

# **Contributing Factors to Persistent Poverty in North Carolina Appalachia**

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# Table of Contents

Executive Summary.....	i
Report.....	1
Policy Question.....	1
Background Information.....	1
Literature Review.....	5
Contributing Factors to Persistent Poverty in Appalachia.....	6
Strategies for Regional Economic Development.....	11
NC Appalachia.....	12
The Distressed Counties.....	14
Methodology.....	20
Available Data.....	21
Comparisons of Per-Capita Market Income.....	22
Success Stories to Emulate.....	23
Findings/Recommendations.....	29
Bibliography.....	31

## **Policy Question**

Why have the North Carolina (NC) Appalachian counties of Graham, Swain, and Rutherford remained “distressed” while certain other NC Appalachian counties improved their economic conditions over the last several decades? Can actions taken in NC Appalachian “success stories” be replicated in the three current distressed counties?

## **The Client**

The Appalachian Regional Commission (ARC) is a DC-based regional economic development agency established almost a half-century ago through Congressional legislation. The Commission is a partnership that coordinates the efforts of the federal, state, and local governments within its jurisdiction. ARC is comprised of the 13 Appalachian state governors and a presidentially appointed federal co-chair. Local governments participate through local multi-county development districts (ARC, “About ARC,” 2013).

ARC’s mission is “to be a strategic partner and advocate for sustainable community and economic development in Appalachia” (ARC, “About ARC,” 2013). ARC funds development projects that address the four goals outlined in the Commission’s strategic plan:

1. Increase job opportunities and per capita income in Appalachia to reach parity with the nation.
2. Strengthen the capacity of the people of Appalachia to compete in the global economy.
3. Develop and improve Appalachia's infrastructure to make the Region economically competitive.
4. Build the Appalachian Development Highway System to reduce Appalachia's isolation (ARC, “About ARC,” 2013).

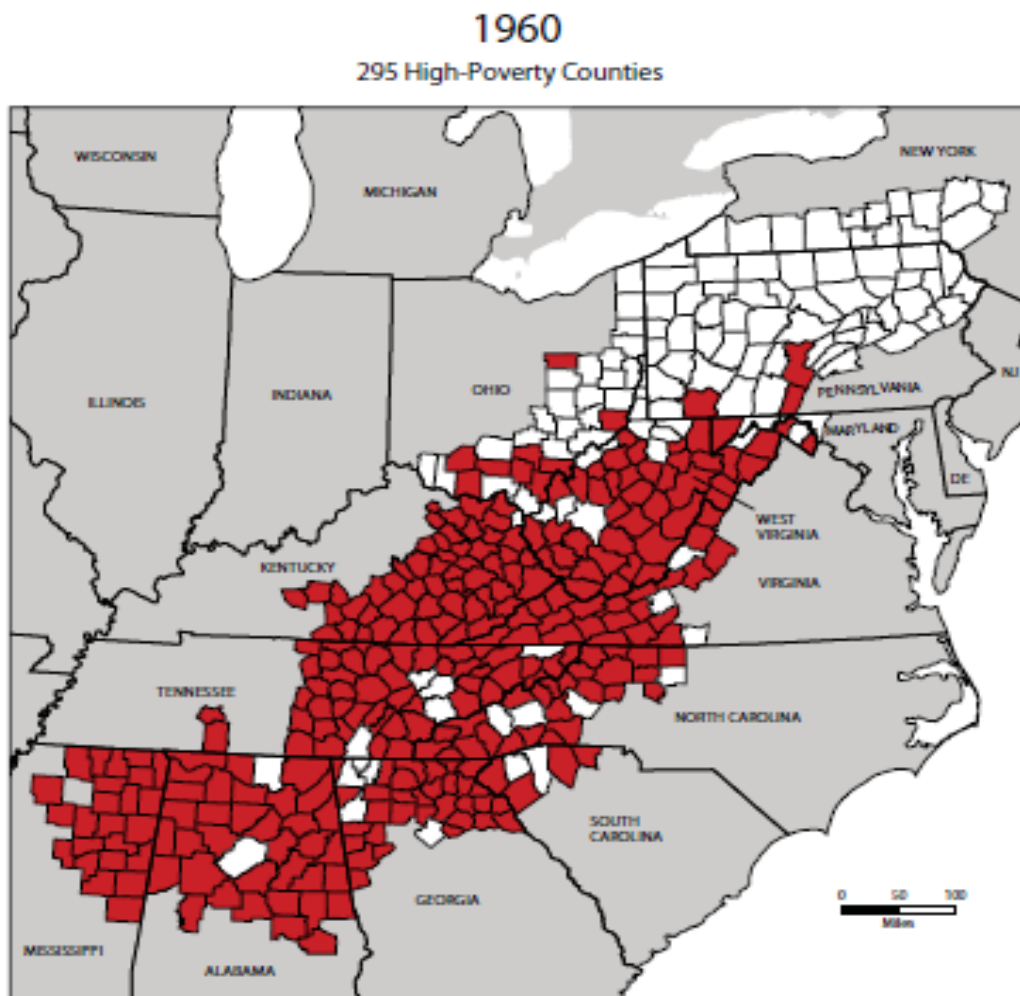
ARC provides funding for several hundred projects in the Appalachian Region annually. Targeted areas include business development, education and job training, telecommunications, infrastructure, community development, housing, and transportation. ARC hopes these projects will accomplish objectives like creating thousands of new jobs, improving local water and sewer systems, increasing local schools’ capabilities, expanding access to affordable and quality healthcare, assisting local communities with strategic planning, and providing subject matter expertise and managerial assistance to emerging businesses in the region (ARC, “About ARC,” 2013).

## **Background Information**

In 1963 President Kennedy formed a federal-state cooperative committee known as the President’s Appalachian Regional Commission (PARC). Kennedy wanted the PARC to develop a comprehensive economic development plan for Appalachia. At the time, one out of three Appalachians lived in poverty, per capita income was 23% less than the national average, and two million people left the region during the 1950s due to a lack of employment opportunities. The Commission released a report in 1964 detailing a strategy for combatting long-term poverty in Appalachia. Recognizing the severity of the economic problems within the region, President

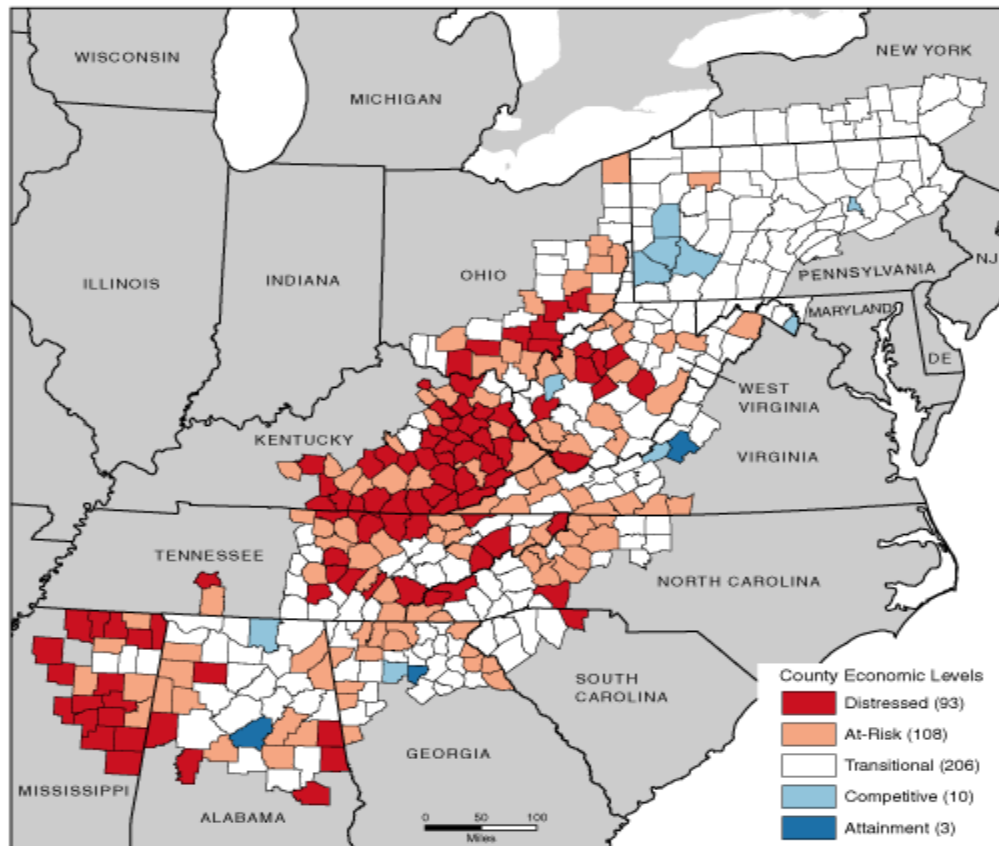
Johnson signed the Appalachian Regional Development Act in 1965, formally removing “President’s” from the organization’s title. Although not formally part of Johnson’s “War on Poverty,” this legislation solidified ARC as a permanent body devoted to economic development in the Appalachian region (ARC “ARC History,” 2013, p.1).

ARC focuses the majority of its time and resources on the most poverty stricken of the Appalachian counties. The Commission is able to target funding where it is needed most by classifying each of the 420 counties within its jurisdiction. ARC uses an index based classification system that compares each county in the US against national averages using three economic dimensions: three year average unemployment rates, the poverty rate, and per-capita market income. Based on that comparison, ARC designates Appalachian counties in one of five economic classifications (listed in order from “worst” to “best” in terms of poverty): distressed, at-risk, transitional, competitive, and attainment. Distressed counties fall in the bottom 10 percent nationwide, while the attainment counties are in the top 10 percent. The other three categories fall in the middle 80 percent (ARC Performance and Accountability Report, 2012, p. 21). There were 295 economically distressed counties in 1960; in fiscal year (FY) 2014 there are 93 (ARC, “The Appalachian Region,” 2013).



(source: ARC Performance and Accountability Report, 2012, p. 21)

## Fiscal Year 2014



(source: ARC, “County Economic Status in Appalachia, FY 2014, 2013)

### ARC in North Carolina

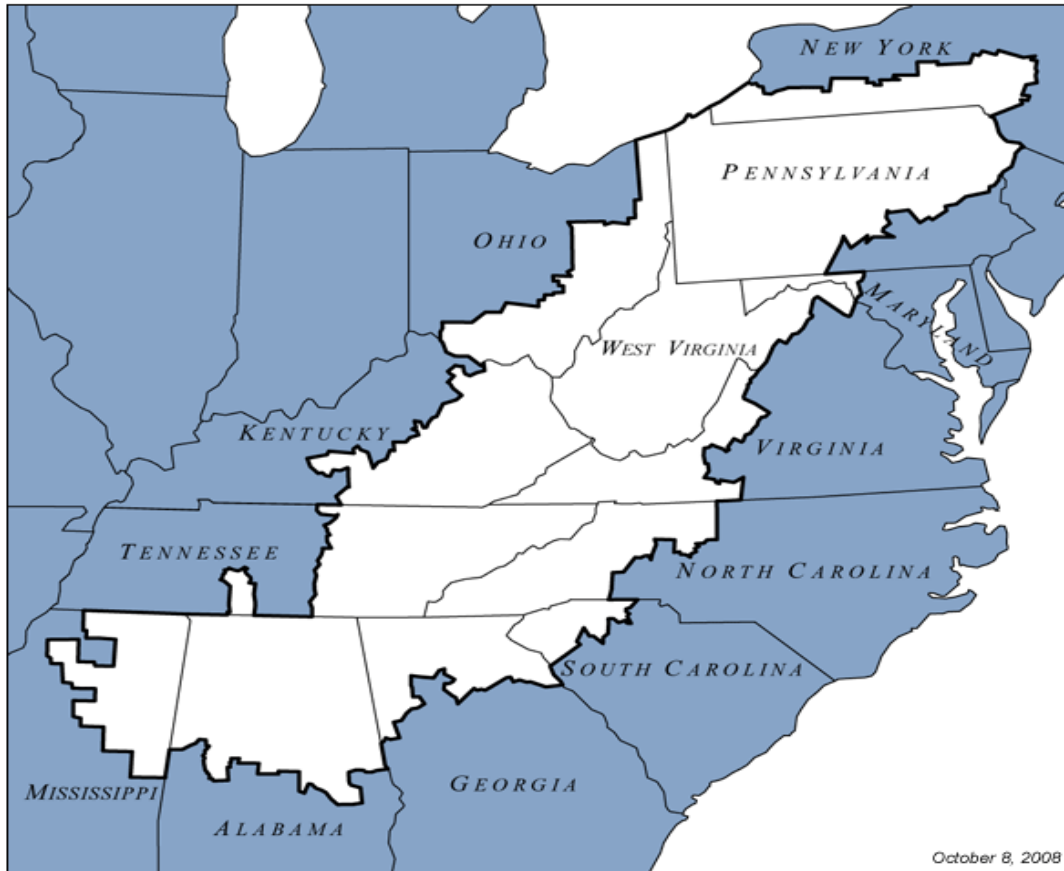
Like all states within its jurisdiction, ARC works with North Carolina’s (NC) governor Pat McCrory. Governor McCrory has a designated ARC Representative: Patricia Mitchell is the Assistant Secretary of NC’s Department of Commerce’s Rural Development Division. Assistant Secretary Mitchell represents the governor at all ARC related meetings and serves as a conduit of information between ARC and local governments. Governor McCrory also has an ARC State Program Manager. The NC Division of Community Assistance’s Ms. Olivia Collier currently serves in this role. As such she is the primary administrator of ARC-provided funds to local governments (ARC, “North Carolina,” 2014).

Appalachian NC has six local governmental development districts: the High Country Council of Governments, the Isothermal Planning and Development Commission, the Land-of-Sky Regional Council, the Piedmont Triad Regional Council, the Southwestern Commission, and the Western Piedmont Council of Governments. These local entities articulate their constituents’ greatest needs and work in concert with state and ARC authorities to procure funding for their municipalities (ARC, “North Carolina,” 2014).

NC works in concert with ARC’s four strategic goals. All projects approved for Appalachian NC must meet ARC’s objectives and the following priorities:

1. Improve educational opportunities and workforce skills.
2. Improve infrastructure for community and economic development.
3. Increase civic and leadership capacity.
4. Increase entrepreneurial opportunities. Improve health care resources (North Carolina Department of Commerce, “About ARC,” 2014).

### The Appalachian Region



(source: ARC, “The Appalachian Region,” 2008)

ARC’s authorizing legislation defines the Appalachian Region as a 205,000-square-mile region that follows the spine of the Appalachian Mountains for over 1,000 miles from southern New York to northeastern Mississippi. It includes 420 counties in all of West Virginia and parts of 12 other states: Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, and Virginia. The region is home to more than 25 million people. 42 percent of the Region’s population is classified as rural, compared with 20 percent of the American population as a whole (ARC, “The Appalachian Region,” 2013).

The region's economy, once highly dependent on mining, forestry, agriculture, chemical industries, and heavy industry, is much more diverse now. Appalachia's economy now includes a variety of manufacturing and service industries. In 1965, one in three Appalachians lived in poverty. Over the 2007–2011 period, the Region's poverty rate was 16.1 percent. These gains have transformed the region from one of widespread and relatively uniformed poverty to one of economic variety. Some Appalachian communities have successfully diversified their economies; cities like Pittsburgh, Pennsylvania, Morgantown, West Virginia, and Knoxville, Tennessee are vibrant urban areas. Many other Appalachian communities still require basic infrastructure such as electricity, paved roads, and water and sewer systems. The contrasts are not surprising considering the region's size and geographic diversity (ARC, "The Appalachian Region," 2013).

## **Literature Review**

### **Literature that Broadly Defines Poverty in Appalachia**

The seminal literary piece on poverty in Appalachia pre-ARC is Harry M. Caudill's 1963 book *Night Comes to the Cumberlands: A Biography of a Depressed Area*. Mr. Caudill describes the hardships the region's people endured, including poverty, poor health, and exploitation by outside business interests that sought profit in Appalachia's abundant natural resource industry. The author also described how the early Appalachian pioneers were inherently suspicious of the central government's activities, including taxation that led to the Whiskey Rebellion (Caudill, 1963, pp. xi-xiii). This mistrust of government remained a part of the Appalachian cultural identity well into the 20<sup>th</sup> Century. Mr. Caudill brought much needed attention to the region by describing their problems to a prosperous nation at the height of the post-World War II boom.

Another literary work that summarizes the history of the Appalachian region is John A. Williams' 2002 work entitled *Appalachia: A History*. Mr. Williams describes Appalachia and its people from the pre-Revolutionary War period until present times. He devotes attention to the progress made in the region during the latter half of the 20<sup>th</sup> Century (Williams, 2002, pp. 1-14). Both books provide historical accounts and anecdotes chronicling Appalachia, and serve as a good means for understanding the general themes in Appalachian life. However, these literary works are very broad in scope and do not provide specific insights into the issues facing NC Appalachia.

### **Empirical Research Covering the Last Several Decades**

ARC's website contains several studies and reports covering issues pertinent to the Appalachian region. These reports are a mixture of ARC commissioned studies and other scholarly articles that they post for public consumption. In 1995, scholars Andrew Isserman and Terance Rephann published a report entitled "The Economic Effects of the Appalachian Regional Commission: An Empirical Assessment of 26 Years of Regional Planning." Their paper's chief objective was to find out if ARC actually helped the Appalachian economy. Using a quasi-experimental control group, the study measured the effect of ARC policies and initiatives on 391 Appalachian counties since 1969. The study found that Appalachia grew much faster than the control group in terms of income, earnings, population, and per capita income. These

findings held true for the Central Appalachian sub-region, the poorest sub-region in Appalachia (Isserman and Rephann, 1995, p.1).

Isserman and Rephann's study used a difference-in-difference technique to conduct their statistical analysis. The treatment groups were Appalachian counties that experienced ARC policies over the years. The control group contained non-Appalachian counties from states like Michigan and Texas (Isserman and Rephann, 1995, p.8). The validity of the control group rests on two premises: 1) the non-Appalachian counties are similar enough to the Appalachian counties, and 2) the growth and development of the non-Appalachian counties can actually serve as an appropriate counter-factual for what could have happened in Appalachia had the ARC not introduced any economic development measures (Isserman and Rephann, 1995, p.7). Considering the challenges unique to the Appalachian region, these suppositions present challenges for policymakers.

Ohio University professor Lawrence Wood prepared a comprehensive empirical paper for ARC in 2005 entitled "Trends in National and Regional Economic Distress: 1960-2000." Like Isserman and Rephann's paper, Wood's study detailed economic distress within the region and compared those economic indicators to national averages. The report analyzed the changing nature of economic distress between 1960 and 2000, both regionally and nationally, by consistently using ARC's definition of economic distress as a measure of a region's progress or persistent poverty. He also detailed regional economic trends throughout the US during this time period in terms of individual indicators, including poverty rates, levels of income, and unemployment rates. Additionally, Wood analyzed social and economic trends for both the nation and the region along similar indicators, including rates of educational attainment, levels of urbanization, and a measurement of economic diversity. Wood concludes that limited federal support for Appalachia and other regional economic development support may not be justified (Wood, 2005, pp. 3-4). Both Isserman and Raphann's and Wood's papers provide a comprehensive, multi-decade analysis of the results of economic development initiatives within the region. Their differing conclusions show that there is a lack of consensus on how to proceed with further economic interventions in Appalachia.

## **Contributing Factors to Persistent Poverty in Appalachia**

The research shows that geographic isolation is the major driver, both historic and current, behind economic stagnation. Isolation led to a lack of access to both education and economic trade. Poor access to adequate healthcare also imposed economic limitations on Appalachian communities. ARC and other governmental institutions have addressed the region's healthcare concerns, but could take additional steps to coordinate the efforts between the educational system and the labor force to enhance trade and the economy.

### **The Curse of Isolation, Education, and Marginalized Trade**

#### *Geographic Isolation*

NC Appalachians were often at the mercy of the meteorological conditions they encountered. Snowstorms forced people into their homes, thus reducing economic productivity.

People often traveled on foot or by horse, which was extremely time consuming. NC Appalachians often traveled fourteen miles one way to work. The rugged mountain terrain often kept people geographically separated from one another. It was difficult to get the railroads established in Appalachia, even decades after trains could travel from the Atlantic to Pacific. Despite transportation improvements in the Appalachian Mountains in the 20<sup>th</sup> Century, people remained isolated from one another because it became a cultural norm (Asheville List, "Isolation," 1992).

### *Lack of Education*

Geographic isolation led to a lack of education in the Appalachian Mountains, which in turn led to economic disparities within the region. Distances from schools prevented many Appalachians from receiving an education. The downward spiral of poverty required that many students leave school to work so that they could support their families financially. Cultural perceptions did not place an emphasis on education for Appalachians. Attractive wages from the natural resource industry, albeit low when compared to the national average, exacerbated the region's commitment to secondary and collegiate education (Asheville List, "Education," 1992).

### *Trade Limitations*

Because of limited trade options, Appalachians from Western NC made most of their clothing for generations. The residents planted flax for their harvest and then weaved the flax threads through looms. The resulting cloth became Appalachian clothing. People made wool blankets and coats from their sheep. Sheep shearing, like flax weaving, was a long and arduous process. NC Appalachians made furniture from the plentiful timber from the Great Smoky National Forest. These endeavors all consumed great amounts of time, which robbed the Appalachians of the opportunity cost of diversifying their economy and engage in other economic pursuits (Asheville List, "Appalachian Clothing," 1992).

### *Impacts of Trade Limitations on Appalachian Women*

Like making clothing, preparing and cooking food was extremely time consuming for NC Appalachians. Cooking took its physical toll on the women of Appalachia because the task required them to stoop over the fireplace, resulting in back strain. NC Appalachians had access to only a few cooking utensils and food preparation was often a day-long chore. Growing, harvesting, and canning food occupied the women's time during the growing season. While geographic isolation generally limited communications for Appalachians, these pursuits did not give the people of NC Appalachia much disposable time to engage in other economic activities (Asheville List, "Cooking," 1992).

### *Industrialization and Corporations in Appalachia: Short-term Solutions to Long-term Problems*

At first glance the companies that came to NC Appalachia provided positive benefits for the local residents. Companies supplied housing, food and other life necessities, including basic medical care. However, a family's reliance upon one company created a culture of dependence. This dependence on the company replaced dependence on the natural landscape. Industrialization

and commercialization provided Appalachians with many conveniences, which typically meant easier work for women. Women could now pipe water into their homes, cook more easily over a stove, and could order clothes from company catalogs in lieu of making it themselves. However women still had to can and preserve harvested food for themselves and their families. Although items were more readily available for purchase, Appalachians were still limited financially with respect to their purchasing power because of low wage jobs from these corporations (Asheville List, "Industrialization and Corporate Expansion: Effect," 1992).

The wages associated with greater industrialization and corporate expansion provided steady jobs for Appalachians. However, these paychecks often came with a heavy price. The jobs were physically grueling and often life-threatening. Workers injured on the job received no workers compensation. The families of those workers killed did not receive any compensation either. When men were hurt or killed on the job, the community often came together to support the widows and orphans. Factory workers endured excessive noise and noxious fumes. The health hazards, the life and death dangers faced on the job, and the extremely long hours worked were the risks Appalachians took in order to improve their lives. However, the people of Appalachia remained poor and refused to return en masse back to subsistence lifestyles. These actions limited substantial economic growth in the region. Only the corporate shareholders thrived (Asheville List, "Industrialization and Corporate Expansion: Effect," 1992).

## **Health**

Appalachians' poor health is cited for economic stagnation in the region. The statistics surrounding public health issues in Appalachia have only emerged in the last several decades with the exponential growth of information technology. Bruce Behringer and Gilbert H. Friedell chronicled the general health issues facing the region. They contend that these issues, along with many others, hold Appalachia back from economic progress (Behringer and Friedell, 2006).

### *Cancer Awareness*

Numerous articles state that Appalachians lack facts about different types of cancer, are not informed about the differences among cancer screening procedures, and are unaware of publicly supported breast, testicular, and cervical cancer screening programs. The qualitative data provides depth and greater generalizability because it was collected in different communities and states across Appalachia. Focus group and survey respondents claimed that they received most of their information about cancer from family, neighbors, and friends rather than from healthcare professionals. Unfortunately, this faulty information often includes erroneous perceptions of and outdated knowledge about cancer treatments. The goal in

Appalachia should be to improve public cancer education using communities' established networks of communication. It is extremely difficult to penetrate these local communication networks because of inherent distrust of outsiders. The goal is to distribute accurate cancer information while bolstering doctors and healthcare professionals as the primary resources in the battle against cancer (Behringer and Friedell, 2006).

## *Smokeless Tobacco Usage*

Ferketich et. al published a paper entitled “Factors Influencing Smokeless Tobacco Use in Rural Ohio Appalachia.” The author’s stated purpose was to understand cultural factors that influence smokeless tobacco (ST) initiation and sustained use in rural Ohio Appalachia. The study tried to describe the perceptions associated with ST use. They also examined how shared culture continues to impact ST initiation and sustained use among adolescent boys and men in Ohio Appalachia. The paper’s authors developed two research questions to achieve their objectives: (1) what are the cultural beliefs regarding ST use in Ohio Appalachia? and (2) how does culture, along with interpersonal and community factors, influence ST initiation and continued use of ST among males in this sub-region (Ferketich et. al, 2012, p. 1209)?

Ferketich et. al concluded that ST use appears to be a rite of passage among Ohio Appalachian boys and that interpersonal factors had the greatest influence on initiation and continued use of ST. The authors also stated that users perceived that acceptance into male social networks was predicated on ST use. They claimed that community factors such as ST advertisement and user access to ST reinforced these deeply rooted Appalachian values found throughout the region (Ferketich et. al, 2012, p. 1210).

The researchers recommended the implementation of policies aimed at reducing ST marketing and access, and interventions that (1) shift perceived cultural norms regarding ST use and (2) address male social networks as the driver of ST initiation. The authors could have strengthened their general policy recommendations by mentioning specific tobacco cessation strategies that experienced success in places similar to this sub-region (Ferketich et. al, 2012, p. 1215).

## *Cultural Factors*

Religion is an important aspect of Appalachian culture. Then-Senator Barack Obama remarked about how people in small-town Pennsylvania “cling to their guns or religion” because of frustration with industrial decline (Pilkington, 2008). Researchers assumed peoples' belief in "God's will" as evidence of fatalistic attitudes toward healthcare and mortality. However, these studies find that Appalachians consider both their faith and the potential benefits of medical care when seeking solutions to health problems. The researchers found that faith was not an obstacle to obtaining health care and is described as a comforting factor for people diagnosed with cancer and their families. Behavioral scientists identify religion as an element of a person's "external locus of control," an external circumstance that guides fate, luck, or behavior in decision making about health. The authors note that reliance on directions from health professionals is also marginally present in Appalachia. Healthcare professionals must leverage the power of these balancing influences and coordinate this knowledge in their efforts to remedy cancer issues for individuals and their families (Behringer and Friedell, 2006).

## *Access to Care*

10 of the 13 states with counties located in the region have Appalachian counties with lower population densities than their respective state averages. Appalachia also has numerous geographically isolated counties. Cancer care access is limited because of a lack of healthcare professionals. Distances to referral centers also exacerbate the problems. However, evidence shows that these rural communities can pull together to help their own when cancer diagnoses occur. The challenge is how to create cancer care service centers applicable for rural communities' needs while simultaneously providing access to larger regional centers and their highly specialized cancer services. Public health officials in these communities need to promote behaviors that lead to cancer prevention, risk reduction, and the availability of screening services. Providing these services may help rural residents see community cancer control as feasible and important, not as something available only through high deductibles and distant treatment centers. The authors found that the bonds between such treatment facilities and Appalachian communities would be beneficial for all involved parties (Behringer and Friedell, 2006).

### *Health and the Environment*

Future qualitative studies must focus on Appalachians' concerns that the region's ability to create sustainable jobs potentially has harmful side effects on the people of the region. Rural community members are particularly worried about the environmentally related causes of cancer. Concerns include toxic waste, unclean air, occupational exposures, and runoff from farms, mines, and factories that negatively impact water quality. Environmental epidemiologists are studying Appalachian community claims that cancer clusters exist within the region. Appalachian residents feel as though they have to choose between relatively prosperous jobs and environmental side effects that wreak havoc on the population and the countryside (Behringer and Friedell, 2006).

### *Communication Factors*

Appalachians are characterized as proud, private, do not want outside help, and do not accept charity. The authors claim to have validated that communication between patients and healthcare professionals is essential to create trust between individuals and families and healthcare professionals and the healthcare system. Trust, they claim, is the critical factor in Appalachians' acceptance of information and use of healthcare services, including screening and treatment for cancer. Healthcare providers face the challenges that these personal characteristics of Appalachians present and must use them to develop two-way communication about cancer awareness prevention and treatment. The authors contend that it is especially challenging to communicate public cancer awareness messages outside of routine healthcare visits, as well as to find ways to integrate communications about screening and prevention into general healthcare practices and short healthcare encounters (Behringer and Friedell, 2006).

### *ARC's Response to Appalachian Health Issues*

ARC understands that community access to extensive and affordable health care is necessary for social and economic growth in the Appalachian Region. ARC's health initiatives

are community-based efforts to encourage health-promotion and disease-prevention activities (ARC, "Health," 2014).

Strategies include:

- Using best practices in public health to develop targeted approaches to wellness and disease prevention;
- Supporting partnerships that educate children and families about basic health risks;
- Using telecommunications and other technology to reduce the high cost of health-care services; and
- Encouraging the development and expansion of health professional education services within the region (ARC, "Health," 2014).

ARC health grants have provided equipment for hospitals and community-based health clinics, training for physicians, nurses, and other healthcare providers, and support for health education activities (ARC, "Health," 2014).

ARC also works with other health organizations to address the high incidence of life-threatening diseases in the region. Examples include its ongoing partnership with the Centers for Disease Control and Prevention in diabetes and cancer education, prevention, and treatment programs in the region's distressed counties (ARC, "Health," 2014).

ARC formed the Appalachian Health Policy Advisory Council (AHPAC) in 1999 to advise the Commission on health issues and concerns in the Appalachian Region. Council members include state rural health directors, academics, local health care practitioners, and economic development officials. The council meets frequently to discuss current regional health issues and to provide advice to ARC on responses to emerging health problems. Past activities included a focus on the need for documentation of the health disparities between the region and the rest of the nation, which resulted in the Commission undertaking four major research studies on the issues (ARC, "Health," 2014).

## **Strategies for Regional Economic Development**

### *General Strategies for the Region*

ARC, in partnership with scholars primarily from the University of Tennessee, commissioned a report in 2012 called "Strategies for Economic Improvement in Appalachia's Distressed Rural Counties: An Analysis of Ten Distressed and Formerly Distressed Appalachian Counties." The study examined ten case study counties and how they successfully and unsuccessfully responded to social and economic development treatments. This study found that geographic location is vital to economic success. Specifically, the authors noted that counties located near developed urban areas, major transportation arteries, or sources of natural resources generally performed better than those counties without similar proximities (Ezzell et. al, 2012, p. 10).

While the University of Tennessee study focused on best practices from the small, county government--level, Matthew E. Kahn's 2012 piece entitled "Cities, Economic Development, and

the Role of Place-Based Policies: Prospects for Appalachia” looks at lessons learned from the urban level. Kahn found that cities are the key to economic growth, and that while the Appalachia region does not contain any megacities like New York or Los Angeles, policies that bolster cities and their periphery would serve Appalachia well (Kahn, 2012, p. 149). The research shows that large metropolises are not going to appear in Appalachia anytime soon, so the region needs different economic development strategies.

### *An International Context for NC Appalachia*

Rodrik argued that there are three types of nations in terms of economic output: low skilled, labor intensive countries; highly skilled, high output countries; and variants of the previous two. Rodrik ascertains that the nations that fall within these two extremes (assuming they have a skilled workforce relative to the country’s physical endowment) have two options: low tech, low wage outputs versus high tech, high wage results. He believes government action and policies separate the likelihood of achieving the two outcomes (Rodrik, 1996, p. 22). According to Rodrik the government should take advantage of its natural and human resources by providing investment subsidies and elevating wages in order to promote growth towards the more specialized, higher earning sectors (Rodrik, 1996, p. 1).

NC Appalachia should receive investment subsidies for education (secondary and university level) and for high wage sectors like information technology in order to retain and grow human capital within the region. The market appears willing to support the fledgling efforts of NC Appalachian entrepreneurs. With additional intervention, the region could transition from economic distress towards diversification across high wage, high growth sectors.

## **NC Appalachia**



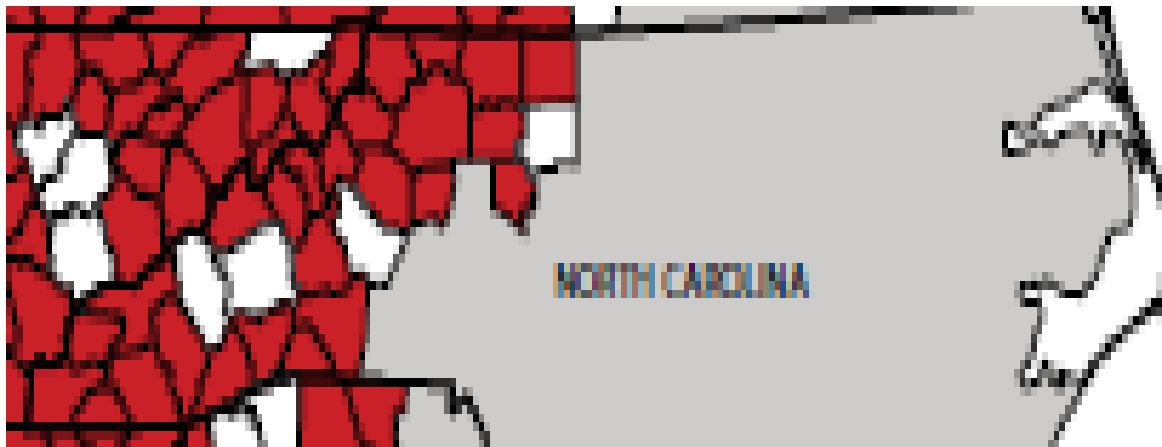
(source: The North Carolina Office of Archives and History, “The Way We Lived in North Carolina, 2004)

Twenty-nine of NC's westernmost counties reside within ARC's jurisdiction and are considered Appalachian. The counties are generally located within the Smokey Mountains while some share borders with Appalachian Virginia, Tennessee, South Carolina, and Georgia. The Appalachian NC counties are Alexander, Alleghany, Ashe, Avery, Buncombe, Burke, Caldwell, Cherokee, Clay, Davie, Forsyth, Graham, Haywood, Henderson, Jackson, McDowell, Macon, Madison, Mitchell, Polk, Rutherford, Stokes, Surry, Swain, Transylvania, Watauga, Wilkes, Yadkin, and Yancey (ARC, "North Carolina," 2014).

### Poverty in NC Appalachia

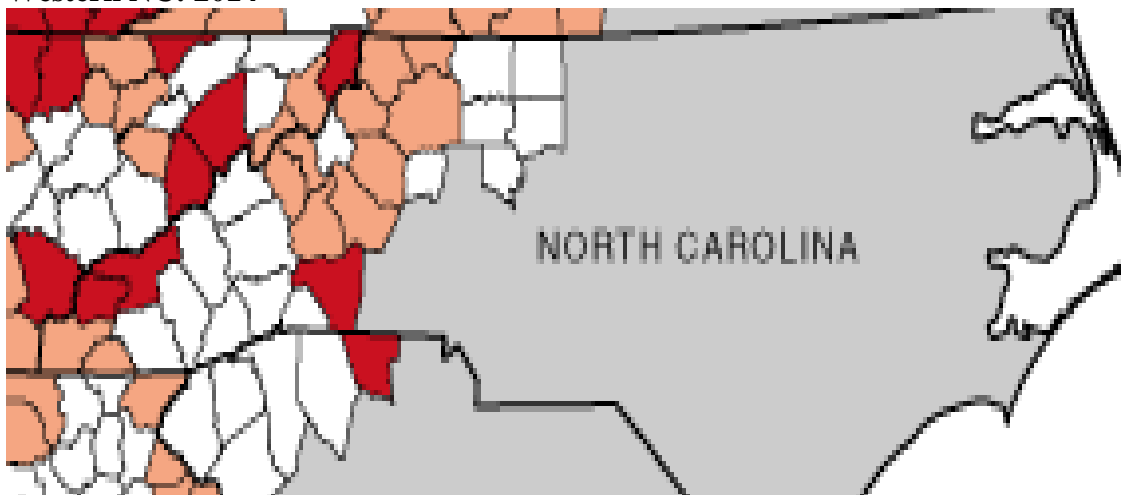
In 1965, the year Congress established ARC, all but four (Buncombe, Burke, Forsyth, and Haywood) of NC's 29 Appalachian counties were distressed (FY '12 Perf. Pdf). Currently (FY 2014) only Graham, Rutherford, and Swain counties are economically distressed.

#### Western NC: 1960



(source: ARC Performance and Accountability Report, 2012, p. 21)

#### Western NC: 2014



(source: ARC, "County Economic Status in Appalachia, FY 2014, 2013)

# The Distressed Counties

## Graham County



(source: University of North Carolina, “Map of Graham County,” 2014)

### Graham County Key Demographics

**Table 1**

Population, 2012 estimate	8,700
Persons Under 5 years, percent, 2012	5.3%
Persons Under 18 years, percent, 2012	21.2%
Persons 65 years and over, percent, 2012	20.8%
Female Persons, percent, 2012	50.7%
High School Graduate or Higher, percent of those persons age 25+, 2008-2012	78.9%
Bachelor's Degree or Higher, percent of persons age 25+, 2008-2012	12.9%
Total Number of Firms, 2012	1,238

(source: United States Census Bureau, “State and County Quickfacts, Graham County, NC,” 2014)

Graham County has a population under 10,000, so the labor force is relatively small. The County is one the lower bachelor degree attainment counties with NC Appalachia, so therefore the workforce is relatively unskilled when to other counties. The need for more high school and college graduates is high if Graham County wants to attract top flight jobs and higher skilled work sector.

Graham County is the second-most western county in NC, sharing a border with Tennessee. Two thirds of the county is within a national forest, specifically the Joyce Kilmer Memorial Forest, Slickrock Creek Wilderness Area, the Nantahala National Forest, and the Smoky Mountains National Park. The county seat is Robbinsville. Graham County’s economy is largely dependent upon agriculture and tourism-driven outdoor recreational activities. Graham County markets such activities including hiking, whitewater rafting, canoeing, kayaking, fly-

fishing, lake fishing, boating, jet skiing, hunting, horseback riding, nature photography, and mountain biking. Accommodations that support these pursuits include hotels, motels, bed and breakfasts, luxury vacation homes for rent, and log cabins (Graham County, “Chamber of Information,” 2012).

*Graham County, NC Key Health Statistics*

**Table 2**

Health Outcomes Overall (out of 100 NC Counties)	63
Adult Smoking	18%
Adult Obesity	26%
Excessive Drinking	18%
Primary Care Physicians (ratio)	1,168:1
Diabetic Screening	92%
Mammography Screening	77%

(source: Robert Wood Johnson Foundation, “County Health Rankings and Roadmaps: Graham,” 2013)

Graham County, NC has the highest health rankings of the three distressed counties discussed in this paper, yet is still in the lower half of the 100 NC counties. Graham County adults engage in detrimental behaviors like smoking and drinking in excess of the national average. These health limitations limit the economic potential of the labor force.

*Graham County Economic Initiatives*

Graham County is currently trying to entice businesses to the area by selling two multi-acre properties. However, these properties are undeveloped tracts of land and would require significant capital for development (Graham County Economic Development, “Davis Lot Flyer,” 2014) and (Graham County Economic Development, “Jordan Lot Flyer,” 2014). The county is offering an industrial warehouse that has over 24,000 square feet rent free for 18 months (Graham County Economic Development, “Jordan Lot Flyer,” 2014). The infrastructure is “turnkey,” and offers companies the ability to start operations very quickly, without the need for additional capital investment. Graham County should try to entice more businesses like this through local tax relief initiatives. The County could use the potential tax revenue, but they need to first attract businesses to the area.

*Graham County Limitations*

Graham County is a dry county, with the exception of four lodge resort locations (Graham County, “Chamber of Information-Accommodations,” 2012). The lack of tax revenue hurts the local municipal budgets, while a lack of alcohol in Graham County restaurants and other establishments is lost revenue for tourists (SUNY Potsdam, “Alcohol Consumption and Taxes: Wet vs. Dry Areas”, 2013). There is a balance between conservative culture and

attracting businesses, but this is an issue that Graham County leaders must consider going forward.

Graham County should consider diversifying its economy by leveraging its human talent and not relying primarily on “natural tourism.”

### *Graham County Schools Have Potential*

Graham County schools boast the highest graduation rate in the State at over 93%. All county schools met or exceeded NC’s testing standards. All Graham County teachers are highly qualified when compared to federal standards. Graham County schools rank in the top 10 percent of all schools in the state, providing a safe space for students to learn (Graham County Economic Development Council, “Schools,” 2013). Policies for economic development must tap into Graham County’s educational potential.

### **Rutherford County**



(source: University of North Carolina, “Map of Rutherford County,” 2014)

*Rutherford County, NC Key Demographics*

**Table 3**

Population, 2012 estimate	67,323
Persons Under 5 years, percent, 2012	5.4%
Persons Under 18 years, percent, 2012	21.7%
Persons 65 years and over, percent, 2012	18.4%
Female Persons, percent, 2012	51.7%
High School Graduate or Higher, percent of those persons age 25+, 2008-2012	80.6%
Bachelor's Degree or Higher, percent of persons age 25+, 2008-2012	15.9%
Total Number of Firms, 2012	5,264

(source: United States Census Bureau, “State and County Quickfacts, Rutherford County, NC,” 2014)

Rutherford County’s educational attainment is better than Graham County’s, but not by a significant difference. Investments in education could be beneficial as the County has more young people (aged 18 and under) than it does people of retirement age (65 and above). That workforce needs to provide the tax revenue necessary to support the older retirees.

Rutherford County’s population is roughly 68,000. The county seat is Rutherfordton, and there are seven other subordinate municipalities. The rural county contains abundant open space, natural forests, and farmland. The primary economic driver is agriculture, although the county is looking to diversity its economy by attracting manufacturing that already has a presence in the Southeastern region (Rutherford County, “Demographics,” 2014).

*Rutherford County, NC Key Health Statistics*

**Table 4**

Health Outcomes Overall (out of 100 NC Counties)	69
Adult Smoking	26%
Adult Obesity	31%
Excessive Drinking	9%
Primary Care Physicians (ratio)	1,831:1
Diabetic Screening	86%
Mammography Screening	65%

(source: Robert Wood Johnson Foundation, “County Health Rankings and Roadmaps: Rutherford,” 2013)

Like Graham County, Rutherford County is well below average in terms of health performance among NC Counties. The County has higher incidences of adult smoking and obesity, and there are less primary care physicians available to the general public (as a ratio) than Graham County.

Rutherford County is attempting to treat its residents through the consolidation of healthcare facilities. The Rutherford Regional Health System has a joint medical center co-located between Rutherford and Cleveland counties. Rutherford Regional Health System offers inpatient, outpatient, and emergency services (Rutherford Regional Health System, “Rutherford Regional,” 2014).

#### *Rutherford County Economic Initiatives*

Isothermal Community College Small Business Center supports business development by providing training, counseling, and resource information for the residents of Rutherfordton. Fiber optic cable is present to facilitate the expansion of internet access. The county is also home to a Facebook Data Center and the NC State Data Center. The technological infrastructure needed to support the facility can also be attractive to other high-tech industries as well, but thus far has not attracted any additional infrastructure. (Rutherford NC, “Doing Business in Rutherfordton, 2014).

#### *Rutherford County Economic Limitations*

1. **Overreliance on Manufacturing; a Lack of Economic Diversity:** Rutherford County still has an over-reliance on manufacturing, and a lack of economic diversity. The county has a high percentage of the workforce in manufacturing, including plastics, metals, wood products, and textiles. The service sector is not that strong outside of basic retail and the restaurant industries (Clark, “The Positives of Rutherford County, 2014).
2. **Failure to Promote Natural Tourism:** The county needs to look at further promotion of its natural tourism, such as Chimney Rock and Lake Lure, which have potential to draw new business and additional labor to the area (Clark, “The Positives of Rutherford County, 2014).
3. **Promotion of Other Existing Infrastructure:** There is an understanding that the economy cannot diversify instantly, but potential growth should be maximized. There are existing buildings and sites that can provide businesses to the area. The Riverstone Shell building is one of those buildings that could be repurposed for another manufacturing venture (Clark, “The Positives of Rutherford County, 2014).

## Swain County



(source: University of North Carolina, “Map of Swain County,” 2014)

### *Swain County, NC Key Demographics*

**Table 5**

Population, 2012 estimate	13,981
Persons Under 5 years, percent, 2012	6.3%
Persons Under 18 years, percent, 2012	23.1%
Persons 65 years and over, percent, 2012	17.7%
Female Persons, percent, 2012	51.4%
High School Graduate or Higher, percent of those persons age 25+, 2008-2012	80.3%
Bachelor's Degree or Higher, percent of persons age 25+, 2008-2012	18.4%
Total Number of Firms, 2012	1,648

(source: United States Census Bureau, “State and County Quickfacts, Swain County, NC,” 2014)

Like the other two distressed NC Appalachian Counties, Swain County has a heavier concentration of young people when compared to retirees. The need to increase the number of high school and college graduates will allow a higher skilled economy to take shape in the county.

Swain County has a population of just under 14,000 residents, and its county seat is Bryson City. Swain County shares a border with the Great Smoky Mountains National Park. The Federal Government annexed almost 65% of the county for the National Park (North Shore Heritage Memories, “Historical Grief and Trauma,” 2014).

**Table 6**

Health Outcomes Overall (out of 100 NC Counties)	96
Adult Smoking	28%
Adult Obesity	32%
Excessive Drinking	10%
Primary Care Physicians (ratio)	933/1
Diabetic Screening	86%
Mammography Screening	65%

(source: Robert Wood Johnson Foundation, “County Health Rankings and Roadmaps: Rutherford,” 2013).

Swain County ranks as the worst of the three distressed counties in terms of health. Swain County ranks in the lower half of all NC counties in every subcategory. These challenges consume tremendous amounts of resources and limit economic growth in the county.

#### *Swain County Economic Initiatives*

Swain County has a technology center. The technology center is a regional facility capable of onsite or remote classroom or conference center for up to 25 people. The center houses a full robotic training area to give students hands on training with state of the art industrial robotics. The intent is to attract top technology students to the area (Swain County, “Technology Center,” 2014).

#### *Swain County Economic Limitations*

1. Lack of Economic Plan: Swain County lacks a basic economic development plan. The county economic development council simply tries to assist businesses as needed, but does not provide any comprehensive plan (Swain County, “Economic Development, 2014).

## **Methodology**

ARC classified 25 NC Appalachian counties as distressed in 1965; as of FY 2014 only Graham, Rutherford, and Swain counties remain distressed. We compared per capita market income of each of these 25 counties over the last fifty years in roughly ten year intervals (1959, 1969, 1979, 1989, 2007, and 2010). Per capita market income is defined as the mean money income received in the past 12 months computed for every man, woman, and child in a geographic area, usually denoted in a metropolitan city, county, state, or nation. It is computed by dividing the total income, less transfer payments (i.e. welfare payments, other entitlement monetary compensation) of all people 15 years old and over in a geographic area by the total population in that area. We noted that income is not collected for people under 15 years old even

though those people are included in the denominator of the per capita income calculation (United States Census Bureau, “Per Capita Income” 2014).

We compared a county’s per capita market income and divided that value by that year’s national per capita market income to derive a percentage. For example, in 2010 “Smith County” had a per capita income of \$10,000, while the US per capita income was \$20,000. Therefore, Smith County has a value of .5, or 50%. The impetus behind calculating these percentages was to reconcile the value of money over time. These comparisons eliminate the need to discount income, which normally accounts for inflation and growth across a period of time.

We understand that the inherent shortcoming in this methodology is that any growth or retraction of a NC Appalachian county’s per capita earnings is directly tied to how the US per capita income performed overall. The other shortfall with per-capita market income is that outliers (either abnormally high or abnormally low earners) can skew the data and not be truly representative of the population. Individual median income or household median income could at first glance be more representative of a population’s average earnings. However, these median income figures contain transfer payments, which Appalachian communities are heavily dependent upon for economic survival. We presume that the inclusion of said transfer payments will have a greater skewing effect on the data than any outliers that are found in per capita market income. We ultimately decided to analyze per capita market income also because it is one of the three inputs into the ARC’s measure of economic distress.

We wanted to discover which NC Appalachian counties sustained substantial per capita income growth over the life of ARC (1965 to present). We selected multiple counties and conducted qualitative research to see what, if any, economic development initiatives occurred in these prosperous counties and how successful they were.

### **Available Data**

The majority of the data pertaining to Appalachian poverty is publicly available from the ARC. ARC’s website has an entire subsection devoted to “Data Reports.” These reports include regional data covering census population changes, population estimates, personal income rates, unemployment rates, three year unemployment rates, poverty rates, high school and college completion rates, and county economic status. These reports cover every county within the ARC’s jurisdiction over multiple years (ARC, “Data Reports,” 2013).

The ARC also provides a diverse set of data through its “Economic Reports.” These reports cover a variety of economic data by presenting them in narrative and map formats. ARC economic reports included on their website include “Economic Overview of Appalachia 2011,” “Appalachian Region Income Report 2011,” “Income Maps 2011,” “Appalachian Region Employment Report 2011,” and “Employment Maps 2011” (ARC, “Economic Reports,” 2013). These economic reports devote attention to the region as a whole, and the Appalachian sub-regions of Northern Appalachia, North Central Appalachia, South Central Appalachia, and Southern Appalachia. A very important data point from one of these economic reports is that the Great Recession caused Appalachia to lose all of the jobs gained since 2000 (ARC, “Economic Overview of Appalachia 2011,” 2013, p. 1).

The ARC provides a plethora of data on the Appalachian Region through its extensive online collection of maps. These county-level maps of the region graphically display patterns in socioeconomic data. The range of data includes patterns from the 1980s up to projections for fiscal year 2014. These maps visually represent data in the same ARC subcategory of “Data Reports.” The data behind the maps includes comparisons of three year unemployment averages (locality and US averages), per capita market income, and poverty rates. ARC compares the data between state totals and Appalachian state totals (ARC, “Maps,” 2013).

The US Census keeps vast amounts of demographic and economic data available to the public on its website. The data corresponds to the information collected from the decennial census of the US, as required by the Constitution. Data from the 1920 Census to the 1960 Census is digitally archived through scanned copies of the Census long forms. Data from the 1970 Census to the 2010 Census (and presumably going forward) is aggregated and presented in html. The author primarily gathered county level historical data from the Census annals.

### Comparisons of Per Capita Market Income

**Table 7: NC Appalachian Counties’ Per Capita Market Incomes as a Percentage of the US Level, 1959-2010**

Year	US PCI	Graham	Rutherford	Swain	Alexander	Alleghany	Ashe	Avery	Caldwell	Cherokee	Clay	Davie	Henderson	Jackson
1959	7259	40.21%	63.08%	42.76%	57.96%	49.95%	42.00%	43.13%	66.33%	43.41%	34.59%	66.87%	73.67%	50.60%
1969	9816	56.20%	75.63%	56.49%	75.15%	62.46%	55.05%	55.73%	75.83%	60.79%	52.68%	76.27%	77.17%	61.59%
1979	12224	63.26%	75.65%	56.52%	78.56%	67.64%	63.77%	62.71%	77.50%	60.93%	64.94%	86.95%	87.89%	68.37%
1989	14420	61.56%	78.27%	61.87%	80.61%	70.99%	66.19%	67.47%	79.90%	64.20%	65.58%	101.58%	95.02%	71.61%
2007	32930	52.72%	59.25%	51.57%	69.44%	55.82%	56.97%	55.06%	71.35%	44.45%	51.45%	87.89%	80.32%	67.06%
2010	32562	47.38%	50.51%	55.97%	68.77%	65.45%	59.34%	61.78%	56.78%	46.75%	52.55%	84.84%	82.70%	62.59%
Year	US PCI	McDowell	Macon	Madison	Mitchell	Polk	Stokes	Surry	Transylvania	Watagua	Wilkes	Yadkin	Yancy	
1959	7259	61.14%	47.14%	39.08%	50.76%	72.88%	51.95%	64.71%	66.39%	44.65%	54.00%	61.95%	44.44%	
1969	9816	70.41%	58.96%	53.89%	61.62%	74.90%	70.82%	74.09%	75.54%	63.13%	67.10%	73.06%	52.07%	
1979	12224	72.30%	77.74%	64.01%	68.79%	88.72%	76.91%	78.01%	86.25%	69.87%	79.06%	77.38%	62.10%	
1989	14420	72.93%	76.40%	63.45%	70.87%	98.56%	84.47%	78.65%	88.33%	73.70%	75.01%	82.13%	65.62%	
2007	32930	54.45%	68.51%	55.01%	49.11%	95.33%	65.11%	65.66%	72.69%	78.65%	72.06%	65.30%	47.24%	
2010	32562	51.93%	62.78%	59.97%	52.97%	87.92%	66.89%	64.53%	67.46%	73.07%	67.88%	68.35%	49.78%	

(sources: US Census Bureau Data and ARC Data)

We compared the growth of per capita market incomes (PCI) of all the NC Appalachian counties over the last 50 years. The counties we deemed as “success stories” based on PCI growth compared to the national average were Macon, Madison, and Watagua counties. We ultimately wanted to see what made these counties grow more effectively than all the other counties in NC Appalachia.

# Success Stories to Emulate

## Macon County



(source: University of North Carolina, “Map of Macon County,” 2014)

### *Macon County, NC Key Demographics Compared to Graham, Rutherford, and Swain Counties*

**Table 8**

	Macon	Graham	Rutherford	Swain
Population, 2012 estimate	33,922	8,700	67,323	13,981
Persons Under 5 years, percent, 2012	4.9%	5.3%	5.4%	6.3%
Persons Under 18 years, percent, 2012	19.2%	21.2%	21.7%	23.1%
Persons 65 years and over, percent, 2012	25.2%	20.8%	18.4%	17.7%
Female Persons, percent, 2012	51.5%	50.7%	51.7%	51.4%
High School Graduate or Higher, percent of those persons age 25+, 2008-2012	85.3%	78.9%	80.6%	80.3%
Bachelor’s Degree or Higher, percent of persons age 25+, 2008-2012	20.4%	12.9%	15.9%	18.4%
Total Number of Firms, 2012	4,629	1,238	5,264	1,648

(source: United States Census Bureau, “State and County Quickfacts,” 2014)

Macon County has a higher level of high school and college graduates when compared to the three distressed NC Appalachian Counties. Macon County also has a higher concentration of firms when these counties.

Macon County has approximately 34,000 residents, and its county seat is Franklin, NC. Macon County boasts a proud natural tourism base with trails for hiking including the Little Tennessee River Greenway. There is also an economic base of fishing, hunting, rafting and kayaking available for tourists. Almost one-half of the county is contained within the Nantahala National Forest. Macon County also has one of the lowest crime rates in the Southeastern US. Macon County is home to one of the few temperate rain forests in North America and an agri-tourism industry that includes wild flower viewing (Macon County, “Macon County EDC,” 2014).

*Macon County, NC Key Health Statistics Compared to Graham, Swain, and Rutherford Counties*

**Table 9**

	Macon	Graham	Rutherford	Swain
Health Outcomes Overall (out of 100 NC Counties)	16	63	69	96
Adult Smoking	22%	18%	26%	28%
Adult Obesity	25%	26%	31%	32%
Excessive Drinking	11%	18%	9%	10%
Primary Care Physicians (ratio)	1,710/1	1,168/1	1,831/1	933/1
Diabetic Screening	90%	92%	86%	46%
Mammography Screening	72%	77%	65%	53%

(source: Robert Wood Johnson Foundation, “County Health Rankings and Roadmaps,” 2013)

Macon County outperforms the three distressed NC Appalachian Counties by a wide margin. Macon County has much lower incidences of adult smoking and obesity, and screens its residents for diabetes and breast cancer at rates on par with Graham, Swain, and Rutherford Counties.

Despite that the ratio of primary care physicians to residents is relatively high in Macon County, the County has two hospitals as well as a locally based Air Ambulance service that supports regional medical facilities. Angel Medical Center employs over 440 local residents and has over 25 specialized services (Macon Economic Development Center, “Angel Medical Center,” 2014). Specialists covering all medical disciplines are available in the county. Supporting medical and dental practices are located throughout Macon County, including an Urgent Care Center.

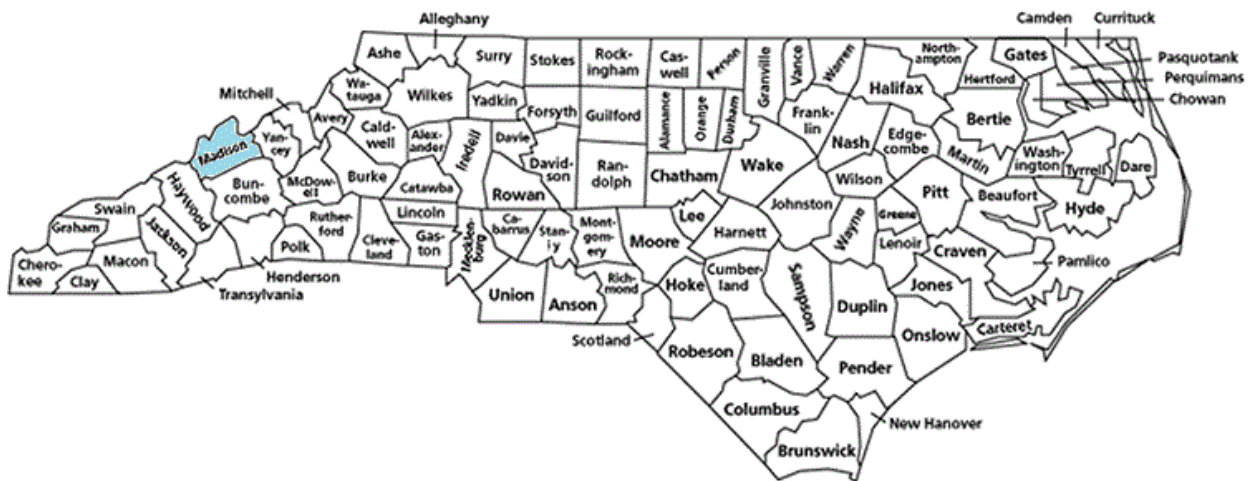
*Successful Macon County Economic Development Initiatives*

1. Southwestern Community College: Macon County is home to Southwestern Community College, which is ranked fourth in the nation for community colleges. Macon County can provide its residents with a quality education locally and return them to the local workforce (Southwestern Community College, 2014).
2. TekTone: TekTone manufactures sound and signal devices for healthcare, other commercial, and residential customers. The company is approximately 40 years old and employs approximately 75 to 100 local employees. TekTone generates millions of dollars in revenue, money that it can bring back to the local community (Macon County Economic Development Corporation, “TekTone,” 2014).
3. Drake Software Services: Headquartered in Franklin, NC, Drake Software is a tax preparation software company. The company employs approximately 325 local residents and has more than 30,000 customers nationwide. Each year, Drake Software processes more than nine million federal- and state returns. The revenue generated from the

company's activities is derived from all across the country, but comes home to Macon County (Macon County Economic Development Corporation, "Drake Software," 2014).

4. **BalsamWest FiberNET:** BalsamWest opened its doors in 2003 and is jointly owned by the Eastern Band of Cherokee Indians. BalsamWest employs 12 local residents. The company is the leading provider of broadband Ethernet services in the region. With over 300 miles of underground fiber optic cable serving 10 counties in three states, BalsamWest provides connections to major communication hubs in Atlanta and Charlotte (Macon County Economic Development Corporation, "Balsam West FiberNet," 2014).
5. **Old Edwards Inn and Spa Renovation:** The Old Edwards Inn and Spa employs over 200 people. The resort has 68 rooms ranging from historic inn rooms, spa suites and luxury suites to cottages, and two other lodges. The Old Edwards Inn and Spa started a three year, \$50 million renovation project in 2001 to address the infrastructural decline of the facilities. The resort is now able to attract over 12,000 visitors annually (Macon County Economic Development Corporation, "Old Edwards Inn & Spa," 2014).

## Madison County



(source: University of North Carolina, "Map of Madison County," 2014)

*Madison County, NC Key Demographics Compared to Graham, Rutherford, and Swain Counties*

**Table 10**

	Madison	Graham	Rutherford	Swain
Population, 2012 estimate	20,724	8,700	67,323	13,981
Persons Under 5 years, percent, 2012	4.6%	5.3%	5.4%	6.3%
Persons Under 18 years, percent, 2012	19.3%	21.2%	21.7%	23.1%
Persons 65 years and over, percent, 2012	18.9%	20.8%	18.4%	17.7%
Female Persons, percent, 2012	50.5%	50.7%	51.7%	51.4%
High School Graduate or Higher, percent of those persons age 25+, 2008-2012	80.2%	78.9%	80.6%	80.3%
Bachelor's Degree or Higher, percent of persons age 25+, 2008-2012	18.2%	12.9%	15.9%	18.4%
Total Number of Firms, 2012	2,214	1,238	5,264	1,648

(source: United States Census Bureau, “State and County Quickfacts,” 2014)

Madison County graduates their students from high school and college at about roughly the same rate as the three distressed NC Appalachian Counties. The County has fewer firms per capita than does Madison and Swain Counties. We will further detail how Madison County has been able to attract higher wage jobs and effectively raise its per capita market income.

Madison County has approximately 21,000 residents and is located on the border with Tennessee, approximately 15 miles north of Asheville, NC. The county seat is Marshall. Madison County is heavily forested and is part of the Asheville metropolitan area. Madison County has had to find ways to diversify its economy without relying primarily upon Asheville (Madison County Government, “Local Government,” 2014).

*Madison County, NC Key Health Statistics Compared to Graham, Rutherford, and Swain Counties*

**Table 11**

	Madison	Graham	Rutherford	Swain
Health Outcomes Overall (out of 100 NC Counties)	45	63	69	96
Adult Smoking	26%	18%	26%	28%
Adult Obesity	28%	26%	31%	32%
Excessive Drinking	8%	18%	9%	10%
Primary Care Physicians (ratio)	2,078/1	1,168/1	1,831/1	933/1
Diabetic Screening	92%	92%	86%	46%
Mammography Screening	67%	77%	65%	53%

(source: Robert Wood Johnson Foundation, “County Health Rankings and Roadmaps,” 2013)

Madison County’s health outcomes are better overall than the three distressed NC Appalachian Counties, yet key markers like adult smoking and obesity are mixed when to the distressed counties. Madison County’s residents drink in excess less than their distressed counterparts and receive health screenings on par with them.

Madison County has the worst health outcomes of the three “success story” counties, yet is still in the upper half of NC counties overall. Madison County established the Hot Springs Health Program over 40 years ago. Madison County residents have access to the healthcare professionals of their choice, including family medicine generalists, nurse practitioners, physician assistants, internists, and pediatricians. These healthcare professionals offer their services at four different medical treatment facilities (Hot Springs Health Program, “Our Services,” 2014).

### Successful Madison County Economic Development Initiatives

1. Mars Hill University: Baptists founded the French Broad Baptist Institute, the precursor to Mars Hill University, in 1856. The school’s president led to Mars Hill becoming a four year university in 1962. In 2002 the university added a technology department that has educated the local workforce on skills needed to be competitive in a global economy (Mars Hill University, “About MHU,” 2014).

### Watagua County



(source: University of North Carolina, “Map of Watagua County,” 2014)

*Watagua County, NC Key Demographics Compared to Graham, Rutherford, and Swain Counties*

**Table 12**

	Watagua	Graham	Rutherford	Swain
Population, 2012 estimate	51,871	8,700	67,323	13,981
Persons Under 5 years, percent, 2012	3.6%	5.3%	5.4%	6.3%
Persons Under 18 years, percent, 2012	13.7%	21.2%	21.7%	23.1%
Persons 65 years and over, percent, 2012	13.3%	20.8%	18.4%	17.7%
Female Persons, percent, 2012	49.9%	50.7%	51.7%	51.4%
High School Graduate or Higher, percent of those persons age 25+, 2008-2012	89.3%	78.9%	80.6%	80.3%
Bachelor's Degree or Higher, percent of persons age 25+, 2008-2012	38.4%	12.9%	15.9%	18.4%
Total Number of Firms, 2012	5,893	1,238	5,264	1,648

(source: United States Census Bureau, “State and County Quickfacts,” 2014)

Watagua County’s percentage of high school and college graduates far exceeds that of the five other counties analyzed, most likely due to the presence of Appalachian State University. Appalachian State also probably skews the amount of young and older inhabitants, as most people affiliated with the University are college aged or working aged professors.

Watagua County has a population of approximately 52,000 inhabitants, and shares a border with Tennessee. The county seat is Boone. Watagua County is home to Appalachian State University, part of the University of North Carolina system. The economy of Watagua County is diverse, and major employers include Chetola Mountain Resort, Hospitality Mints, and Samaritan’s Purse International Relief (Watagua County Economic Development Corporation, “Major Employers,” 2014).

*Watagua County, Key Health Statistics Compared to Graham, Swain, and Rutherford Counties*

**Table 13**

	Watagua	Graham	Rutherford	Swain
Health Outcomes Overall (out of 100 NC Counties)	3	63	69	96
Adult Smoking	20%	18%	26%	28%
Adult Obesity	25%	26%	31%	32%
Excessive Drinking	17%	18%	9%	10%
Primary Care Physicians (ratio)	1,245/1	1,168/1	1,831/1	933/1
Diabetic Screening	90%	92%	86%	46%
Mammography Screening	74%	77%	65%	53%

(source: Robert Wood Johnson Foundation, “County Health Rankings and Roadmaps,” 2013)

Watagua County has lower incidences of adult obesity than the distressed NC Appalachian Counties. The County’s levels of adult smoking and preventative screenings perform well against the other Counties.

Watagua County is the highest ranking “success story” county in terms of health statistics. Watagua County ranks third overall in the state and no lower than 26<sup>th</sup> in any individual health category. Watagua County residents have access to healthcare through Appalachian State University (Appalachian Regional Healthcare System, 2014).

### *Watagua County Economic Development Initiatives*

1. **Appalachian State University and the UNC System:** Appalachian State Teachers College transformed from a single-purpose teachers college into a multipurpose regional university during the 1960s. Appalachian State Teachers College became Appalachian State University in 1967. Appalachian State University doubled its enrollment throughout the 1970s to approximately 9,500 total students (Appalachian State University, “History”, 2014).
2. **Robust Economic Development Program:** Even with a relatively thriving economy, Watagua County’s Economic Development Corporation appeals to entrepreneurs looking to start a new business. Recognizing the strengths of a diversified economy, the EDC provides assistance for startup businesses in retail, manufacturing and distribution, technology, restaurants, lodging, medical, and various other fields (Watagua County Economic Development Corporation, *Starting a Business*, 2014).

## **Findings/Recommendations**

### **1. Access to Quality Education Helps Per-Capita Market Income Progression**

All three success story counties have post-secondary institutions (Southwestern Community College in Macon County, Mars Hill University in Madison County, and Appalachian State University in Watagua County). Mars Hill became a four-year university in 1962, which was the beginning of the period of time the author analyzed. This educational growth better served the local community by providing more educational opportunities for the residents of Madison County. Appalachian State joined the UNC system in 1967 and doubled its enrollment throughout the ensuing decade. A higher educated workforce meant more people had more tangible skills. A larger student body required more professors, which meant more people needed to come to Boone. Per-capita market income grew with the expansion of the university. Graham, Rutherford, and Swain counties should invest in the expansion of technical programs at their existing educational institutions (secondary and above). While it is too difficult to expand a college into a university (Mars Hill) or join the UNC system (Appalachian State), providing technical training appears to diversify the workforce attract higher-wages in the “successful” counties.

Rodrik notes that intermediate goods production, like the goods produced in the “success story” counties, requires a skilled workforce that will bring increasing returns to scale to the production process (Rodrik, 1996, p. 5). He also argues that investment subsidies in things like education and raising the minimum wage brought about a higher earning, higher skilled workforce in Eastern Germany and East Asia (Rodrik, 1996, p. 20). While local are limited in the size and scope of their budgets, they must coordinate

efforts with state and federal officials to receive investment funds for secondary and collegiate level education and for an increase in the minimum wage.

**2. Health Outcomes and Persistent Poverty Exist in Parallel**

The three persistently distressed counties (Graham, Rutherford, Swain) all rank in the lower half of NC counties (63<sup>rd</sup>, 69<sup>th</sup>, and 96<sup>th</sup> respectively) for health. The three successful counties (Macon, Madison, and Watagua) all rank in the upper half of the state’s counties in terms of health outcomes (16<sup>th</sup>, 45<sup>th</sup>, and 3<sup>rd</sup> respectively). Graham County only has a health clinic to serve its residents (Graham County Department of Public Health. “Adult Health Clinic,” 2014). Rutherford County has a jointly controlled medical center with Cleveland County, and their health outcomes are only slightly behind Graham County’s. Swain County only has a community health center to serve its residents (Smoky Mountain Urgent Care and Family Center, 2014). In contrast, all three of the “success stories” have much greater access to hospitals and healthcare. The recommendation is for the distressed counties to invest in hospitals in their counties to serve their residents.

**3. Consider Revising ARC’s Economic Classification System**

*Comparisons of Economic Dimensions Among the Distressed and some At-Risk NC Appalachian Counties*

**Table 14**

A	B	C	D	E	F	G	H	I	J	K
County	Population-1960	Population-2010	Average Income-1960	Average Income-2010	Percent over age 65-1960	Percent over age 65-2010	Percent Unemployed-1960	Percent Unemployed-2010	High School Graduation Rate-1960	High School Graduation Rate-2010
<i>Distressed</i>										
Graham	6,432	8,861	\$2,525	\$15,427	7.6%	20.8%	8.2%	16.8%	18.2%	79.4%
Rutherford	45,091	67,810	\$3,751	\$16,447	8.7%	18.4%	4.5%	15.9%	11.5%	79.6%
Swain	8,387	13,981	\$2,484	\$18,224	9.7%	17.7%	6.3%	13.5%	11.8%	79.4%
<i>At Risk</i>										
Cherokee	16,335	27,444	\$2,396	\$15,223	10.4%	24.9%	6.3%	14.6%	13.4%	81.5%
Clay	5,526	10,587	\$1,921	\$17,711	11.4%	26.0%	9.8%	11.2%	13.4%	83.0%

(sources: US Census Bureau and ARC)

When looking at the demographic data, it can be hard to distinguish the differences between distressed counties and at risk counties. For example, in 2010 all three “distressed counties” have higher per capita market incomes than does Cherokee County, NC, an “at-risk” County. ARC should expand its classification system from five (distressed, at-risk, transitional, competitive, and attainment) to ten categories that align with ten sets of percentiles. By doing this there will be greater distinctions between the levels of economic classifications, and policymakers can tailor specific economic development programs accordingly.

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