross County should engage the local schools and training facilities to provide information and facility interaction between the schools and local businesses. Work should also be done to help develop specialized training or coursework for local industries. Analyzing and inventorying industries, will allow local governments can facilitate in the development of current and relevant education and training opportunities in Ross County.

Ross and Jackson County did identify industry Wholesale Electronics Markets and Agents 425 as a growth area. This industry uses the internet, or works through brokers, to sell and distribute goods between. It includes business to business sales as well as third party agents facilitating the sales (U.S. Census Bureau, 2010). Ross and Jackson Counties share this industry with Clermont County as well. Clermont most likely excels in this industry due to the strength of its industrial and commercial sectors. Ross County also has a more developed economy than most counties in the region signifying need for these services. Ross County could position itself as a leader in the region at supplying businesses and industries in Southern Appalachian Ohio with the goods they need to operate. Because of its location next to Jackson County and connection via US-35 it may also represent an opportunity to work together to broaden the industry's reach throughout the State.

The first step in targeting this industry would be to assess the nature of firms in the industry and the type of wholesale markets they serve. County officials should seek out these businesses and work to define the nature of their work and business needs. This will help to identify strengths and weaknesses in the industry as well as opportunities to direct growth. With internet wholesale trading being covered in this sector, extension of broadband services throughout the county may be a priority. This will help existing business as well as encourage local entrepreneurs. The fact that Ross County is more developed than other counties may mean that its broadband services are further developed, giving it an

edge in the internet market.

Collaboration with Jackson County could include engaging Ohio University's Chillicothe Campus to develop business classes catered to this industry. Ross and Jackson County's economic development officials and Chambers of Commerce could collaborate to develop a system, such as a website, to facilitate matching these brokers with businesses in need of their services. They could then expand this system to the other counties and businesses in the region, especially where this industry and its services are less available. The establishment of this industry could facilitate the development of many of the other industries recommended in this analysis by ensuring that new businesses have the services they need to buy and sell their goods.

Two state run correctional facilities are located in Ross County, the Ross Correctional Institution and the Chillicothe Correctional Institution. Combined they employ almost 1,100 people and house over 4,400 inmates (Ohio Department of Corrections, 2011 & 2011). This explains the location quotient of 2.16, signifying the industry as a significant exporter of its services. The negative local share of -8.5% is evidence that the industry is struggling in Ross County. This industry, and these two institutions, are dependent upon government employment, targeting this industry will depend upon the ability to secure government funding. In the ten years previous to 2009, the state of Ohio had lost approximately 1,000 corrections officers (Ohio Civil Service Employees Association, 2008). Recent reports indicate that proposed budget cuts could cost the state 1 in 6 correctional employees and close several correctional facilities (Cohen, 2010). These budget concerns will preclude any State action for targeting new corrections hiring, or facility construction or expansion.

The presence of prisons could be seen as a negative for communities, raising questions about crime and safety. However, the presence of these institutions in the county and their importance signified by this analysis means that to lose them would severely hurt the county's economy. It is recommended that Ross County officials work with the local correctional facilities and their State

congressmen to lobby the State to keep their institutions and employment if budget cuts do occur.

As a general recommendation, this industry should only be targeted based upon the needs of local areas for the services. Any new government jobs can benefit a community or county by increasing employment and service. However, recent economic conditions have meant budget cuts and hiring freezes for many governments throughout the nation. Growth in this industry depends on the growth of government budgets. Whether government expenditures should focus on Justice, Public Order, and Safety Activities will depend upon the needs of the local areas. A county the size of Ross has many government employment needs as signified by the classification of Executive, Legislative and Other General Government Support 921 services as a key industry. Like every government, Ross needs to determine its government needs and budget accordingly.



Glatfelter paper company, Chillicothe, Ohio.
The Columbus Dispatch www.dispatch.com



Ross Correctional Institution, Chillicothe, Ohio.
Ohio Department of Rehabilitation and Correction
www.drc.ohio.gov



Chillicothe Correctional Institution, Chillicothe, Ohio.
Ohio Department of Rehabilitation and Correction
www.drc.ohio.gov

Scioto County

Analysis of Scioto County has presented several economic development opportunities. The Strongest and most interesting opportunity lay in the development of a tourism industry. Targeting this type of development will be aided by neighboring Pike County, which shares the same economic development opportunity.

Pike and Scioto Counties both share industry Accommodation 721 as a growth industry. While its location quotients and local shares were small, it was one of only four industries growing both nationally and locally. This industry includes hotels and motels, casino hotels, bed and breakfasts, RV parks and campgrounds, and recreational parks and camps (U.S. Census Bureau, 2010). Utilizing natural amenities and targeting tourism industries like Accommodation has been shown to be a good way in which rural areas can generate economic growth (Hunter, Boardman, and Saint Onge, 2005; Henderson and McDaniel, 2005; Deller et. al. 2001). While not in the heart of the Appalachian Mountains, Southern Appalachian Ohio still provides an abundance of natural and cultural amenities that could be used to attract visitors, create local jobs, and support recreation and tourism in the region.

Pike and Scioto Counties create a natural opportunity for collaboration in developing this industry due to their adjacency to each other and the surrounding attractions. US Route 23 runs through both counties and is one of the few major highways in the region. It connects Portsmouth and Chillicothe and to the State Capital of Columbus. The Appalachian Highway also runs east-to west through Pike County, connecting the area to the greater Cincinnati region and acting as a gateway to the rest of Appalachia. These routes are essential to development of any tourism industry by providing easy access to the regions amenities and attractions.

Within Pike and Scioto counties there are three State Parks. This includes the 63,000 acre Shawnee State Park in Scioto County, and Lakes White and Pike in Pike County (Ohio Department of

Natural Resources, 2010). Scioto also contains a large portion of the Wayne National Forest (U.S. Department of Agriculture, 2010). Scioto County is also home to the historic river town of Portsmouth. Portsmouth contains many attractions including the Historic Boneyfiddle District, the Southern Ohio Museum, Portsmouth Brewery, Verne Riffe Center for the Arts, the Shawnee State University Campus and Clark Planetarium, floodwall murals, and other historic and cultural offerings (Portsmouth Scioto County Visitors Board, 2010). Pike County is part of the Appalachian Adventure Trail, contains the Ohio-Erie Canal Historic Trail and also has 8 places listed on the National Register of Historic Places (Pike County Convention and Visitors Bureau, 2010). Surrounding counties also provide many cultural and natural amenities that would be attractive to visitors. Outdoor recreation and cultural amenities in this area present an excellent opportunity to develop accommodations that cater to visitors seeking to enjoy the many amenities and attractions in the region.

Pike and Scioto Counties should form a joint convention and visitor's bureau to work with local governments and businesses to promote the areas many attractions and amenities. In targeting and building Accommodation establishments, the area should focus on those types that support the natural and historic amenities they contain. This would include bed and breakfasts and RV and camping facilities. Placement of these establishments may vary, but should be focused on providing access to either the natural amenities or the local historical and cultural offerings.

Targeting these types of accommodations would also be an opportunity to develop and assist local entrepreneurs. County and local governments should work with organizations like the Appalachian Center for Economic Networks (ACEnet) which helps to provide loans, business development, and marketing assistance to entrepreneurs and small businesses (ACEnet, 2010). They could assist local entrepreneurs in opening their own bed and breakfast or camping, hunting, or fishing lodges. The joint visitor's board should maintain profiles of these new and existing enterprises and work to promote them as part of the areas attractions. Targeting small bed and breakfasts and camping lodgings can utilize the

many natural and cultural amenities in the region and help grow and support tourism for small businesses and local attractions catering to visitors

Along with creating a joint convention and visitors bureau, that bureau should work to develop a joint convention center to service the region. Both Pike and Scioto Counties also listed industry Religious, Grantmaking, Civic, and Professional Organizations 813 as growth industries. A convention center could be used to attract and host conventions and meetings for groups in this growing industry. The central location of these counties provides great access as a meeting and convention center for any local group or organization. Also being connected to both Columbus and Cincinnati means that it could also attract convention and weekend retreat opportunities from businesses and groups from the broader region. Being located in the Appalachian hills it would represent a relaxing and possibly less expensive alternative to hold such business activities.

Cooperation will definitely be needed in placing and designing such a facility. The facility itself should be designed to provide all the needs convention goers would need. This includes hotel rooms, meeting rooms, restaurants and lounges, and media rooms. This would create an all-inclusive center that would cater to weekend retreats and conventions, but could also serve as a hotel or resort area. Scioto County has the larger population and Portsmouth is over 20,000 people, over two-thirds the entire population of Pike County. However, US-23 and The Appalachia Highway intersect in Piketon in Pike County. It is also close to mid way between the two major cities in the region, Chillicothe and Portsmouth, and closer to Columbus and Cincinnati. Placement should occur around Piketon near the intersection of US-23 and the Appalachian Highway. This would keep the center close to the major traffic corridors, but also still provide easy access to Portsmouth and Scioto County. It is advised that the center be located outside of a city or village, unless such a spot can be found to take advantage of natural scenic beauty. Placement may need to be moved somewhat away from the major highways to accommodate such requirements, but would greatly benefit the site as an all inclusive convention

center and hotel. Location in Piketon also means the center could cater to visitors to Lake White, just north of Piketon.

A land suitability analysis should be completed to find a specific location, but effort must be made to find a fair resolution that takes the needs of both counties into account. Other sites found by the analysis outside the recommended zone should be studied further but should again account for a fair placement. While placing the center in Portsmouth might also make sense, its location there may provide no benefit at all to Pike County. Locating it in Piketon would serve as gateway to Portsmouth and still retain the most accessibility. In any case the site selection process should be comprehensive and open to the communities, businesses, and organizations located in these two counties.

A second strong growth opportunity lies in the industry 321 Wood Product Manufacturing. Wood Product Manufacturing 321 was identified as a key industry in the county, while Clermont, Brown Counties classified it as a growth industry. Vinton County did not classify this industry, but it is one of the largest employing industries in the county and would greatly benefit in collaboration with the other counties. This also represents a great opportunity for other Appalachian counties to collaborate with Clermont County to use its large market to help the boost their local economies.

The success of the Amish furniture industry in Holmes County, Ohio should serve as a blueprint on how to create a thriving secondary wood product market in Brown, Pike, Scioto, Vinton and Clermont Counties. The Amish furniture industry utilizes small firms with cooperation between firms in the supply of products, quality craftsmanship, and a distribution of stores throughout Ohio, Pennsylvania, Indiana that specialize in selling their product. They also allow some customization of products which is valued by customers (Bumgardner, Romig, and Luppold, 2007). The fact that businesses tend to be small could greatly benefit the Southern Appalachian Region counties because they could focus on developing small businesses through local craftsmen and entrepreneurship, rather than focusing on attracting large businesses to locate in the region. The creation of furniture or other wood products from local

craftsmen with local wood lends itself to marketing efforts. Proximity of Holmes County to the region may create competition, but may also offer the opportunity to collaborate in sales, marketing, and the supply of raw materials.

Scioto County was the only county to classify this industry as key, therefore, it is recommended that Scioto continue to focus on developing and strengthening the primary industries of producing raw wood products. Local development authorities should work with the wood producing industries in Scioto to connect them with local firms and industries that can use their products to create secondary products such as furniture, cabinets, and paper. It is important that the Ohio Valley Regional Development Commission continue its efforts in promoting Appalachian hardwoods to export markets.

Scioto County economic development efforts should also focus on supporting entrepreneurship among local craftsmen and retailers to create and sell secondary wood products. A regional development authority such as the Ohio Valley Regional Development Commission could then facilitate cooperation between entrepreneurs in Scioto County and retailers in Clermont and Brown Counties to supply and sell their goods in a much larger market. This would create a truly regional industry that supports local natural resource production as well as secondary industries that use those products.

Scioto County and the Ohio Valley Regional Development Commission should engage State and local entrepreneurial initiatives such as ACEnet, Enterprise Appalachia, the Appalachian Regional Entrepreneurship Group at Ohio University Athens, the ICAN! Entrepreneurship Advancement Initiative, Adena Ventures, and other entrepreneurial support groups. This will provide a network of support for local residents to start their own businesses and to grow existing start-ups. Attracting a new paper plant or furniture plant may be difficult. Supporting entrepreneurship will provide an opportunity for residents to create their own economic opportunity building on the strength of the wood product industry in the region. With support, those businesses can eventually grow and add even more value to the Wood Product Manufacturing Sector.

Scioto County also shares industry Professional, Scientific, and Technical Services 542 industry in common with Ross County. This presents an opportunity for the development of professional coalition to strengthen and promote the industries for potential economic development. It is also recommended that these counties conduct a more in-depth analysis of this industry. Subsectors in this industry range from lawyers and engineers to computers systems design and scientific research companies. Analysis and inventory of businesses in this sector will better aid officials and industry leaders in connecting with similar firms and developing mentorship programs.

Additionally, Educational Services 611 was identified as a dormant industry. Shawnee State University and the O C Collins Career Center are located in Scioto County, along with its public elementary and secondary schools. Educational institutions represent excellent economic assets. They provide a trained workforce and often serve as centers for community activity. Economic officials in Scioto County should engage the local schools and training facilities to provide information and facilitate interaction between the schools and local businesses. Work should also be done to help develop specialized training or coursework for local industries. Analyzing and inventorying industries, will allow local governments to facilitate the development of current and relevant education and training opportunities in Scioto County.

A development opportunity that poses mixed possibilities exists in the construction sector. Industry Construction of Buildings 236 and Specialty Trade Contractors 238 were identified as key industries for Scioto County. Economic development in these industries should be a concerted collaborative effort along with Lawrence and Pike Counties whole also share this strength. Economic development officers should bring together businesses and trade groups in those three counties to further analyze their strengths and weaknesses. Industry SWOT analysis would allow the region to assess where it has potential to grow, what challenges they face, and how these industries can work

together. The economic development agencies in the county should also work to create a regional coalition of businesses and trade groups to disseminate information about industry news and trends and communicate business and cooperative opportunities. Making building companies aware of the tradesmen and contractors working in the area can allow them to make decisions and advise clients on any needs they may have after their building is constructed. This could then develop into working relationships between companies.

Lawrence and Scioto officials should also work with State agencies and local companies to resolve any issues there may be with working across State lines and facilitate any licensing or permitting needs. This could be done through the industry coalition.

County officials should also engage the industry and local colleges and trade schools to develop or strengthen educational and training programs. Shawnee State University, O C Collins Center, Ohio University Southern Campus, Pike County Joint Vocational School, and Scioto County Joint Vocational School are all located within these three counties. The University of Rio Grande and Ohio University Chillicothe are also located in neighboring counties. A regional network could be created that taught trades, offered certifications, or even developed degree programs focusing on these construction industries.

These industries are not guaranteed investments. The nature of the business often involves competition for projects. If the housing market does not pick up growth may be very slow, eliminating a major sector of work. Housing market data has given reason for optimism and concern. Mortgage delinquency rates have dropped to their lowest level since 2008, but number homes in some stage foreclosure has risen back to record highs. The volume of low priced foreclosed homes is also suppressing home values and hurting the housing market (El Boghdady, 2011). The news gives reason for optimism, but growth may remain slow. If the economy dips back into recession and consumer spending decreases, it could hurt demand for new industrial and commercial development.

Targeting construction industries in this economy is a risk. It must include a concerted effort to also target housing and commercial markets. Brown County does promote a USDA program for providing loans for upgrading rural housing and both Brown and Clermont have Community Housing Improvement Programs that offer assistance to lower income residents in buying and renovating homes (Brown County, Ohio 2010 & 2010, and Clermont County Ohio, 2010). Greater promotion and assistance with these programs could increase housing construction. Another possible policy would be for local governments to buy up foreclosed homes and renovate them for resale (Baca, 2009). This would depend heavily on the availability of funds for such projects but also holds promise of recoup on investment. The American Recovery and Reinvestment Act also provides funds for weatherizing and improving homes for low-income families. Actively pursuing and promoting these types of programs through the industry and in communities can be a way to offset some of the struggles put in place by the slumping housing market.



Shawnee State Park
Ohio Department of Natural Resources
www.dnr.state.oh.us

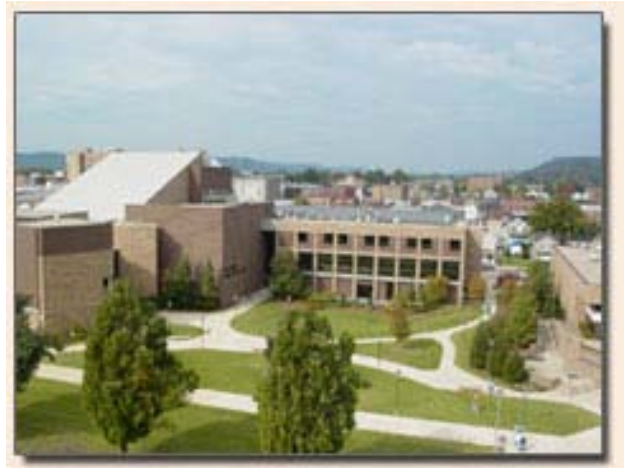


**Ohio River floodwall murals, Portsmouth,
Ohio.**
www.ohiorivertourism.org



Boneyfiddle District, Portsmouth.
www.ohiorivertourism.org

Shawnee State University,
Portsmouth.
Portsmouth Area Chamber of Commerce
www.portsmouth.org



Vinton County

Vinton County is poised to take advantage of the Wood Product Manufacturing 321 industry and the creation of a stronger secondary products sector. Wood Product Manufacturing was identified as a key industry in Scioto County, while Clermont, Brown Counties classified it as a growth industry. Vinton County did not classify this industry, but further look into employment data shows that it is the largest and most important industry in the county. Employment in the industry grew by 10% between 2004 and 2008 and had a positive local share with an impressive location quotient over 17. This proves that this is an extremely important industry and Vinton County would greatly benefit in collaboration with the other counties. This also represents a great opportunity for Vinton to collaborate with Clermont County to use its large market to help the boost its economy.

The success of the Amish furniture industry in Holmes County, Ohio should serve as a blueprint on how to create a thriving secondary wood product market in Brown, Pike, Scioto, Vinton and Clermont Counties. The Amish furniture industry utilizes small firms with cooperation between firms in the supply of products, quality craftsmanship, and a distribution of stores throughout Ohio, Pennsylvania, Indiana that specialize in selling their product. They also allow some customization of products which is valued by customers (Bumgardner, Romig, and Luppold, 2007). The fact that businesses tend to be small could greatly benefit the Southern Appalachian Region counties because they could focus on developing small businesses through local craftsmen and entrepreneurship, rather than focusing on attracting large businesses to locate in the region. The creation of furniture or other wood products from local craftsmen with local wood lends itself to marketing efforts. Proximity of Holmes County to the region may create competition, but may also offer the opportunity to collaborate in sales, marketing, and the supply of raw materials.

Vinton County reported excellent numbers for local share and location quotient. Its declining location quotient signifies that it must do a better job in exporting its wood products to outside markets. Part of this decline may be due to the decline in the housing market. This represents a great opportunity to shift supply to other secondary producers. Vinton should continue to focus on developing and strengthening the primary industries of producing raw wood products. Local development authorities should work with the wood producing industries in Vinton County to connect them with local firms and industries that can use their products to create secondary products such as furniture, cabinets, and paper. Many of these industries are already located in the region. It is important that the Ohio Valley Regional Development Commission continue its efforts in promoting Appalachian hardwoods to export markets. Aggressively championing the hardwood products of Appalachian Ohio would help to reverse the decline in location quotient that Vinton has experienced.

Economic development efforts should also focus on supporting entrepreneurship among local craftsmen and retailers to create and sell secondary wood products. A regional development authority such as the Ohio Valley Regional Development Commission could then facilitate cooperation between entrepreneurs in Vinton County and retailers in Clermont and Brown Counties to supply and sell their goods in a much larger market. This would create a truly regional industry that that supports local natural resource production as well as secondary industries that use those products.

Vinton County and the Ohio Valley Regional Development Commission should engage State and local entrepreneurial initiatives such as ACEnet, Enterprise Appalachia, the Appalachian Regional Entrepreneurship Group at Ohio University Athens, the ICAN! Entrepreneurship Advancement Initiative, Adena Ventures, and other groups. This will provide a network of support for local residents to start their own businesses and to grow existing start-ups. Attracting a new industry may be difficult. Supporting entrepreneurship will provide an opportunity for residents to create their own economic opportunity building on the strength of the wood product industry in the region. With support, those

businesses can eventually grow and add even more value to the Wood Product Manufacturing Sector.

Vinton County and business officials should also be aware that the location quotient has declined to 17 from a level over 31 in 2004. While other factors show that it is still locally strong and growing, efforts should be taken to make sure that the industry is healthy and any problems are addressed. Local economic officials should work with the Ohio Valley Regional Development Commission and local businesses to increase the efforts of promoting Appalachian hardwood resources to businesses outside of the region. They should also work to make sure that the quality of their products and the health of the tree resources they grow, harvest and produce meet the highest standards. Communication between these groups can help to identify any problems that may be hindering the growth of this and related industries.

Vinton County industry is heavily dependent upon natural resource production. County economic officials need to work to develop secondary industries that can support or enhance those natural resources. Focusing on the development of industries that use the natural resources to create consumer goods will help enhance those primary production industries and add more depth to the economy. The availability and access to these natural resources should present a great economic benefit to secondary industries as it could reduce transportation and supply costs to them. The location of many goods producing firms in the region, such as Mills Pride (cabinets) in Pike and Glatfelter (paper) in Ross, show the important role these firms can have in the local economy. Development officials need to not only focus on strengthening the existing natural resource industries, but also on developing an industrial base that uses those resources to produce marketable goods. They must leverage this asset to attract higher order industries and create a thriving economic cluster.

Vinton County would benefit greatly by promoting entrepreneurship as an overall development strategy. This would allow local governments and residents to take more control over their economies and create their own thriving businesses. Valuable resources and programs are made available through

the State, Appalachian Regional Commission non-profit groups that offer assistance to local entrepreneurs. Local government officials need to be well versed in the administration and use of these programs. They must be able to connect eager entrepreneurs to the right funding sources and business supports. Vinton County officials and local chambers of Commerce should work to create a central repository and assistance office or specialist to aid individuals eager to start their own business.

County officials should also work to develop business incubator space for local entrepreneurs. Developing unused buildings or space into offices or areas with cheap rent, reduced taxes, or other incentives where local entrepreneurs can develop and grow their businesses. Creating local business centers that offer access to conference rooms, internet, fax machines, printing, and shipping services would also greatly benefit local entrepreneurs as they start or look to expand their business and may not have access to these services. The expansion of broadband internet into rural areas could also help to expand the business opportunities rural entrepreneurs.

Growing local businesses can serve as a supplement to industrial attraction, creating a broader, more robust economic development strategy for the county. It also engages those in the community to take control of their own economic situation. In order to gain the most benefit from this strategy, economic development officials must provide the support necessary to help small businesses grow. These growing businesses can help to fuel growth in the larger economy.



Crownover Lumber Company, McArthur.
www.crownoverlumber.com



McArthur Lumber & Post, McArthur.
www.mcarthurlumberandpost.com

Appendix A: Regional Shift-Share Results

County local shift percentages for the twenty-nine industries reported for at least eight counties. Results include the median local shift for all counties reporting, used to determine regional competitiveness. Industries highlighted in yellow reported a positive median local share.

Southern Appalachian Ohio Counties Shift-Share Analysis														
Local Shift With At Least 8 Counties Reporting														
NAICS Code	NAICS Title	Adams	Brown	Clermont	Gallia	Highland	Jackson	Lawrence	Pike	Ross	Scioto	Vinton	Count	Median
236	Construction of Buildings		-42.0%	-19.0%	72.3%	-30.0%		77.8%	209.9%	-40.5%	4.9%		8	-7.1%
238	Specialty Trade Contractors	147.7%	25.2%	-20.4%		-32.2%	-2.7%	20.4%	48.7%	-23.5%	25.1%	-43.6%	10	8.8%
332	Fabricated Metal Product Manufacturing	41.8%	-8.7%	37.1%		-30.3%	-13.9%	-36.1%		-6.7%	15.7%		8	-7.7%
423	Merchant Wholesalers, Durable Goods	-4.2%		-5.9%	15.1%		2.9%	35.8%	-22.2%	-26.3%	-8.1%	5.2%	9	-4.2%
441	Motor Vehicle and Parts Dealers	-18.8%	-11.0%	-6.0%	-12.2%	-3.4%	-0.4%	-15.5%	0.5%	7.3%	5.1%	-36.1%	11	-6.0%
444	Building Material and Garden Equipment and Supplies Dealers	37.7%	-35.5%	34.0%	-19.1%	46.7%	18.8%	34.6%	-3.8%	-7.7%	-2.0%		10	8.4%
445	Food and Beverage Stores	-32.2%	-14.2%	23.6%	17.9%	7.5%	17.6%	5.4%	1.4%	-0.7%	-11.9%		10	3.4%
446	Health and Personal Care Stores	-19.4%	-8.1%	36.7%	14.5%	0.5%	-17.3%	-2.9%	-11.2%	-3.1%	-2.9%		10	-3.0%
447	Gasoline Stations	-0.2%	-13.9%	2.3%	-50.2%	16.1%	5.3%	-8.9%	60.1%	-12.5%	-27.4%	-14.3%	11	-8.9%
448	Clothing and Clothing Accessories Stores		-42.4%	48.9%	-68.5%	92.4%	4.4%	5.5%	-7.6%	-15.4%	-29.7%		9	-7.6%
452	General Merchandise Stores	-18.9%	24.0%	14.1%	-15.8%	-35.1%	-14.9%	-18.2%	-24.7%	11.5%	28.9%		10	-15.3%
453	Miscellaneous Store Retailers		-19.7%	4.4%	-36.7%	-18.3%	-28.1%	15.4%	-21.2%	21.2%	-2.1%		9	-18.3%
491	Postal Service	4.6%	2.0%	6.1%	6.2%	3.3%	2.8%	5.6%	-1.7%	0.4%	3.2%	4.6%	11	3.3%
522	Credit Intermediation and Related Activities	-30.2%	-15.7%	23.1%	9.7%	6.7%	4.2%	-7.6%	3.3%	-2.4%	7.0%		10	3.7%
531	Real Estate	-41.5%	-8.5%	4.7%	-10.8%	-23.7%		29.6%	-25.9%	-27.8%	-3.7%		9	-10.8%
532	Rental and Leasing Services	4.4%	-5.3%		-15.3%	-17.4%	-19.5%	4.4%	-43.2%	-33.6%	24.6%		9	-15.3%
611	Educational Services	-3.4%		860.9%	-5.8%		-9.0%	-14.6%	-9.9%	1578%	-7.0%	-14.8%	9	-7.0%
621	Ambulatory Health Care Services	22.8%	17.7%	2.9%	-28.4%	8.8%	37.8%	64.9%	11.5%	-25.9%	-7.8%		10	10.1%
623	Nursing and Residential Care Facilities	-18.6%	-8.1%	20.0%	14.4%	-9.5%	-7.3%	-20.6%	-9.6%	-6.9%	-21.3%		10	-8.8%
721	Accommodation	9.6%	67.7%	3.0%	-9.1%		-19.5%	-60.7%	39.9%	-19.2%	77.7%		9	3.0%
722	Food Services and Drinking Places	-2.5%	3.6%	8.3%	-11.1%	-8.0%	-1.6%	-10.3%	-9.9%	-19.1%	-10.1%		10	-8.9%
811	Repair and Maintenance	-35.2%	-39.2%	0.3%	9.5%	-11.9%	-14.4%	9.0%	0.1%	-4.7%	-8.6%		10	-6.6%
812	Personal and Laundry Services	-4.2%		-6.9%	-14.7%	-21.6%	7.3%	-10.4%	-7.9%	-35.4%	-7.7%		9	-7.9%
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations		-14.8%	-14.0%	-48.9%	-5.1%	-17.4%	-28.6%	23.6%	-1.8%	42.8%		9	-14.0%
814	Private Households			-30.9%	634.3%	-68.6%	324.3%	202.0%	84.3%	25.7%	89.3%		8	86.8%
921	Executive, Legislative, and Other General Government Support	4.8%	-15.4%	10.2%	-8.3%	-10.5%	16.9%	-5.9%	6.5%	12.2%	5.4%	-10.6%	11	4.8%
922	Justice, Public Order, and Safety Activities	25.4%	-3.8%	13.6%	35.7%	7.3%	23.4%	12.1%	-8.0%	-8.5%	3.8%	-13.0%	11	7.3%
924	Administration of Environmental Quality Programs	49.9%	33.2%	99.9%	-33.4%	-22.3%	-80.1%	-31.5%	99.9%	9.9%	10.3%		10	10.1%
926	Administration of Economic Programs	-38.0%	-26.8%	7.0%	-36.6%	-8.0%	-23.6%	1492%	-79.7%	-19.1%	-4.5%		10	-21.4%

*Based on data from the 2008 and 2004 Quarterly Census of Employment and Wages, US Bureau of Labor Statistics, <http://www.bls.gov/cew/>.

Appendix B: Local and National Share Results

The following table shows the result of comparing industry share results to median local share for the twenty-nine industries reported for at least eight counties. Counties are categorized as growing nationally and locally, declining nationally but growing locally, growing nationally but declining locally, or declining both nationally and locally.

Southern Appalachian Ohio Counties Shift Share Results				
Industry Growth Compared Nationally and Locally				
NAICS Code	NAICS Title	National Industry Growth %	Local Shift Growth %	Median LQ
Growing Nationally and Locally				
238	Specialty Trade Contractors	2.72%	8.84%	0.42
444	Building Material and Garden Equipment and Supplies Dealers	1.03%	8.38%	0.65
445	Food and Beverage Stores	1.73%	3.37%	0.61
621	Ambulatory Health Care Services	14.04%	10.12%	0.46
721	Accommodation	5.02%	2.99%	0.17
814	Private Households	15.66%	86.84%	0.20
921	Executive, Legislative, and Other General Government Support	2.91%	4.78%	0.27
922	Justice, Public Order, and Safety Activities	7.95%	7.30%	0.57
924	Administration of Environmental Quality Programs	0.09%	10.12%	0.10
Declining Nationally and Growing Locally				
491	Postal Service	-4.57%	3.27%	0.55
522	Credit Intermediation and Related Activities	-3.31%	3.74%	0.47
Growing Nationally Declining Locally				
236	Construction of Buildings	1.43%	-7.09%	0.56
332	Fabricated Metal Product Manufacturing	3.05%	-7.67%	0.37
423	Merchant Wholesalers, Durable Goods	4.17%	-4.17%	0.22
446	Health and Personal Care Stores	6.90%	-3.01%	0.62
448	Clothing and Clothing Accessories Stores	7.62%	-7.62%	0.15
452	General Merchandise Stores	6.70%	-15.34%	0.94
531	Real Estate	3.70%	-10.84%	0.14
611	Educational Services	6.03%	-7.03%	0.50
623	Nursing and Residential Care Facilities	6.72%	-8.79%	1.00
722	Food Services and Drinking Places	8.24%	-8.94%	0.59
812	Personal and Laundry Services	4.20%	-7.90%	0.34
813	Religious, Grantmaking, Civic, Professional Orgs.	5.11%	-13.95%	0.36
926	Administration of Economic Programs	8.01%	-21.38%	0.18
Declining Nationally Locally				
441	Motor Vehicle and Parts Dealers	-3.89%	-5.99%	0.56
447	Gasoline Stations	-3.34%	-8.87%	1.13
453	Miscellaneous Store Retailers	-8.01%	-18.30%	0.36
532	Rental and Leasing Services	-4.39%	-15.25%	0.37
811	Repair and Maintenance	-0.12%	-6.64%	0.33

*Based on data from the 2008 and 2004 Quarterly Census of Employment and Wages
US Bureau of Labor Statistics, <http://www.bls.gov/cew/>.

Appendix D: Regional Location Quotient Results

The results of location quotient calculated for the twenty-nine industries reporting shift-share results for at least eight counties. Industries highlighted in yellow reported a positive median local share. Quotients highlighted in red are over "1". Those highlighted in green represent the highest for that industry.

Southern Appalachian Ohio Counties Location Quotient Analysis															
Location Quotients for Industries With At Least 8 Counties Reporting Shift-Share															
NAICS Code	NAICS Title	Adams	Brown	Clermont	Gallia	Highland	Jackson	Lawrence	Pike	Ross	Scioto	Vinton	Count	Median LQ	Highest LQ
236	Construction of Buildings		0.2	0.5	1.5	0.2		0.9	1.3	0.4	0.6		8	0.555	1.54
238	Specialty Trade Contractors	0.7	0.5	0.5		0.2	0.3	0.4	0.4	0.3	0.7	0.1	10	0.42	0.67
332	Fabricated Metal Product Manufacturing	0.3	1.2	1.2		0.7	0.2	0.5		0.2	0		8	0.37	1.19
423	Merchant Wholesalers, Durable Goods	0.3		0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.3	10	0.215	0.38
441	Motor Vehicle and Parts Dealers	0.5	0.3	0.9	0.6	0.6	0.5	0.6	0.4	0.6	0.7	0.2	11	0.56	0.90
444	Building Material and Garden Equipment and Supplies Dealers	0.6	0.5	0.7	0.6	1.3	0.6	1.2	0.4	0.7	0.7		10	0.65	1.29
445	Food and Beverage Stores	0.4	1	0.7	0.4	0.7	0.8	0.8	0.6	0.5	0.6		10	0.605	0.97
446	Health and Personal Care Stores	0.8	0.7	0.6	0.6	0.6	0.4	0.8	0.5	0.5	0.7		10	0.615	0.81
447	Gasoline Stations	3.4	1.1	0.8	1	0.9	1.5	1.6	1.3	0.8	1	1.9	11	1.13	3.35
448	Clothing and Clothing Accessories Stores		0.1	0.4	0.2	0.1	0.1	0.2	0	0.2	0.2		9	0.15	0.44
452	General Merchandise Stores	1.2	0.3	1.1	0.9	1	0.9	1.2	0.7	1	0.6		10	0.94	1.22
453	Miscellaneous Store Retailers	0.3	0.3	0.7	0.4	0.2	0.4	0.5	0.1	0.9	0.3		10	0.355	0.91
491	Postal Service	0.9	0.8	0.4	0.5	0.6	0.5	0.7	0.4	0.6	0.5	1.1	11	0.55	1.05
522	Credit Intermediation and Related Activities	0.5	0.5	0.8	0.7	0.8	0.5	0.4	0.3	0.3	0.4		10	0.47	0.84
531	Real Estate	0.2	0.2	0.3	0.1	0.2		0.1	0.1	0.1	0.1		9	0.14	0.33
532	Rental and Leasing Services	0.3	0.4	0.7	0.4	0.4	0.5	0.3	0.3	0.3	0.7		10	0.37	0.69
611	Educational Services	0.7		0.5	0.4	0.8	0.4	0.8	0	0.5	0.5	0.9	10	0.495	0.93
621	Ambulatory Health Care Services	0.8	0.5	0.5	1.1	0.5	0.3	1.1	0.4	0.4	1.1		10	0.46	1.14
623	Nursing and Residential Care Facilities	0.8	1.5	0.6	1.1	1	0.9	1	1.2	0.8	1.1		10	0.995	1.51
721	Accommodation	0.3	0.2	0.1	0.3	0.1	0.2	0.1	0.4	0.2	0.2		10	0.17	0.36
722	Food Services and Drinking Places	0.6	0.7	0.7	0.5	0.6	0.5	0.6	0.4	0.6	0.7		10	0.59	0.72
811	Repair and Maintenance	0.2	0.4	0.7	0.3	0.2	0.3	0.5	0.1	0.3	0.4		10	0.325	0.68
812	Personal and Laundry Services	0.3	0.2	0.6	0.2	0.4	0.5	0.4	0.1	0.3	0.4		10	0.34	0.64
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations	0.2	0.5	0.3	0.5	0.6	0.3	0.2	0.5	0.4	0.3		10	0.36	0.62
814	Private Households	0.3	0.1	0.1	0.4	0.1	0.2	0.5	0.2	0.2	0.2	0.4	11	0.2	0.49
921	Executive, Legislative, and Other General Government Support	0.4	0.7	0.4	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.7	11	0.27	0.67
922	Justice, Public Order, and Safety Activities	0.6	0.6	0.4	0.4	0.7	0.6	0.7	0.3	2.2	0.5	0.6	11	0.57	2.16
924	Administration of Environmental Quality Programs	0.1	0.1	0	0	0.1	0.1	0.4	0	0.1	0.5		10	0.095	0.45
926	Administration of Economic Programs	0.1	0.2	0.1	0.1	0.5	0.5	0.3	0.2	0	0.3		10	0.18	0.52

*Based on data from the 2008 and 2004 Quarterly Census of Employment and Wages, US Bureau of Labor Statistics, <http://www.bls.gov/cew/>.

Appendix E: 3 Digit NAICS Industry Descriptions

This appendix includes definitions of all 3-digit NAICS codes identified and used in the shift-share, location quotient, and industry classification analysis, in numerical order. These definitions are taken directly from the U.S. Census Bureau's website:

<http://www.census.gov/epcd/www/naics.html>. Descriptions of all NAICS industries and subsectors are also available there.

236 Construction of Buildings

The Construction of Buildings subsector comprises establishments primarily responsible for the construction of buildings. The work performed may include new work, additions, alterations, or maintenance and repairs. The onsite assembly of precut, panelized, and prefabricated buildings and construction of temporary buildings are included in this subsector. Part or all of the production work for which the establishments in this sector have responsibility may be subcontracted to other construction establishments usually specialty trade contractors.

238 Specialty Trade Contractors

The Specialty Trade Contractors subsector comprises establishments whose primary activity is performing specific activities (e.g., pouring concrete, site preparation, plumbing, painting, and electrical work) involved in building construction or other activities that are similar for all types of construction but that are not responsible for the entire project. The work performed may include new work, additions, alterations, maintenance, and repairs. The production work performed by establishments in this subsector is usually subcontracted from establishments of the general contractor type or operative builders but, especially in remodeling and repair construction, work also may be done directly for the owner of the property. Specialty trade contractors usually perform most of their work at the construction site, although they may have shops where they perform prefabrication and other work. Establishments primarily engaged in preparing sites for new construction are also included in this subsector.

321 Wood Product Manufacturing

Industries in the Wood Product Manufacturing subsector manufacture wood products, such as lumber, plywood, veneers, wood containers, wood flooring, wood trusses, manufactured homes (i.e., mobile home), and prefabricated wood buildings. The production processes of the Wood Product Manufacturing subsector include sawing, planning, shaping, laminating, and assembling of wood products starting from logs that are cut into bolts, or lumber that then may be further cut, or shaped by lathes or other shaping tools. The lumber or other transformed wood shapes may also be subsequently planed or smoothed, and assembled into finished products, such as wood containers. The Wood Product Manufacturing subsector includes establishments that make wood products from logs and bolts that are sawed and shaped, and establishments that purchase sawed lumber and make wood products. With the exception of sawmills and wood preservation establishments, the establishments are grouped into industries mainly based on the specific products manufactured.

327 Nonmetallic Mineral Product Manufacturing

The Nonmetallic Mineral Product Manufacturing subsector transforms mined or quarried nonmetallic minerals, such as sand, gravel, stone, clay, and refractory materials, into products for intermediate or final consumption. Processes used include grinding, mixing, cutting, shaping, and honing. Heat often is used in the process and chemicals are frequently mixed to change the composition, purity, and chemical properties for the intended product. For example, glass is produced by heating silica sand to the melting point (sometimes combined with cullet or recycled glass) and then drawn, floated, or blow molded to the desired shape or thickness. Refractory materials are heated and then formed into bricks or other shapes for use in industrial applications. The Nonmetallic Mineral Product Manufacturing subsector includes establishments that manufacture products, such as bricks, refractories, ceramic products, and glass and glass products, such as plate glass and containers. Also included are cement and concrete products, lime, gypsum and other nonmetallic mineral products including abrasive products, ceramic plumbing fixtures, statuary, cut stone products, and mineral wool. The products are used in a wide range of activities from construction and heavy and light manufacturing to articles for personal use.

332 Fabricated Metal Product Manufacturing

Industries in the Fabricated Metal Product Manufacturing subsector transform metal into intermediate or end products, other than machinery, computers and electronics, and metal furniture or treating metals and metal formed products fabricated elsewhere. Important fabricated metal processes are forging, stamping, bending, forming, and machining, used to shape individual pieces of metal; and other processes, such as welding and assembling, used to join separate parts together. Establishments in this subsector may use one of these processes or a combination of these processes.

423 Merchant Wholesalers, Durable Goods

Industries in the Merchant Wholesalers, Durable Goods subsector sell capital or durable goods to other businesses. Merchant wholesalers generally take title to the goods that they sell; in other words, they buy and sell goods on their own account. Durable goods are new or used items generally with a normal life expectancy of three years or more. Durable goods merchant wholesale trade establishments are engaged in wholesaling products, such as motor vehicles, furniture, construction materials, machinery and equipment (including household-type appliances), metals and minerals (except petroleum), sporting goods, toys and hobby goods, recyclable materials, and parts.

425 Wholesale Electronic Markets and Agents and Brokers

Industries in the Wholesale Electronic Markets and Agents and Brokers subsector arrange for the sale of goods owned by others, generally on a fee or commission basis. They act on behalf of the buyers and sellers of goods. This subsector contains agents and brokers as well as business to business electronic markets that facilitate wholesale trade.

441 Motor Vehicle and Parts Dealers

Industries in the Motor Vehicle and Parts Dealers subsector retail motor vehicles and parts from fixed point-of-sale locations. Establishments in this subsector typically operate from a showroom and/or an open lot where the vehicles are on display. The display of vehicles and the related parts require little by way of display equipment. The personnel generally include both the sales and sales

support staff familiar with the requirements for registering and financing a vehicle as well as a staff of parts experts and mechanics trained to provide repair and maintenance services for the vehicles. Specific industries have been included in this subsector to identify the type of vehicle being retailed.

443 Electronics and Appliance Stores

Industries in the Electronics and Appliance Stores subsector retail new electronics and appliances from point-of sale locations. Establishments in this subsector often operate from locations that have special provisions for floor displays requiring special electrical capacity to accommodate the proper demonstration of the products. The staff includes sales personnel knowledgeable in the characteristics and warranties of the line of goods retailed and may also include trained repair persons to handle the maintenance and repair of the electronic equipment and appliances. The classifications within this subsector are made principally on the type of product and knowledge required to operate each type of store.

444 Building Material and Garden Equipment and Supplies Dealers

Industries in the Building Material and Garden Equipment and Supplies Dealers subsector retail new building material and garden equipment and supplies from fixed point-of-sale locations. Establishments in this subsector have display equipment designed to handle lumber and related products and garden equipment and supplies that may be kept either indoors or outdoors under covered areas. The staff is usually knowledgeable in the use of the specific products being retailed in the construction, repair, and maintenance of the home and associated grounds.

445 Food and Beverage Stores

Industries in the Food and Beverage Stores subsector usually retail food and beverages merchandise from fixed point-of-sale locations. Establishments in this subsector have special equipment (e.g., freezers, refrigerated display cases, refrigerators) for displaying food and beverage goods. They have staff trained in the processing of food products to guarantee the proper storage and sanitary conditions required by regulatory authority.

446 Health and Personal Care Stores

Industries in the Health and Personal Care Stores subsector retail health and personal care merchandise from fixed point-of-sale locations. Establishments in this subsector are characterized principally by the products they retail, and some health and personal care stores may have specialized staff trained in dealing with the products. Staff may include pharmacists, opticians, and other professionals engaged in retailing, advising customers, and/or fitting the product sold to the customer's needs.

447 Gasoline Stations

Industries in the Gasoline Stations subsector group establishments retailing automotive fuels (e.g., gasoline, diesel fuel, gasohol) and automotive oils and retailing these products in combination with convenience store items. These establishments have specialized equipment for the storage and dispensing of automotive fuels.

448 Clothing and Clothing Accessories Stores

Industries in the Clothing and Clothing Accessories Stores subsector retailing new clothing and

clothing accessories merchandise from fixed point-of-sale locations. Establishments in this subsector have similar display equipment and staff that is knowledgeable regarding fashion trends and the proper match of styles, colors, and combinations of clothing and accessories to the characteristics and tastes of the customer.

452 General Merchandise Stores

Industries in the General Merchandise Stores subsector retail new general merchandise from fixed point-of-sale locations. Establishments in this subsector are unique in that they have the equipment and staff capable of retailing a large variety of goods from a single location. This includes a variety of display equipment and staff trained to provide information on many lines of products.

453 Miscellaneous Store Retailers

Industries in the Miscellaneous Store Retailers subsector retail merchandise from fixed point-of-sale locations (except new or used motor vehicles and parts; new furniture and house furnishings; new appliances and electronic products; new building materials; and garden equipment and supplies; food and beverages; health and personal care goods; gasoline; new clothing and accessories; and new sporting goods, hobby goods, books, and music).

Establishments in this subsector include stores with unique characteristics like florists, used merchandise stores, and pet and pet supply stores as well as other store retailers.

488 Support Activities for Transportation

Industries in the Support Activities for Transportation subsector provide services which support transportation. These services may be provided to transportation carrier establishments or to the general public. This subsector includes a wide array of establishments, including air traffic control services, marine cargo handling, and motor vehicle towing.

491 Postal Service

The Postal Service subsector includes the activities of the National Post Office and its subcontractors operating under a universal service obligation to provide mail services, and using the infrastructure required to fulfill that obligation. These services include delivering letters and small parcels. These articles can be described as those that can be handled by one person without using special equipment. This allows the collection, pick-up, and delivery operations to be done with limited labor costs and minimal equipment. Sorting and transportation activities, where necessary, are generally mechanized. The restriction to small parcels distinguishes these establishments from those in the transportation industries. These establishments may also provide express delivery services using the infrastructure established for provision of basic mail services.

517 Telecommunications

Industries in the Telecommunications subsector include establishments providing telecommunications and the services related to that activity. The Telecommunications subsector is primarily engaged in operating, maintaining, and/or providing access to facilities for the transmission of voice, data, text, sound, and video. A transmission facility may be based on a single technology or a combination of technologies. Establishments primarily engaged as independent contractors in the maintenance and installation of broadcasting and telecommunications systems are classified in Sector 23, Construction.

522 Credit Intermediation and Related Activities

Industries in the Credit Intermediation and Related Activities subsector group establishments that (1) lend funds raised from depositors; (2) lend funds raised from credit market borrowing; or (3) facilitate the lending of funds or issuance of credit by engaging in such activities as mortgage and loan brokerage, clearinghouse and reserve services, and check cashing services.

531 Real Estate

Industries in the Real Estate subsector group establishments that are primarily engaged in renting or leasing real estate to others; managing real estate for others; selling, buying, or renting real estate for others; and providing other real estate related services, such as appraisal services.

Establishments primarily engaged in subdividing and developing unimproved real estate and constructing buildings for sale are classified in Subsector 236, Construction of Buildings.

532 Rental and Leasing Services

Industries in the Rental and Leasing Services subsector include establishments that provide a wide array of tangible goods, such as automobiles, computers, consumer goods, and industrial machinery and equipment, to customers in return for a periodic rental or lease payment.

Professional, Scientific, and Technical Services 541

Industries in the Professional, Scientific, and Technical Services subsector group establishments engaged in processes where human capital is the major input. These establishments make available the knowledge and skills of their employees, often on an assignment basis, where an individual or team is responsible for the delivery of services to the client. The individual industries of this subsector are defined on the basis of the particular expertise and training of the services provider.

Management of Companies and Enterprises 551

Industries in the Management of Companies and Enterprises subsector include three main types of establishments: (1) those that hold the securities of (or other equity interests in) companies and enterprises; (2) those (except government establishments) that administer, oversee, and manage other establishments of the company or enterprise but do not hold the securities of these establishments; and (3) those that both administer, oversee, and manage other establishments of the company or enterprise and hold the securities of (or other equity interests in) these establishments. Those establishments that administer, oversee, and manage normally undertake the strategic or organizational planning and decision making role of the company or enterprise.

561 Administrative and Support Services

Industries in the Administrative and Support Services subsector group establishments engaged in activities that support the day-to-day operations of other organizations. The processes employed in this sector (e.g., general management, personnel administration, clerical activities, cleaning activities) are often integral parts of the activities of establishments found in all sectors of the economy. The establishments classified in this subsector have specialization in one or more of these activities and can, therefore, provide services to clients in a variety of industries and, in some cases, to households. The individual industries of this subsector are defined on the basis of the particular process that they are engaged in and the particular services they provide.

562 Waste Management and Remediation Services

Industries in the Waste Management and Remediation Services subsector group establishments engaged in the collection, treatment, and disposal of waste materials. This includes establishments engaged in local hauling of waste materials; operating materials recovery facilities (i.e., those that sort recyclable materials from the trash stream); providing remediation services (i.e., those that provide for the cleanup of contaminated buildings, mine sites, soil, or ground water); and providing septic pumping and other miscellaneous waste management services. There are three industry groups within the subsector that separate these activities into waste collection, waste treatment and disposal, and remediation and other waste management.

Educational Services 611

Industries in the Educational Services subsector provide instruction and training in a wide variety of subjects. The instruction and training is provided by specialized establishments, such as schools, colleges, universities, and training centers.

621 Ambulatory Health Care Services

Industries in the Ambulatory Health Care Services subsector provide health care services directly or indirectly to ambulatory patients and do not usually provide inpatient services. Health practitioners in this subsector provide outpatient services, with the facilities and equipment not usually being the most significant part of the production process.

623 Nursing and Residential Care Facilities

Industries in the Nursing and Residential Care Facilities subsector provide residential care combined with either nursing, supervisory, or other types of care as required by the residents. In this subsector, the facilities are a significant part of the production process and the care provided is a mix of health and social services with the health services being largely some level of nursing services.

624 Social Assistance

Industries in the Social Assistance subsector provide a wide variety of social assistance services directly to their clients. These services do not include residential or accommodation services, except on a short stay basis.

721 Accommodation

Industries in the Accommodation subsector provide lodging or short-term accommodations for travelers, vacationers, and others. There is a wide range of establishments in these industries. Some provide lodging only; while others provide meals, laundry services, and recreational facilities, as well as lodging. Lodging establishments are classified in this subsector even if the provision of complementary services generates more revenue. The types of complementary services provided vary from establishment to establishment.

722 Food Services and Drinking Places

Industries in the Food Services and Drinking Places subsector prepare meals, snacks, and beverages to customer order for immediate on-premises and off-premises consumption. There is a wide range of establishments in these industries. Some provide food and drink only; while others provide various combinations of seating space, waiter/waitress services and incidental amenities, such as limited entertainment. The industries in the subsector are grouped based on the type and

level of services provided. The industry groups are full-service restaurants; limited-service eating places; special food services, such as food service contractors, caterers, and mobile food services; and drinking places.

811 Repair and Maintenance

Industries in the Repair and Maintenance subsector restore machinery, equipment, and other products to working order. These establishments also typically provide general or routine maintenance (i.e., servicing) on such products to ensure they work efficiently and to prevent breakdown and unnecessary repairs.

812 Personal and Laundry Services

Industries in the Personal and Laundry Services subsector group establishments that provide personal and laundry services to individuals, households, and businesses. Services performed include: personal care services; death care services; laundry and drycleaning services; and a wide range of other personal services, such as pet care (except veterinary) services, photofinishing services, temporary parking services, and dating services.

813 Membership Organizations and Associations

Industries in the Membership Organizations and Associations subsector (a.k.a. Religious, Grantmaking, Civic, Professional, and Similar Organizations) group establishments that organize and promote religious activities; support various causes through grantmaking; advocate various social and political causes; and promote and defend the interests of their members.

814 Private Households

Industries in the Private Households subsector include private households that engage in employing workers on or about the premises in activities primarily concerned with the operation of the household. These private households may employ individuals, such as cooks, maids, butlers, and outside workers, such as gardeners, caretakers, and other maintenance workers.

921 Executive, Legislative, and Other General Government Support

The Executive, Legislative, and Other General Government Support subsector groups offices of government executives, legislative bodies, public finance and general government support.

922 Justice, Public Order, and Safety Activities

The Justice, Public Order, and Safety Activities subsector groups government establishments engaged in the administration of justice, public order, and safety programs.

924 Administration of Environmental Quality Programs

The Administration of Environmental Quality Programs subsector groups government establishments primarily engaged in the administration of environmental quality.

926 Administration of Economic Programs

This subsector comprises government establishments primarily engaged in the administration of economic programs.

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