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As a result of the tourism industry's growth and receipts many communities have embraced the industry as an economic development tool. It is less clear if tourism can be a panacea. The purpose of this dissertation is to provide a better understanding of the economic geography of the tourism industry across the geographically complex Appalachian Regional Commission (ARC) study area. Using NAICS-based County Business Patterns data from the 2005 U.S. Census Bureau, this research endeavors to examine some of the economic impacts of tourism agglomeration by analyzing the industry's establishments, employment and average wages while utilizing a core-periphery theoretical framework.

The empirical and spatial analysis revealed that while core counties had more tourism establishments and employment in absolute terms, there was a greater dependence on the tourism industry in the peripheral counties. These clusters of greater tourism dependence were found in the Smoky Mountains and the Poconos. Correlation analysis indicated that a positive and significant relationship was found between both accommodation establishment and employment location quotients versus accommodation average wages for the

ARC as a whole. Conversely, the specialized periphery saw accommodation average wage levels driven down with the clustering of accommodation establishments. The implication here is that while tourism agglomeration can benefit the industry in economically robust counties, it can actually have a negative impact on accommodation wages in remote, less diversified counties where alternative economic opportunities are limited. Additionally, remoteness as measured by the percent of National Forest and National Park land acreage by county was positively correlated to accommodation agglomeration indicating that tourism clusters in the ARC are often associated with natural amenities and wilderness.

THE GEOGRAPHY OF INDUSTRY SPECIALIZATION: TOURISM
DEVELOPMENT STRATEGIES WITHIN THE APPALACHIAN
REGIONAL COMMISSION AREA

by

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CHAPTER I

INTRODUCTION

Over the past few decades, tourism has emerged as a major growth industry in the global economy. According to the United Nations World Tourism Organization (2008), the international tourism industry generated receipts of \$856 billion in 2007, accounting for 35 percent of world service exports. It is no surprise, therefore, that the tourism industry is prominent in the plans of many communities—the Appalachian region is no exception to this rule. In 1964, the establishment of the President's Appalachian Regional Commission included a lengthy report recommending tourism as a feasible economic development option for the impoverished Appalachian region (PARC, 1964). Many years have passed since the 1964 report, yet economic development initiatives for the Appalachian region still include tourism as a major component of economic development.

This dissertation will provide an explicitly spatial analysis of the varying economic impacts of tourism in the Appalachian region. According to the Appalachian Regional Commission (2007), tourism accounted for over \$29 billion in expenditures in 2001 and the industry provided over 600,000 jobs to the region. While these figures provide an aggregate assessment of tourism, this

dissertation provides a more detailed examination of which specific tourism sectors contribute to the region's economy on a county by county basis utilizing North American Industrial Classification System (NAICS)-based economic data.

Some have argued that tourism may not be a panacea (Williams and Shaw, 1988; Andrew, 1997) since tourism jobs are often thought to be low-wage, seasonal and part-time. Mathieson and Wall (1982) argued that developing regions like the Appalachian Regional Commission (ARC) area suffer from high rates of unemployment and underemployment, meaning that even lower-wage tourism employment may be beneficial to the overall economy. Despite the importance of such issues regarding the overall quality of life, only a limited amount of research has been conducted on the economic geography of Appalachian tourism.

The Appalachian region is comprised of cities such as Pittsburgh, Knoxville, and Birmingham at its "core" while being surrounded by a "periphery" of smaller communities and great swaths of rural landscapes, creating an entire region that is peripheral to the nation as a whole. With the recent emphasis on tourism as an economic development tool, it becomes important to better understand the industry's socio-economic impact on Appalachia not only as a region but also across urban and rural locations. For example, does tourism follow the typical core-periphery patterns or will rural areas benefit more from this type of development than urban areas? While in absolute terms it is expected there will be more tourism establishments and employment in urban areas, it is

possible that the industry will be more beneficial and “propulsive” in rural areas, contrary to the precepts of conventional core-periphery theory.

In this dissertation the spatial distribution of the tourism industry is analyzed across the Appalachian region as defined by the Appalachian Regional Commission. In addition to defining the geographic component of the tourism industry for the region, the specific types of tourism found in each county are examined and the direct economic impacts of employment and wages are analyzed. This dissertation considers the tourism industry across the Appalachian region, carefully examining the differences between urban and rural counties by analyzing differences in the region from a core-periphery theoretical standpoint. Existing literature (Christaller, 1963; Murphy and Andressen, 1988) has indicated that there is substantial variation between core (urban) and peripheral (rural) tourism development. Further, the economic impacts of tourism development differ across core and peripheral areas (Keller, 1987). More specifically, Moore (1994) stated that the Appalachian region had inherent core-periphery characteristics both within the region—as there were clear urban cores within the predominantly rural region—and with the rest of the United States because the region lagged behind the country in most economic characteristics.

It is hypothesized that there will be distinct economic differences between core and peripheral counties in the ARC. Using ARC-based economic classifications, it is expected that core counties will be economically more robust than peripheral counties. Secondly, utilizing standardized industrial classification

(NAICS)-based industrial data and location quotients (LQs) this dissertation hypothesizes that high accommodation LQs will benefit the industry in terms of elevated average wages in accommodation. Finally, while some have argued that tourism can be manufactured anywhere, in a cultural economy, consumers gravitate toward individuality and uniqueness. Amenities, such as national forests and parks, a rich cultural history and other aesthetic attractions, are destination-specific and inherently unique. Presumably such destinations would draw the “gaze” of tourism consumers more readily than less amenity-rich locales, resulting in greater economic benefit. Therefore, it is hypothesized that tourism dependence will be greatest in counties with the greatest degrees of remoteness and natural amenities.

Better understanding the economic geography of tourism is critical because significant investment and policy planning choices are at play in the ARC. Furthermore, tourism enterprises are predominantly small and medium-sized businesses (Smith, 2006) and, as such, are potential catalysts for local economic development in the ARC region. Locally owned businesses can often contribute more to the local economy than nationally owned companies through inter-industry linkages and indigenous growth.

If tourism is a feasible economic development strategy for the ARC then it is critical that we better understand which types of tourism are the most beneficial given a particular location or socio-economic climate. This dissertation is a critical

first step in determining the preferred policy for tourism investment for the core and peripheral counties of the Appalachian region.

CHAPTER II

LITERATURE REVIEW

Appalachia is a region that is predominantly rural, but several major urban centers are located in the region (e.g. Pittsburgh, Knoxville and Birmingham). Although the overall economic effects of tourism have been extensively discussed within the existing literature, little consideration has been given to the role tourism plays in the economic development of lagging regions like Appalachia. That said, an analysis of the spatial distribution and economic impacts of tourism in a region such as Appalachia requires an in-depth multi-disciplinary literature review.

Tourism is a complicated sector that includes numerous sub-industries (Leiper, 2008). Much of the existing literature analyzes tourism from a demand or consumer perspective with a substantial emphasis on tourist-based consumption and expenditure patterns. Even though tourism is often seen as a cultural commodity (Urry, 1995; Ioannides and Debbage, 1998), the production of tourism and related industries are under-researched. Leiper (2008) argued that a supply-side view is a key component in any industrial definition and associated analysis. He argued that the analysis of expenditures of any consumer subset is not an adequate mechanism of industrial analysis. As noted by Koh (2006), tourism is

symbiotic in character, requiring active relationships between production and consumption. Koh stated, "...tourism supply is a prerequisite to tourism development, and a sine qua non for successful destination marketing" (p. 116). The specific research questions of this dissertation demand a more rigorous interdisciplinary analysis of these topics. This dissertation delves into scholarly research in economic geography, regional science, tourism, political science and economics to help better understand the role that tourism plays in the economic development of a peripheral region like Appalachia.

Section one examines the theoretical framework for utilizing tourism as a strategy for economic development. It will be argued that economic development strategies have changed in recent decades to include tourism as a preferred strategy. Particular attention will be paid to the emergence of tourism entrepreneurship as a potential catalyst for economic development where it is suggested that indigenous small business growth can stimulate more inter-firm economic linkages than investments from outside the community.

Better understanding the spatial distribution of tourism industries is an integral theme of this dissertation and section two of the literature review focuses on core-periphery theory as a particularly relevant geographic theory. Appalachia is a region geographically isolated from the rest of the United States. Within this lagging region are strong and vibrant urban cores like Chattanooga and Charleston, although they are frequently surrounded by remote peripheral areas. The application of core-periphery theory is essential in any understanding of the

economic geography of tourism industries in the Appalachian region. Also included in the second section is a review of literature focusing on the role of agglomeration and the clustering of industries broadly and more specifically on how the agglomeration processes unfold in tourism industries.

The third section covers the widely debated topic of supply versus demand methodologies in tourism analysis. Establishing a rationale for a supply side framework allows for the utilization of NAICS-based industrial data and location quotients. The third section will also cover literature pertaining to utilizing standardized industrial classification, such as NAICS and location quotient (LQ) methodologies, in a supply-side cluster analysis.

2.1 Tourism and Economic Development

As the tourism industry has grown, so has the academic recognition of tourism as a legitimate and productive economic activity. In response to this, numerous scholars are now incorporating tourism into various cultural, political, environmental and economic research agendas and theoretical frameworks. For example, Xiao and Smith (2006) surveyed research in the journal, *Annals of Tourism* and found that culture, policy, and impacts were among fourteen common tourism research themes in the journal. Meyer-Arendt and Justice (2002) examined recent tourism dissertations and found 377 dissertations across all disciplines of tourism, including anthropology, economics and geography among others, which were completed in North America between 1987 and 2000.

Consequently, it is now readily acknowledged that an interdisciplinary approach is critical for a full understanding of tourism processes in places like Appalachia and elsewhere.

Economic Impact Studies

Prior to the 1970s, there were only a handful of studies that addressed tourism's role as a major driver of economic development. Ogilvie (1933) is thought to be among one of the first economists to illustrate the importance of tourism and other services as industries. He noted the ties between economic growth and tourism expenditures. Alexander (1953) later produced one of the first analyses of the economic impacts of tourism with his examination of tourism's economic importance in Cape Cod. In recent decades, more scholars have discussed and often promoted tourism as a strategy for economic development. Christaller (1963) noted, "Nowadays, tourism gives the economically underdeveloped regions a chance to develop themselves—for these very regions interest the tourist" (p. 104). According to Christaller, the landscape and associated natural amenities in conjunction with cultural trends were definitive of tourism destinations. Early interest in tourism as a development strategy is evidenced by national and international scale studies conducted by Peters (1969), Gray (1970) and Thuens (1976). At about that time sub-national studies of tourism were also completed by Archer, Shea and Vane (1974) and Vaughn (1977a), where each conducted case studies of the local economic

impacts of tourism in the United Kingdom. Since the 1970s, research into the economic impacts of tourism has become more widespread.

The predominant approach in the early literature analyzing the economic impacts of tourism was the application of multiplier models based on various tourism expenditure data. In Archer's (1976) often cited overview of multipliers, he defines a multiplier as "the ratio of direct, indirect, and induced changes within an economic system to the direct causal change itself" (p. 115). Archer noted that there are three types of multipliers with slightly different methodologies, as well as strengths and weaknesses. Among the employment, income, and sales (or output) multipliers, he contends the output multiplier measures the effects of tourist spending on the economy in the most comprehensive fashion. While Archer promoted the input-output multiplier, he also explained that problems such as difficulty acquiring adequate data, the ability to only capture one year and the inability to capture the effects of economies of scale within a sector are possible weaknesses of input-output multipliers. Therefore, while multipliers can be beneficial, they are not always appropriate or accurate in the determination of economic impact. Kottke (1988) argued that the use of multipliers could lead to misinterpretation if clear qualifications of the data are not noted and also noted that the analysis is not readily applicable to policy-makers due to their complexity, an argument also made by Archer (1976).

Tourism Satellite Accounts

Another popular technique is the use of tourism satellite accounts (TSAs) (Smith, 1998). These were first introduced as an analytical tool for evaluating the tourism industry in Canada in the 1990s (Meis, 1999) after several years of refinement. The World Tourism Organization and United Nations Statistical Commission recognized the potential statistical value of TSAs and adopted the Canadian model for further development. The TSA is a layered matrix of national accounts in which household surveys about tourist expenditures are consolidated with business surveys regarding tourism profits to generate a more comprehensive understanding of the economic impacts of tourism. While TSAs may be an appropriate tool for the analysis of the tourism industry at the national level, there are some weaknesses associated with this methodology. Smith (1998) noted that some of the shortcomings of the TSA are the cost of assimilating and updating the required data and the geographic limitations. Because the matrices are based on national data, the TSA has not typically been applicable to a regional or local analysis of the tourism industry.

Although much research has been conducted using complex methodology to analyze the aggregate impact of tourism, little work has addressed the spatial distribution of tourism industries and the associated economic impacts of these related industries to broader issues of quality of life (Sinclair and Stabler, 1997). Important in any economic policy is a good understanding of the market structure and potential impacts of the industry in specific communities. More research with

attention to the spatial and market structures of the tourism industry and its associated economic impacts at a regional and local level could benefit economic development theory and positively add to the literature.

Basic versus Non-Basic Industries

The apparent reluctance to analyze the supply side of tourism might be, in part, due to the limited acceptance of tourism as a “basic” industry until the 1970s. The delineation of an industry as “basic” or “non-basic” originates from economic base theory. Basic industries were thought to include raw materials and manufactured goods for export, whereas non-basic industries were services and other industries that served largely local markets. The construct of basic industries is simplified by Blakely and Bradshaw (2002) as “industries that use local resources, including labor and materials for final export elsewhere...” (p. 58). The service industry is often thought of as consumer services, which are services oriented towards household use (e.g. retail, tourism), and producer services, which are provided primarily for businesses (e.g. advertising and legal services). Although most consumer services are considered to be non-basic industries, it has become more commonly accepted that tourism service industries can provide a product that is an export in nature since it is sold to consumers from outside of the local region. Some scholars (Debbage and Daniels, 1998) argue that business tourism and its related value-added benefits

can be considered a producer service because business travel can be such an integral part of many businesses, such as conference tourism.

One difference between the tourism product and that of many other export industries is that tourism is an experiential product supplied by a variety of tourism producers rather than a single tangible product. Another important differentiation between tourism and other export industries is that the consumer must visit the “production facility” rather than the product being shipped to the consumer. Because of this difference, the place of production or destination is perhaps more critical to the tourism industry than other industries which involve transporting the product to more distant locations for purchase by the consumer.

Economic Development Strategies

Beauregard (1998) described the key changes in tourism’s role in economic development strategies over time, explaining that changes in lifestyles, economic restructuring and political alliances helped boost tourism’s perceived importance as a means of economic development. He explained that prior to the 1950s tourism was not considered a viable economic development strategy. Further, most policy strategists during the first half of the 20th century focused on encouraging manufacturing as a method of economic development. Concern over low wages in conjunction with the lack of tangible exports associated with the tourism industry led to the assumption by policy makers that tourism’s potential benefits were minimal. Responding to changing economic structures,

policy makers began to incorporate tourism and by the late 1990s it had become a more pervasive strategy.

After World War II, disposable income soared and the population had a larger amount of leisure time. These two elements led to an increased interest in travel, resulting of course in increased travel-related expenditures. During the 1980s, jobs in manufacturing began to decline causing a need for new mindsets regarding economic development. It was during this period of increased tourism expenditures and declining manufacturing exports that economic development analysts began to recognize tourism as a basic industry with an industrial export potential and, therefore, began to consider it as an integral part of any economic development strategy.

Early suggestions that tourism could be an export industry can be found beginning in the literature from the 1970s. Bond and Ladman (1972) suggested that tourism could be considered an export product and that in fact it could be a better export choice than some manufacturing sectors. Robertson (1968) had previously argued that exports were often confined to one or two products, limiting economic diversification and that export markets can be unstable, creating instability for earnings. Bond and Ladman (1972) noted that the disadvantages Robertson associated with trade are not found in tourism, stating “trade in *correct* products, however, such as tourism, does not involve all these disadvantages and therefore trade in this product can be a catalyst to growth” (p. 41). Perloff and Wingo, Jr. (1964) stated that rising incomes and increasing

demand for tourism services was creating an export market for local amenities via tourism industries. Archer (1978) called tourism an “invisible export,” noting that the economic impact of tourism was related to the structure of the economy in place and the difference between existing wages and the potential of tourism wages.

Despite the rapid adoption of tourism as an integral component of many economic development initiatives, little research has empirically examined the viability of tourism as an economic development tool. Patton (1985) provided one of the first exceptions to this scholarly lacuna with his analysis of tourism-related economic development in Reading, Pennsylvania. Patton argued that with the decline of manufacturing jobs, development strategies could turn towards the service sector. He further noted that tourism was a service industry that was advantageous due to its definition as a sort of basic industry that could be created in many different destinations by utilizing natural attractions, historic sites or creating attractions with the development of shopping outlets or entertainment facilities. To test impacts, he conducted a case study of the retail segment of the multi-faceted tourism industry in association with employment changes in lodging in Reading. Patton examined the growth of retail outlet centers in association with growth of the Reading area population where economic growth is defined by employment and number of establishments. Results indicated that after the opening of retail outlets employment in tourism industries increased substantially, compensating for the loss of manufacturing jobs in the area.

Tourism and Small Businesses/Entrepreneurships

Economic scholars and policy makers have pointed toward the importance of small local businesses and entrepreneurships as important for economic growth because of the greater potential for economic linkages to other local industries. Further, it has been noted that the specific ownership patterns found in a destination in conjunction with the strength of forward and backward linkages and the spatial distribution of tourism supply and consumption are key components regarding the economic impact of tourism (Cornelissen, 2005). Thompson (1975) noted that entrepreneurship was “at the heart of comparative regional growth.” Local entrepreneurs can provide local connections via social and cultural ties, thereby developing and strengthening backward linkages to other local industries. Fewer imports and increased utilization of local resources results in fewer leakages and stronger backward linkages.

Shaw and Williams (1998) argued that small and medium sized enterprises (SMEs) are valuable in tourism development because they provide an important connection between the local community and tourism, possibly improving the interactions for both business owners and tourism consumers. Despite the promotion of tourism as a key element of any economic development strategy and the acknowledged importance of entrepreneurs, little research on the economic impacts of tourism entrepreneurs and SMEs has been completed. Most related research has examined the characteristics of the entrepreneurs as business operators and individuals (Ioannides and Petersen, 2003; Stallinbrass,

1980; Shaw and Williams, 1990), but little work has addressed the spatial distribution or economic empirics of tourism based entrepreneurs and SMEs from a supply-side perspective.

Rural Tourism

Most of the literature cited above deals with economic development from a regional or urban perspective. Also important in any geographic economic analysis of tourism in the Appalachian region is literature pertaining to rural development, since a substantial proportion (324 of 410 counties) of the Appalachian region is rural in character. Rural regions have historically relied upon extractive industries, such as mining and forestry, as well as agriculture for economic viability. With the decline of agriculture and the decreased demand for extracted resources (Blakely and Bradshaw (2002), tourism has become a central economic strategy for many rural communities (Milne and Ateljevic, 2001). Relatively high unemployment rates and low wages often characterize peripheral areas, making tourism development an attractive alternative (Andrew, 1997).

Recently, some contributions to the empirical literature regarding rural development have explicitly included tourism as a viable option and, in fact, have indicated that tourism could be a beneficial component of economic development for lagging rural regions. Courtney, Hill and Robert (2006) found that heritage tourism in Scotland had the potential for contributing to economic improvement in

Scotland. English, Marcoullier and Cordell (2000) noted that amenity based tourism was growing in popularity across rural America as a strategy for development. The authors examined the economic characteristics of rural counties that are dependent on tourism with the characteristics of counties not tourism dependent. They noted that rural counties with many natural amenities were also the most tourism dependent counties. Tourism dependent counties had significantly higher per capita incomes, greater growth in economic diversity, more expensive housing and faster population growth rates. Furthermore, the authors found that tourism dependent rural counties had higher mean incomes than non-dependent rural counties. The authors argued that such growth might be a result of the economic stimulus of higher-income migrants who migrate to the counties because of the recreation opportunities and natural amenities.

A study by Marcoullier, Kim and Deller (2004) utilizing new growth theory found that amenity based tourism in rural areas was associated with different income distribution patterns. New growth theory has also been labeled endogenous growth theory and emphasizes agglomeration effects, knowledge spillovers and economies of scale. These authors suggested further empirical work was needed to better determine the outcomes of various types of amenity based tourism. While such studies have provided an important springboard for research in tourism development in rural areas, there is still a need in the literature to expand on such studies. This is particularly true for analyses of

tourism production which are comparative across rural and urban areas of a region and utilize strong theoretical frameworks as well as a supply-side focus.

2.2 Spatial Structure and Development

Since the convergence of geography and economics, there has been much discussion over how various patterns or spatial structures are linked to processes of economic development. The birth of economic geography provided a conceptual juncture for aspatial economic theories to be better integrated with the explicit industrial location theories found in geography. It has been recognized that the Appalachian region follows a core-periphery structure (Friedman and Miller, 1965; Friedmann, 1966; Moore, 1994). Acknowledging this overlying structure of the region means core-periphery theory will be an important conceptual focus of this dissertation. Additionally, the theory of agglomeration and industrial clustering will also be a key theoretical tool given the explicit links to core-periphery logic.

Tourism and Core-Periphery Theory

Core-periphery theory is a well-known and much utilized concept in economic geography. Core-periphery theory has long been used to describe economic relationships that exist between urbanized areas and more isolated hinterlands. The basic premise is that core locations are more economically

robust than peripheral regions. Furthermore, often core areas experience economic growth at the expense of the lagging peripheral locales.

The early works of Friedmann (1955, 1966) laid the groundwork for the elaboration and application of core-periphery theory in economic development and urban planning. Friedmann (1955) analyzed the spatial structure of urbanized development in the Tennessee Valley where he emphasized manufacturing as a driver of economic development that triggered a demand for a wide variety of services related to industry. Although the emphasis on manufacturing as a means of economic development is now dated, Friedmann's work was a critical step in tying explicit spatial theorizing to economics.

It was noted by Friedmann (1966) that manufacturing industries tended to locate in cities because of the tendency for industrial growth to concentrate spatially, while labor-intensive, extractive industries were more often found in peripheries. He also characterized what he called the center-periphery relationship as "colonial" because of the associated regional economic structure and resulting dependencies of the periphery on the core. More specifically, the periphery could experience a decline in its economic capacities, such as capital and labor, to the benefit of the core as labor, capital and resources migrate to the urban core from the rural periphery. Friedmann further postulated that once industrialization had become advanced a large area would be characterized by numerous city regions connected by a transportation network (1955).

Friedmann and Miller (1965) indicated that core-periphery theory could be applied to regions like Appalachia, since they considered these areas inter-metropolitan peripheral regions. The relative prosperity of urban areas in comparison to the distinct poverty found in the peripheries is a key point where peripheral areas lag behind the urban areas in educational attainment, healthcare and income. The authors noted that the inter-metropolitan peripheral areas were also the areas eligible for federal aid and experiencing the highest rates of unemployment. These peripheral areas were also found to have a declining manufacturing base and labor force.

The perceived changing patterns of urban development were also discussed at length by Friedmann and Miller. It was speculated that changing lifestyles would encompass a more vast geographic extent, making the peripheral areas less isolated and more incorporated into social and economic structures. The authors coined this new interdependent spatial pattern of development the “urban field”. The authors suggested that while the urban areas would still be important, the differences between urban and peripheral areas would become blurred and less precise. One important cause for this, Friedmann and Miller argued, was the increase in income and the subsequent utilization of peripheral areas for settlement and recreation purposes. While it is obvious that there have been some changes in the distinction between urban and peripheral areas since the 1960s, much of this conceptual construct is still relevant for understanding the geography of the tourism industry in the ARC area.

Friedmann (1966) also applied core-periphery theory in a comparative study of the Appalachian region. Friedmann compared the characteristics and potential of poor regions within poor countries to that of poor regions in developed countries, such as the Appalachian region of the United States. He noted that while poor regions of poor countries are peripheral to other nations of the world, poor regions of wealthy countries are peripheral to metropolitan growth centers, giving these regions more potential for growth. Friedmann speculated that the poor Appalachian region was peripheral to such metropolitan areas, making the poorer regions such as the Appalachian, “inter-metropolitan peripheries.” Further, Friedmann recommended several strategies for economic development in Appalachia, indicating that the growth of service sector and white collar jobs would be crucial while these areas faced declining blue collar industries. He also suggested that recreation might be an important industry for some Appalachian areas.

Walter Christaller (1963) was one of the earliest scholars to note how core-periphery relationships were partially contradicted by the geography of the tourism industry. Christaller pointed out that often tourism destinations are located in peripheral locations and are based on natural resources. Such peripheral tourism destinations often draw consumers away from urban areas, Christaller contended. He further argued that “during certain seasons peripheral places become destinations for traffic and commodity flows and become seasonal central points” (p. 96). Christaller also mentioned urban tourism, noting

that it was typically associated with business or education. His work allows the observation that the tourism industry in urban areas acted as an auxiliary industry to the existing metropolitan industrial structure, whereas peripheral tourism created recreation based destinations. Such a difference sparks the consideration of socio-economic differences between peripheral tourism dependent regions compared to more urban and industrially diverse economic structures. This dissertation will examine the structures and spatial distribution of various tourism clusters across the core and peripheral parts of the Appalachian region in an attempt to define the characteristics of tourism industries across a large and complex region.

Krugman (1991) further elaborated on core-periphery theory by explaining how various mechanisms create core-periphery structures. Krugman argued there are three key mechanisms that tend to encourage industrial concentration, which can, in turn, result in a core-periphery structure. The mechanisms he cited were the reciprocal means by which labor pools are established, the ease of supply of intermediate inputs and services and lastly knowledge spillovers. In the case of tourism with its less skilled labor-force, and relatively low levels of innovation, it seems Krugman's thoughts on intermediate inputs are the most applicable. He gives a description of an industrial system in which intermediate inputs and final goods may be the same thing. Generally, intermediate inputs are products or services utilized for the production of a final good, service or product. Using this rationale, it is possible for a good or service to be a component of a

final product or a stand-alone consumer-ready good. This has been argued to be the case in cultural products like tourism as well (Urry, 1995; Scott, 2000). For example, a hotel is only part of the overall experiential product. Also included are a myriad of other tourism sector possibilities, from natural attractions, to museums, restaurants, retail outlets, transportation et cetera. Each of these tourism components could be the only product purchased by the consumer or, alternatively, the purchased tourism product might be a small part of the greater tourism experiential product. A trip to any given destination could involve multiple intermediate inputs to produce a final good, or experienced à la carte. Additionally, Krugman makes the point that service industries are now growing more rapidly than manufacturing industries and that concepts of core-periphery and localization of industry are just as applicable to service sector industries as manufacturing industries.

Moore (1994) also applied core-periphery concepts to his analysis of planning strategies and economic development patterns in the Appalachian region. Core-periphery theory was a basis for Moore's (1994) examination of Appalachian development and regional planning policy. Moore stated there has been little spatial analysis of the Appalachian area utilizing core-periphery theory. Moore examined adopted policies and their impacts on poverty in the region. He found that there were multiple cores within the region, as well as two distinct categories of periphery. The region consisted of an exterior periphery which was accessible to urban areas outside the Appalachian Regional Commission area,

such as Charlotte and Atlanta. Additionally, there was a more depressed interior periphery which was more isolated from the urban cores within and external to the region. Moore noted that these separate peripheries coincided with the subdivision of the region by the ARC into Northern and Southern (external periphery) and Central (internal periphery) regions. With the construction of substantial transportation infrastructure after 1964, economic conditions in the Northern and Southern regions improved. Substantial declines in manufacturing and mining jobs in the Central region negated the overall benefits of completed transportation corridors in the Central region, resulting in sluggish growth rates and significant out-migration.

Moore has firmly established a baseline of economic conditions in the Appalachian Region from 1965 to 1990 associated with the core-periphery structure. This baseline indicates that real economic differences exist at a sub-regional level in Appalachia. More specifically, the Central Appalachian region and portions of northern Appalachia which included Ohio and West Virginia showed the least economic improvement during the 1965-1990 timeframe. Southern Appalachia and the majority of Northern Appalachia showed improvements correlated to transportation infrastructure improvements. Moore also has paved the way for further economic geography analyses in the region predicated on a core-periphery theoretical framework.

Beyond research focused on Appalachia, geographers and tourism academics have often cited core-periphery theory in their analyses of various

tourism destinations (Diagne, 2004; Cabus and VanHaverbeke, 2003; Keller, 1987; Murphy and Andressen, 1988). For example, Keller (1987) examined tourism development policy in Canada's peripheral Northwest Territories. This area is different from Appalachia in that the region has few internal urban areas. Keller revised Butler's (1980) tourist area cycles to accommodate peripheral development issues. Keller noted that because the local population had a lack of interest and/or understanding of tourism, the development of the tourism industry in peripheral areas would be heavily reliant on external investments and interest, thereby limiting the economic potential for the peripheral region. Keller argued that for tourism to avoid the center-periphery conflict, local control must be maintained in the periphery. Further, to assure local control could be maintained, he argued it was important to keep the scale of growth at a level that the majority of labor and resources could be supplied at a local level.

Murphy and Andressen (1988) also utilized core-periphery theory in their analysis of tourism planning policy on Vancouver Island in Canada. They found that resident attitudes towards tourism development differed between the core and periphery. Residents in the urban areas where tourism was already well established were less inclined towards additional tourism development, whereas peripheral residents were receptive towards the economic potential of tourism. Diagne (2004) is another scholar that utilized core-periphery structure to examine the impacts of tourism in Senegal. Diagne argued that the dependence of the peripheral villages on the 'core' resort enclaves and investments from more

distant metropolitan centers has produced both positive and negative consequences for Senegal. Many infrastructural improvements have been made as a result of tourism. Diagne also argued that the lack of local control and participation in the tourism industry has resulted in a disintegration of local culture and little, if any, improvement in the well-being of the local population. It was further argued that utilizing more locals for employment and decision making could help to curb some of the negatives associated with Senegalese tourism in peripheral areas.

Core-periphery relationships were found to be an integral part of economic development patterns in Flanders, Belgium (Cabus and VanHaverbeke, 2003). They argued that the urban and rural regions of Flanders have become so intertwined that economic strategies and analyses for the region can not be conducted without looking at urban and rural areas as a regional whole. Early development in Flanders was concentrated in the core at the expense of the periphery, eventually over-development of various core areas has led to diseconomies of agglomeration and triggered spin-offs and “trickle-down” development patterns in the immediately adjacent peripheral areas of Flanders. Such geographic diseconomies of agglomeration can occur when the activity and density of the metropolitan area results in traffic congestion, elevated crime rates and increased pollution (Wheeler, 2003), thereby making the urban area somewhat less advantageous than it previously had been. Cabus and VanHaverbeke (2003) found that such diseconomies of agglomeration in urban

areas could result in increased economic potential and survival for new businesses in the periphery.

Anderson (2000) made an assessment of peripheral entrepreneurial activity in Scotland by suggesting the periphery may be undergoing economic and cultural shifts in response to the greater shift towards post-modern consumption patterns. His argument is that the perceived quaintness of peripheral areas by urban consumers promotes the ability of those peripheral regions to support innovative entrepreneurial activity in specific market niches. Rural locations, he argues are symbolic of history and its respective value system. Anderson stated, "...rural locations are reservoirs of old values, they are an appropriate location for the consumption of this aesthetic" (p. 102). He suggested that rural entrepreneurial activity may further foster additional entrepreneurial growth resulting in further economic improvement in these peripheral areas. The periphery may be changing according to Anderson. He theorized that the change was due to the activities of rural entrepreneurs, as well as the demands of the post-modern consumer, with their desire for individuality and specialization.

As shown by several of these authors, core-periphery theory is not easily separated from industrial clustering and agglomeration theory. Because of these obvious ties, the next part of the section on spatial structure will cover the literature regarding cluster and agglomeration theory. As will be discovered,

tourism industries are no different from other industries in their proclivity towards clustering and agglomeration.

Cluster Theory in Industry Studies--Where is tourism?

It has long been recognized that regions and industries often agglomerate as they grow. In the case of regions, population can agglomerate or cluster in one or more locales while exhibiting a more dispersed pattern elsewhere within the region. Regarding industrial development, it has been argued that similar industries have a tendency toward agglomeration, perhaps strengthening the industry and the associated local economy. This dissertation will examine the agglomerative patterns of the tourism industry in the core-periphery Appalachian region. Agglomeration is a well-known theoretical construct found in economics and economic geography. The basic premise of agglomeration is that the geographic clustering of inter-related industries can be beneficial to the overall economy and to each respective sector. Agglomeration can provide economies of scale, wherein each company may benefit from the specialization found in the agglomerated market and employment base. For decades, economists have argued that the agglomeration of industries can further promote regional economic growth.

Early scholars, such as Marshall (1890/1920), first acknowledged the presence of industrial districts in metropolitan areas. Marshall argued that cities with strong industrial districts could better weather economic crises than cities

without such industrial districts. The early work by Perroux (1950) on growth poles led to a study of industrial structure in Puerto Rico by Isard, Schooler and Vietorisz (1959) which examined agglomerated industries in spatial association with the growth pole. Hirschman (1958) compared the theory of balanced economic development which involved development in multiple industries at the same time and what he called unbalanced growth or “a chain of disequilibria.” He argued that development in a single industry could spawn subsequent investments in related industries, creating external economies of “production complementarities.” Perloff and Wingo, Jr, (1975) noted that industrial specialization can lead to added overall economic benefit for regions, in addition to individual corporations. Early work on industrial agglomeration likely led to more recent studies of industrial clusters.

Over the last several decades agglomeration theory has grown and spawned theoretical offshoots like cluster theory and industrial districts. Hofe and Chen (2006) offer an overview of cluster-based industrial analysis research. They found that while cluster analyses are growing in usage, the definition of an industrial cluster has not become standardized nor has the methodology behind cluster analysis. The authors found that three broad types of clusters were prevalent in the literature: industrial clusters defined by localization, industrial clusters based on relationships between cluster members, and industrial clusters which are based on why firms are spatially concentrated. Hofe and Chen concluded that because of the vast differences across industries and the variety

of research needs, no single cluster methodology or precise definition is possible. They argued that industrial clusters can only generally be defined as "...groups of firms, businesses, and institutions that co-locate geographically in a specific region and that enjoy economic advantages through this co-location" (p. 21). The authors further noted that most research with a focus on industrial specialization utilized location quotients (LQs) to quantitatively define the clusters.

Cluster theory can provide a conceptual framework for a better understanding of the complex agglomeration of competing and supporting industries that can evolve in specific geographic areas (e.g., Silicon Chip Valley, textiles in North Carolina, chemicals in Germany, etc.) (Porter, 1998). Porter (1998) noted that clusters are common and could be found worldwide across a variety of geo-political levels. Clusters serve to supply member industries with greater efficiencies by developing effective inter-industry linkages that can enhance competitive advantage. Furthermore, clusters can provide an overall cultural product or service to the consumer that no individual company would be able to supply in isolation. A key component to Porter's cluster model is his "diamond" construct which demonstrates the relationships between the four conditions found within clusters. According to Porter, the strength and processes between the diamond conditions (Factor (Input) Conditions, Context for Firm Strategy and Rivalry, Demand Conditions, and Related and Supporting Industries) can impact the potential for economic growth. While many industrial cluster studies focus on manufacturing and high tech industries, Porter (2000)

argued that the specific type of industry cluster is not as important as the presence of a cluster and the associated increased productivity; as he noted, “Improving the productivity of all industries enhances prosperity, both directly and through the influence one industry has on the productivity of others” (p. 19).

Policy makers have recently embraced cluster theory and frequently seek to support and strengthen existing clusters as a way to enhance economic performance (Porter, 1998, 2003). Cluster analysis has become an increasingly important method for identifying industry clusters in an area. Porter (2003) argued that not only local economic performance but also the overall regional appeal of an area can be strengthened by developing a viable industry focused on a specific market niche or cluster. In his analysis of the Economic Areas of the U.S. he stated that there were three types of economies: local, resource dependent and traded economies. Local industries meet the needs of local residents, while resource dependent industries are those which are located in a given area to utilize some natural resource for production, and traded industries are those that are not resource dependent and are traded with other regions. Porter argued that local industries are necessary for sufficient employment while traded economies are a requirement for economic growth and prosperity. Porter also included a tourism cluster in his study, noting that it had the lowest average wage of the clusters he used.

Recognizing that cluster theory and methodologies are still evolving and flexible, Feser and Luger (2003) suggested that cluster research be utilized as a

“general mode of inquiry.” The authors noted that most recent cluster research has focused on the advantages associated with clusters, such as knowledge spillovers and innovation and less on the physical spatial structures. As Feser and Luger pointed out, most cluster research involves qualitative analysis of interviews, surveys and other such primary data. There has been considerably less cluster research using quantitative methodology and secondary, standardized data. In their study of industrial clusters in North Carolina, Feser and Luger concluded that cluster analysis could provide a flexible and unbiased account of the economic structure if conducted properly and with a descriptive purpose rather than a prescriptive one (2003).

While industrial cluster analyses have become increasingly more popular, there have been considerably few cluster analyses of the tourism industry. Although Porter (1998, 2003) briefly discusses the presence and potential benefits of tourism-based clusters (California wine tourism, Las Vegas, tourism regions in Portugal) and the subject literature is beginning to grow, there is still a need for further empirical research on the topic. Smith (1987) was among the first to suggest a potential grouping of explicitly defined tourism industries that could be used in cluster-based economic analysis. He conducted an analysis of tourism production in Ontario, identifying four patterns (or clusters) of tourism. He collected data on specific tourism activities, such as festivals, campsites, hotel rooms, historic sites, etc. Once the data were collected, he defined tourism clusters in the region. Although much of the data he used were collected by

tourism officials, there is great potential for expansion of his methodology to NAICS and cluster analysis.

Based on Porter's theory of clusters and networks, some scholars have analyzed tourism clusters by examining tourists and their behaviors. Analyzing tourism in four Australian cities, Jackson and Murphy (2006) attempted to identify tourism business clusters. The authors conducted a survey of businesses and governmental organizations related to tourism to determine the level of perceived linkages and the structure of tourism-related organizations within each of the four cities. Their research utilized primary data to identify the presence of clusters and their work made it clear that tourism research can benefit from cluster analysis.

Similarly, Jurowski and Reich (2000) conducted a study utilizing cluster analysis in tourism. They suggested that cluster methodology can be used to identify specific market niches in the hospitality industry. Using demand data gathered from surveying potential casino customers, their work revealed three significantly different clusters of tourists when asked about specific entertainment choices. While the resulting categories of drinkers, diners and dancers cover a narrow range of activities, the results do indicate that cluster methodology is feasible in tourism research. Although the authors were clustering using demand characteristics rather than spatial proximity, they do provide clear market differentiation based on the clustering of three significantly different niches of tourism consumers.

Focusing more on spatial relationships and supply, Hjalager (2000) noted the increasing amount of research in agglomeration and industrial districts with a comprehensive review of such studies. She also pointed out the similarities that existed between tourism and other industries despite the paucity of research on tourism as an industrial district. Hjalager (2000) argued that tourism has not been included in industrial district research. As a result of the absence of tourism in industrial analyses, the author called for the treatment of tourism destinations as industrial districts in future analysis, noting there are many aspects of tourism production yet to be thoroughly examined. She concedes the failure to include tourism in industrial district studies is possibly symptomatic of the Fordist inclination to exclude services from “basic economic activities.” Hjalager makes a strong argument for the inclusion of tourism in research methodologies utilized for other industrial districts by pointing out the nature of tourism is that the consumer requires products from several different businesses to acquire the final experiential product. Hjalager’s emphasis on the role of small and medium enterprises (SMEs) is especially pertinent to this research since SMEs dominate the tourism markets of the ARC region.

In response to Hjalager’s (2000) work, Jackson and Murphy (2002) applaud Hjalager’s contribution to the literature. They note that Hjalager did not access Porter’s (1998) cluster theory and suggest it could be beneficial to tourism industry research. After much discussion of Porter’s theoretical framework and comparisons of industrial districts to clusters, Jackson and

Murphy suggest that such a cluster framework could be relevant to tourism destinations. The authors state that “industrial districts are usually local clusters of single product industries....In contrast, cluster theory refers to concentrations of interrelated but different firms...” (p. 38). Furthermore, the literature has shown that tourism is not a single product, so perhaps Jackson and Murphy have underestimated Hjalager’s theoretical framework. It is obvious that more scholars are recognizing the potential of cluster theory in the analysis of the tourism industry.

More recently, Novielli, Schmitz and Spencer (2006) discussed the importance of SMEs in tourism and the potential application of cluster theory to help determine the impact of tourism clusters on local development. They suggested that the Porter approach could be viable but thus far it had predominantly been used in large-scale analyses rather than local and regional investigations. Their definition of a tourism cluster brings together the spatial component of clusters as well as the resultant interdependencies. “Tourism clusters are the result of the co-location of complementary firms, which may not necessarily be involved in the same sector, but may benefit by pre-existing network membership and alliances’ dynamics” (p. 1143). The authors examined a niche tourism industry (healthy lifestyle tourism) found in the UK. After defining the informal cluster, a formal alliance was set up as part of the study to determine how readily interdependencies and alliances were established to further the local benefits of clustered industry.

In an effort to examine tourism clusters in Cuba, Miller, Henthorne and George (2008) noted that important to some tourism clusters are resources which may increase the destination's competitiveness as a particular tourism cluster or, indeed, may be the basis for the cluster's existence. Using Porter's diamond, the authors examined each facet in conjunction with the Cuban tourism industry. Miller et al. noted that local clusters are often more important to an economy than clusters with a majority of foreign owned firms. For future policy, the authors suggested that further product differentiation among Cuba's tourism clusters on the basis of destination resources might help to strengthen the clusters.

Michael (2002; 2007) has also examined the role of clusters in tourism research. He described the unique situation where many tourism markets thrive in peripheral locations unlike most major industry clusters which tend to be clustered in major urban core areas near large-scale labor markets and consumer demand. These smaller rural communities survive as tourist destinations because of their small scale, specialization and peripheral isolation. The localized scale of tourism functions in these regions help to assure that the community has some control of the development process due to the absence of large-scale chain companies, thereby maintaining some of the local character of the region. Michael called tourism clusters in these regions "micro-clusters." Although Michael's study of tourism micro-clusters in Australia was qualitative, it is unusual in its focus on supply-side characteristics and lends much potential for

further analysis using supply-side data in the cluster analysis of tourism resources in peripheral regions.

2.3 Supply versus Demand: The Tourism Debate

With receipts of \$856 billion in tourism (UNWTO, 2008) it might be surprising that the definition of tourism as an industry is controversial among some academics. The controversy stems from the basic treatment of tourism as a subject of study (Smith, 1988, 1991; Leiper, 1990, 2008; Wilson, 1998; Pearce, 1979). Many tourism researchers focus on demand, while others concentrate on the supply, or production, of tourism. Leiper (1990) argued that tourism was “partially industrialized” and because of this was more easily analyzed from a demand perspective. Wilson (1998) commented that the supply/demand argument was based on the question of whether tourism was an industry or a market and, while he concluded tourism was a market, he further stated the real issue was the appropriate methodology for the research question at hand. One of the earliest to identify tourism as an industry was Jafari (1974) who used an analogy of tourism as a market basket of products and services while acknowledging that the tourism industry was different from any other industry.

Regarding the multiple definitions of tourism, Smith (1988) succinctly stated, “Practitioners must learn to accept the myriad of definitions and to understand and respect the reasons for those differences” (p. 180). As the intent of this dissertation is to study the economic impact of the tourism industry on a

peripheral region, it will incorporate the supply-side construct which treats tourism as an economic industry. Supply side research defines tourism in industrial terms not based on the demand motivations of the individual tourist or traveler.

As a precursor to the supply versus demand debate, Smith (1987) conducted an analysis of tourism regions in Ontario. Using clustering methodology, Smith examined tourism resources across Ontario counties to establish tourism regions. Among the 16 tourism components he used were: the number of vacation cottages, number of ski hills, days of festivals, and other similar variables. He created indices of the tourism resources in Ontario and mapped the resultant tourism clusters to establish the specific spatial distribution of such resources. Smith noted that such understanding of the spatial distribution of tourism resources could assist policy makers who determine which counties get funding for tourism development. While Smith's focus was clearly the establishment of tourism regions in Ontario, this work was suggestive toward a supply-side construct. Additionally, Smith noted that "small towns can be heavily dependent on tourism, but a city cannot develop and support a large population without a strong mixed economy" (p. 268). Although Smith was not inclusive of many possible tourism resources, his work opened the door to further scholarly endeavors into tourism industry clusters and the definition of tourism regions using a supply-side focus.

The supply-side focus is chosen because, as Smith (1988) notes, most economic studies are of the products and processes used in an industry (i.e. tourism), not the traits of the industry's customers (i.e. tourists). He recommended that supply-side tourism research address the commodities or products the tourism industry produces. At the time Smith conducted his research, Standardized Industrial Classification (SIC) codes were used, since then they have been improved upon and are now called North American Industrial Classification System (NAICS) codes. While not every nation uses NAICS, most developed countries have a standardized industrial classification system of some sort.

Using a supply-side focus allows the scholar to examine industries using standardized production-based data. Most countries and world government organizations, such as the U.S. Census and World Tourism Organization have adopted formal industry classification systems in which each industry is carefully defined and every business is assigned to the appropriate classification as data are acquired. Surprisingly little research has been conducted using industrial classification systems such as the SIC codes or the current NAICS codes regarding the analysis of the geography of tourism.

Smith (1988) proposed a supply-side definition of tourism that would allow for a more vigorous economic spatial analysis of the tourism industry. His definition stated that "Tourism is the aggregate of all businesses that directly provide goods or services to facilitate business, pleasure and leisure activities

away from the home environment” (p. 183). Smith also recommended the use of Standard Industrial Classification codes for the analysis of the tourism production chain. Although Smith’s research is Canadian-based, similar analysis could be completed using the newer NAICS codes in the United States.

Smith (1988) recommended a wide variety of specific industries that could be included in a supply-side tourism analysis using the conventional Industry Classification schema provided by the Federal Government (i.e. SIC and NAICS). He included several general tourism sectors: accommodation, transportation, food and beverage, recreation and retail; furthermore, he utilized more specific sectors within each of those more broad sectors. Additionally, he calculated tourism ratios for each tourism-related industry sector using expenditure-based data. The ratios estimated the proportion of a business used by tourists and local residents. These ratios could be useful as a guide for identifying the essential tourism products of a destination, such as transportation, accommodations and food services; however, they might not capture the magnitude of niche products, such as agritourism, farmers markets, and festivals, that frequently thrive in under-developed peripheral regions.

Lovingood and Mitchell (1989) performed an analysis of tourism resources in South Carolina similar to the methodology advocated by Smith (1987). While Smith’s study utilized a large portion of transportation-related industries (e.g. air transportation, rail transportation, motor vehicle dealers, etc.), Lovingood and Mitchell did not include transportation or retail. Their study identified six spatial

and functional clusters of tourism production across the state of South Carolina. Although the authors did not note the population distribution associated with each cluster they did note that the largest cluster, which included counties that scored about average on all tourism components, was sparsely populated. Also sparsely populated were counties which were associated with below average tourism components. Further, it was found that counties with high urban tourism components were more densely populated. While it was not noted whether the counties with high levels of outdoor recreation components were sparsely or densely populated, the authors have laid the groundwork for future research examining urbanity in conjunction with tourism clusters.

Similarly, Roehl (1998) demonstrated the appropriateness of using industrial classification codes in his analysis of tourism production in Texas using SIC codes. Collecting SIC data for hotels, museums, air transportation, and other sectors, Roehl established the dominant type of tourism function in each Texas county by determining which category had the most establishments. Roehl next established specialization indices to describe patterns found spatially across the state. He found two categories of tourism development across Texas: nature-oriented destinations and urban tourism destinations. While Roehl found tourism growth across Texas, there were still many counties without a substantial tourism industry. Roehl noted that using such a methodology allowed for the identification of multiple tourism production systems and he recommended the use of NAICS data in future tourism production research. Although there were some potential

tourism sub-sectors that were not included in his study, Roehl greatly contributed to supply-side tourism geography with his examination of the spatial distribution and growth of select tourism industries in Texas.

Another benefit to using a supply-side focus in conjunction with cluster analysis is the ability to use location quotients (LQs) to define clusters spatially. Location quotients are a common and accepted methodology for identifying industry clusters and analyzing the relative strength of an industry in a locale. Feser and Luger (2003) noted that location quotients, factor analysis and expert opinion are three common methods for cluster identification in industrial analyses. It has also been expressed (Hofe and Chen, 2006) that most studies on industrial specialization use LQs to determine specialization for a given community or region. The literature has indicated that the use of location quotients is an appropriate methodology for establishing the presence of industrial specialization and clusters. Therefore, the tourism geography literature should also benefit from the utilization of LQs in determining niche local and regional tourism specializations.

2.4 Conclusions

There has been significant academic growth in the sub-discipline of tourism geography over the past several decades. Tourism has gradually become more accepted as a legitimate topic of inquiry for geographers and economists. Much of this increased recognition is likely a result of tourism's

greater acceptance by economists as a basic industry and the implementation of countless economic development strategies with tourism at the forefront. Despite the growth and development of tourism geography, much research is still needed for a more complete understanding of the relationships between different types of tourism development and the relative socioeconomic well-being of the communities that produce tourism. Additional work needs to be conducted to determine if there are substantive geographic and socioeconomic differentiations between rural and urban areas that have significant tourism development.

Ioannides (1995) pointed out there has been a lack of supply-side research in tourism, noting “there is a need to increase understanding concerning the contingencies leading to varying patterns of tourism development from place to place” (p. 50). He further commented that while tourism has been associated with theories of core-periphery, industrial concentration and other production theories, more empirical research is needed to tie tourism production to such models. Similarly, Britton (1991) eloquently summarized the challenge to tourism researchers when he argued that “the geographic study of tourism requires a more rigorous core of theory in order to conceptualize fully its role in capitalist accumulation, its economic dynamics, and its role in creating the materiality and social meaning of places” (p. 452). Tourism is about the production of consumer services in a given location and the spending of capital to acquire said services and associated experiences. In order to fully understand tourism production, the field must have stronger theoretical links to economic geography. For such

theory to be developed, researchers must utilize supply-side empirics in their analyses.

This dissertation will examine the tourism geography of Appalachia and the industry's socioeconomic implications for the region as a whole, as well as its rural and urban components. Using a relatively broad range of tourism-related NAICS industries and natural amenities indicators, it will be possible to establish counties with a specialization in tourism development. Once tourism specialization has been established, the industry in the region will be mapped to give a more clear understanding of the spatial distribution of the industry and its niches. This will allow for a more careful examination of the interaction between types of tourism, geographic characteristics and quality of life across the region.

CHAPTER III

RESEARCH DESIGN

3.1 The Research Hypotheses

The purpose of this dissertation is to better understand the geography and economic structure of the tourism industry in the Appalachian Regional Commission (ARC) area. More specifically, this dissertation will conduct a county-level based spatial analysis of tourism industries in the ARC with a focus on disentangling the complex core-periphery relationships that exist in the region, particularly as it relates to tourism's overall contribution to the local economy. This dissertation argues that the theoretical and conventional constructs of core-periphery and growth pole theories, while typically representative of regional economies, may not fully explain the spatial structure and economic geography of the tourism industry in the ARC region. In some ways, the ARC region is an unusual landscape in that the region is itself peripheral to the rest of the nation while also containing both core (e.g. Pittsburgh) and peripheral (e.g. Eastern Kentucky) components within the region.

It is hypothesized that there will be definitive differences between core and peripheral counties as evidenced by various ARC economic classification indicators. More specifically, it is expected that the more economically diversified

core counties will typically be classified by the ARC methodology as “attainment” or “competitive,” while peripheral counties are more likely to have “transitional” or “distressed” classifications. It is expected that the tourism industry is less able to contribute a substantive role in the economy of peripheral counties of the ARC than might be expected especially relative to the more urban core counties. In the specialized periphery, over-dependence on tourism may result in less robust economic classifications. The assumption here is that peripheral ARC counties are lagging economies characterized not only by below average wage levels but also an under-educated workforce, high levels of out-migration and limited levels of economic diversification. In this context, tourism may not be an industry that can out-perform other industries in peripheral counties with respect to employment generation, average wages and number of establishments, especially in locations that are “rich” in natural resources and scenic amenities.

The second major hypothesis proposed in this dissertation is that statistically significant positive relationships exist in the ARC as a whole between the accommodation establishment and employment LQs and average wage levels in the accommodation industry. It is thought that agglomeration effects may strengthen the industry, creating a more competitive sector. Such heightened competition within the sector is thought to possibly increase the skill level needed, and thereby result in increased average wages within the accommodation sector. Conversely, it is expected that specialized peripheral counties may not see such positive correlations because of the low absolute

numbers of accommodation establishments and jobs. While the accommodation industry may be relatively large in these small, isolated counties, the industry is likely not large enough in absolute terms to provide the level of competition needed to offer opportunities of upward mobility for workers.

The final major hypothesis is that remoteness will play a major role in tourism development in the ARC and an even greater role in the specialized periphery. It is thought that one of the major drivers of tourism in the ARC is its natural amenities and relative isolation. Therefore, it is expected that there will be a positive correlation between remoteness and accommodation establishment and employment LQs for the ARC. Furthermore, it is hypothesized that the same correlations for the specialized periphery should be stronger because geography dictates that those peripheral counties are more remote by definition than many of the core counties that are included in the ARC but not in the specialized periphery.

3.2 Core-Periphery Theory and Appalachia

Appalachia, as defined by the Appalachian Regional Commission, was selected as the study area for this dissertation. The region includes 410 counties and seven independent cities across a 13 state area of the eastern United States. The population of the ARC region totaled nearly 24 million in 2007, covering an area of 200,781.25 miles². The region was selected for its geographic diversity of urban and rural places and because it is a region shaped

by explicit core-periphery relationships. The region has numerous tourism amenities, while the President's Appalachian Regional Commission has long placed a high priority on the tourism industry as an economic development strategy for the region (PARC, 1964). While many of the counties of the ARC region can be characterized as rural, there are also many major cities and counties in the region that are highly urbanized and economically diverse.

3.2.1 Core-Periphery Definitions

A good starting point for defining core and peripheral counties is the U.S. Census Bureau which has developed comprehensive definitions for urban and rural places that includes the following:

- Urban—All territory, population and housing units in urban areas, which include urbanized areas and urban clusters. An urban area generally consists of a large central place and adjacent densely settled census blocks that together have a total population of at least 2,500 for urban clusters, or at least 50,000 for urbanized areas. (U.S. Census Bureau, 2004)
- Rural—Territory, population and housing units not classified as urban. Rural classification cuts across other hierarchies and can be in metropolitan or non-metropolitan areas (U.S. Census Bureau, 2004)

However, the U.S. Census Bureau definitions were not developed for the county level geographic unit; therefore, these conventional urban and rural definitions were modified in this dissertation to make it possible to target urban core counties that are substantial in both absolute and relative terms:

- Urban or core counties are defined as counties with both a total population over 50,000 persons and an urban population of greater than 50 percent of the total county population
- Rural or peripheral counties are those counties with a total population of under 50,000 persons or less than 50 percent of the total county population being urban
- Major cities in this dissertation are those cities located within a core county which also have a population of over 50,000

Only counties that have a total population greater than 50,000 and 50 percent or more of the population residing in urban places are considered core counties in this dissertation. For example, counties that have a substantial percentage of the population in urban places, but are relatively small in absolute terms, are not considered urban. Conversely, peripheral counties are small in either absolute or relative terms. Using these definitions there are 86 urban counties in the ARC and 324 peripheral counties and seven independent cities. All data for this dissertation have been collected at the county level with the exception of seven independent cities in Virginia.

3.2.2 ARC County Economic Status

The ARC was established to improve the economic circumstances of its member counties. As there is great economic variation across the region, the ARC has developed a classification system of four designations to better identify the relative economic status of each county. The ARC classification system is used in this dissertation to provide a broader context to the economic status of

each county for the analysis of the tourism industry. The ARC (2005) defines these classification designations as follows:

- **Attainment**—Attainment counties have economic indicators (three-year average unemployment, per capita market income, and poverty) equal to or better than the national averages.
- **Competitive**—Competitive counties have three-year average unemployment rates and poverty rates equal to or better than the national average, and per capita market income equal to or greater than 80 percent, but less than 100 percent, of the national average.
- **Transitional**—Transitional counties have rates worse than the national average for one or more of the three economic indicators (three-year average unemployment, per capita market income, and poverty), but do not meet the criteria for the distressed level.
- **Distressed**—Distressed counties are the most economically depressed counties. These counties have three-year average unemployment rates at least 1.5 times the national average, per capita market income no greater than two-thirds of the national average, and poverty rates at least 1.5 times the national average; OR they have at least twice the national poverty rate and meet the criteria for either the unemployment or the income indicator.

3.3 Tourism Definitions and Specialization

Although it is acknowledged that tourism is based upon consumer or individual tourist-based demand, this dissertation approaches tourism from a supply-side or industrial perspective and as such will define the tourism industry based upon production. Tourism is a complex industry with many niche markets and corresponding industrial sub-sectors. It has been argued that the tourism industry is comprised of several travel related industries which in combination can form a larger and broader-based tourism product. For example, the tourism industry includes both producer (e.g. convention facilities) and consumer (e.g. restaurants) services; consequently, a broad range of business and recreational needs can be met via the tourism industry.

This dissertation does not utilize an overarching definition of tourism, but instead provides multiple definitions of the industry. In this dissertation, tourism is defined using the US Office of Management and Budget North American Industrial Classification (NAICS) system. As there is no single specific tourism industry definition within the NAICS classification system, it is necessary to determine which NAICS codes to include in any assessment of tourism-based industries.

3.3.1 Tourism Definitions

Tourism has been defined by the UNWTO to include activities which serve the needs of consumers who have traveled overnight outside of their usual

environment for business or recreation purposes and excludes day trippers.

Although there are a variety of tourism products that serve individual tourists,

some of these industries also serve residents. One of the “purest” forms of

NAICS codes regarding tourism is NAICS 721—Accommodation and is defined

as

- NAICS 721—*Accommodation* includes establishments which provide lodging to travelers. This sector includes motels, hotels, RV parks, campgrounds, as well as bed and breakfast inns.

Other forms of tourism will be assessed although the more indirect tourism related industries also partly serve resident demand. These more indirect tourism activities were selected to represent various niche components of the tourism industry in the ARC region. While these industries are not required for tourism to exist, they provide a more comprehensive measure of the economic geography of the tourism industry. The following NAICS-defined sectors were chosen to assess the more indirect components of the tourism industry:

- NAICS 445—*Food and Beverage Stores* includes establishments that display and retail food and beverages. This category includes grocery stores as well as specialty food stores and farmer’s markets. It is thought that specialty food and beverage stores such as dessert and wine shops may serve as a component of food and wine tourism in the region.
- NAICS 451—*Sporting Goods, Hobby, Book and Music Stores* includes establishments that provide knowledge and merchandise for retail purchase for various leisure and sports activities. This category includes sporting goods, which would reflect businesses

selling fishing, white-water rafting, golf, ski and hiking equipment within the region.

- NAICS 453—*Miscellaneous Store Retailers* includes establishments that operate as gift and souvenir shops, art dealers, and a variety of other retail niches not specified elsewhere within the NAICS. This category includes gift and souvenir shops as well as art dealers and flea markets which could be an important component of a more diverse tourism destination.
- NAICS 531—*Real Estate* includes establishments that provide services to sell, manage and lease real estate. Popular tourism destinations often have a higher proportion of vacation homes. This sector will capture some of this component of the tourism industry.
- NAICS 532—*Rental and Leasing* includes establishments that rent or lease goods to consumers. Businesses included within this sector are car rental, recreational goods rental, and movie rental among others. The rental of sporting goods such as skis, bicycles and boats could be considered an appropriate component of many nature-based tourism niches.
- NAICS 71—*Arts, Entertainment and Recreation* includes establishments that provide services or facilities to meet cultural, entertainment and recreational demands. Included in this sector are companies associated with the production of live entertainment, events and exhibits, businesses such as museums that preserve or exhibit cultural attractions and also businesses that provide the opportunity for consumers to participate in recreational activities.
- NAICS 722—*Food Services and Drinking Places* includes establishments that prepare food and beverages for immediate consumption.

Within each NAICS sector, several key economic indicators have been chosen to effectively capture the spatial variation in the economic geography of the tourism industry in the ARC region including:

- Absolute and Relative Employment—Using aggregate and relative employment totals as an indicator of economic vitality can provide insight into the relative strength of a given tourism-based industry.
- Number of Establishments—Utilizing establishments in conjunction with employment figures can give a degree of insight into the characteristics of an industry and local economy. For example, an industry with few establishments but large numbers of jobs may indicate the presence of larger corporations whereas, numerous establishments and lower employment numbers might indicate a greater degree of small businesses.
- Average Annual Wage (\$)—This indicator can provide a clearer understanding of the skill and education levels as well as the related economic impacts associated with a given sector.

3.3.2 Tourism Specialization and Location Quotients

This dissertation will also calculate location quotients (LQs) to measure varying levels of tourism specialization by county. LQs are commonly used to determine level of industry specialization and can be thought of as a ratio of ratios. Calculating the location quotient is achieved by comparing the county level data to the overall regional data to determine the relative importance of the industry for the region. LQs of around 1 are what would be expected if the industry is primarily meeting local needs. Conversely, LQs significantly higher than 1 would indicate the industry has the potential for “exporting” or attracting large numbers of tourists from outside the local economy. For example, NAICS 722 (Food Services and Drinking Places) is an industry that often meets local resident demand while simultaneously attracting tourist expenditures. Such a phenomenon is likely to occur when higher NAICS 722 LQs are found.

The specific equation used in this dissertation to determine LQ is as follows using Ashe County employment in the Accommodation (721) sector as a practical example:

$$\frac{\left[\frac{721 \text{ Employees in Ashe County}}{\text{Total Employees in Ashe County}} \right]}{\left[\frac{721 \text{ Employees in ARC}}{\text{Total Employees in ARC}} \right]}$$

3.4 Remoteness Variables

Tourism development in the ARC is expected to be largely driven by natural amenities and remoteness. As remoteness is a qualitative variable this dissertation will use surrogate quantitative measures to evaluate remoteness in the region. Variables considered surrogates for remoteness are

- Percent of land cover designated as National Forest Service land
- Percent of land cover designated as National Park Service land

Those variables were chosen because they are defined at the federal level and therefore, are consistent throughout the region. Also, there is a great deal of land throughout the ARC with these two designations.

3.5 Caveats and Considerations

Careful consideration was taken in selecting NAICS and other indicators that would capture a substantial portion of the tourism industry in the ARC, although it

is acknowledged that some niches may have been overlooked. All NAICS were carefully examined for any contribution to the tourism industry. Sectors that were thought to be relevant and provide some component to the tourism industry in the ARC were selected. Tourism is an industry rapidly growing and new niches are constantly created; because of the dynamic nature of consumer products like tourism, it is possible some niches may have been left out. For example, this dissertation is not examining possible niches such as antiques tourism or religious tourism. In addition to the NAICS sectors discussed in this Chapter, other indicators were utilized to capture the natural amenities present in many counties.

CHAPTER IV

FINDINGS

4.1 Geographic Distribution of Tourism Indicators

Across the Appalachian Regional Commission (ARC) area tourism brings over 1.3 million jobs in more than 98,000 different establishments. These tourism jobs generated nearly \$17 billion in total wages and comprised about 18 percent of the total jobs for the region in 2005. It is clear that the tourism industry is a major component of the ARC economy and is capable of shaping the economic geography of the region. Less well understood is how the tourist industry might contribute to the quality of life of different parts of the ARC region, particularly given the acute core-periphery differences with respect to employment opportunity and wage levels. The overall purpose of this dissertation is to disentangle these core-periphery differences as they relate to specific elements of the tourist industry, beginning with an analysis of the economic geography of tourist accommodation.

4.1.1 Accommodation Establishments

Across the entire ARC region, there were over 5,000 accommodation establishments in 2005 (Figure 1) with an average of 12 accommodation establishments per county. Those 5,000 accommodation establishments were

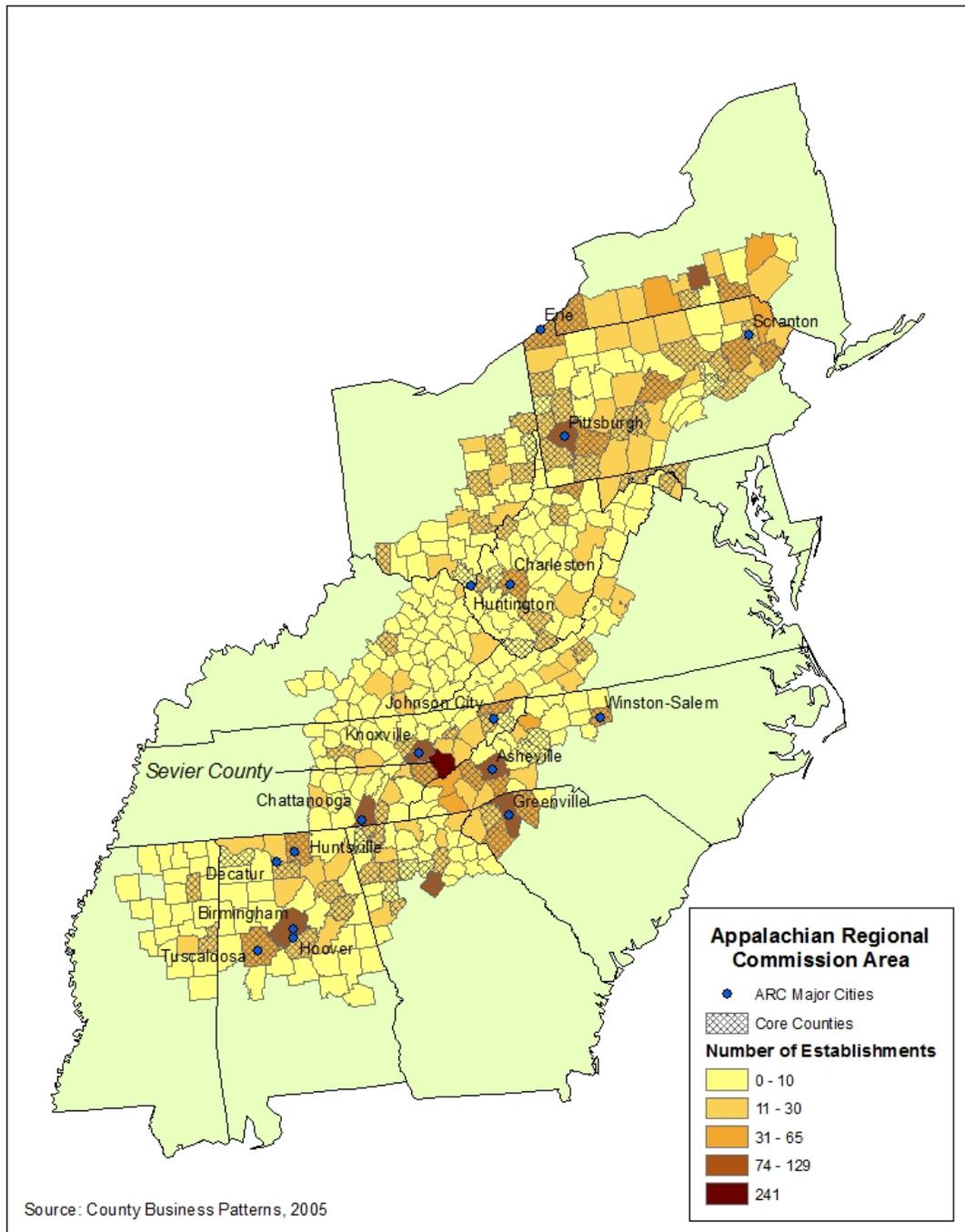


Figure 1. Accommodation Establishments by ARC County, 2005

distributed nearly equally between ARC core and peripheral counties. However, there were only 86 core counties while there were 331 peripheral counties, suggesting that urban counties were supporting more of these establishments than were the peripheral counties. For example, those counties with the greatest absolute number of accommodation establishments were predominantly core counties like Allegheny County, PA (Pittsburgh), Jefferson County, AL (Birmingham) and Knox County, TN (Knoxville). As expected, core counties had a higher average with 29 establishments per county compared to peripheral counties which had an average of just eight per county.

Table 1 lists the top 20 counties in the ARC based on the number of accommodation establishments. The top 20 counties generated nearly one-third (1,583) of all tourist accommodations in the ARC region, suggesting a process of geographic concentration underlies the geography of ARC accommodation establishments for much of the region. Nearly all of the top counties were associated with a metro area, suggesting that a large concentration of accommodation establishments is often found in conjunction with population centers. Of these top performing counties, only four were peripherally located and none were “distressed” based on the ARC designations. Such a distribution indicates that with regards to the number of accommodation establishments, urban centers and their associated population and infrastructure are important for large concentrations of such businesses.

Table 1. ARC Counties Ranked by Number of Accommodation Establishments, 2005

| Rank | County, State | Core/Peri. | ARC Status | Estab. | Percent of Total |
|------|------------------|------------|--------------|--------|------------------|
| 1 | Sevier, TN | Periphery | Transitional | 241 | 9.0% |
| 2 | Allegheny, PA | Core | Attainment | 129 | 0.4% |
| 3 | Buncombe, NC | Core | Competitive | 110 | 1.6% |
| 4 | Jefferson, AL | Core | Transitional | 105 | 0.6% |
| 5 | Gwinnett, GA | Core | Attainment | 98 | 0.5% |
| 6 | Knox, TN | Core | Transitional | 91 | 0.8% |
| 7 | Hamilton, TN | Core | Competitive | 80 | 0.9% |
| 8 | Greenville, SC | Core | Competitive | 79 | 0.7% |
| 9 | Tompkins, NY | Core | Transitional | 74 | 3.3% |
| 10 | Monroe, PA | Core | Transitional | 65 | 1.8% |
| 11 | Tuscaloosa, AL | Core | Transitional | 57 | 1.4% |
| 12 | Swain, NC | Periphery | Transitional | 57 | 13.4% |
| 13 | Centre, PA | Core | Transitional | 57 | 1.7% |
| 14 | Haywood, NC | Core | Transitional | 53 | 3.5% |
| 15 | Erie, PA | Core | Transitional | 53 | 0.8% |
| 16 | Wayne, PA | Periphery | Transitional | 52 | 3.2% |
| 17 | Forsyth, NC | Core | Attainment | 46 | 0.5% |
| 18 | Westmoreland, PA | Core | Transitional | 46 | 0.5% |
| 19 | Madison, AL | Core | Attainment | 45 | 0.6% |
| 20 | Watauga, NC | Periphery | Transitional | 45 | 2.7% |

Source: U.S. Census Bureau, County Business Patterns

On the other end of the spectrum, analysis of all 417 counties and independent cities located in the region revealed that 26 counties in the ARC region did not have a single accommodation establishment. All of those 26 counties and also the bottom-ranked 130 (one-third) counties were peripheral and over half of those were classified as economically “distressed” by the ARC. Those 130 counties generated a total of 186 tourist accommodation establishments (about 4 percent of the ARC regional total) suggesting that large

parts of the ARC region play a negligible role in shaping the economic geography of the tourist industry.

More specifically, large portions of Kentucky, West Virginia, Alabama, Mississippi and Tennessee have a limited accommodation sector. Further illustrating the small impact of tourism on these counties, accommodation establishments, on average, make up only one-half percent of all types of business establishments. Most of the bottom-ranked 130 counties were small with population averaging about 17,000 per county and only two of those counties had a population greater than 40,000. Many of those counties experienced high poverty levels and low median incomes and additionally, many had no interstate access, likely further limiting economic growth.

Kentucky particularly exhibited a limited accommodation sector with 10 counties having no accommodation establishments. In fact, over 43 percent of Kentucky's ARC counties had one or fewer accommodation establishments, compared to the 17 percent in the ARC. Most of the accommodation-scarce counties were found clustered in east-central Kentucky. Owsley and Martin Counties, KY and Hancock County, TN all had zero accommodation establishments and also had high poverty rates at 45.5, 42.2 and 39.5, respectively. These counties had unemployment rates and poverty rates above the ARC regional averages, and very low educational attainment, with only around 50-55 percent of the population with a high school diploma or more. In

short, such indicators point toward economies that struggled to support the skills needed for many industries.

Sevier County, Tennessee had the most accommodation establishments in the ARC region with 241. Sevier County was classified by the ARC as “transitional,” indicating a local economy that is weaker than the national average. Moreover, Sevier is the only county in the top 10 that was classified as a peripheral county. The county had a rather modest population of 83,000 and contains the cities of Gatlinburg and Pigeon Forge, which have largely tourism-based economies. Tourism in Sevier County began to grow in the early 1900s, with the Smoky Mountains as a major draw. The first hotel was built in 1916 and, in 1934, the area saw the first real impetus for tourism development with the opening of the Great Smoky Mountains National Park (GSMNP). Since that time tourism has expanded to become a major industry for the county with numerous man-made attractions, including ski facilities, as well as the natural amenities afforded by the Smoky Mountains. GSMNP has grown to be the most popular National Park in the country with over 9 million annual visitors. Over one-third of the land in Sevier County is designated as National Park Service land. Sevier County also hosts a variety of family-oriented, affordable accommodations, including campgrounds, bed and breakfasts and hotels affiliated with multinational chains, such as Best Western and Holiday Inn. Many of the independent establishments have a mountain lodge or rustic theme and most are priced between \$75 and \$140 per night.

Allegheny County was the second-ranked county in the ARC in terms of number of accommodation establishments (129), but the market appeal and location differs dramatically from top-ranking Sevier County. Allegheny County is home to numerous Fortune 500 companies and consequently its tourism is based more on business travel than the pleasure-based tourism of Sevier County. It had a population of 1.2 million and was clearly a much more urban county, since it contains Pittsburgh. It also had a wide variety of accommodation types. Although Allegheny County had fewer accommodation establishments than Sevier County, it had more upscale hotels such as the Omni William Penn in Pittsburgh with a standard nightly rate of \$239. The Omni Penn was built in 1916 and has nearly 600 rooms and suites. The Marriot Renaissance is also located in an historic building in Pittsburgh and is also considered to be an upscale hotel. The Renaissance has 300 rooms and suites and charges a base nightly rate of \$249. Both of these hotels offer numerous business services as well as fine dining and more deluxe personal services, such as valet dry-cleaning and baby-sitting.

The third-ranked county was Buncombe County, NC with 110 establishments. Buncombe County, NC is a moderately sized county with a population of over 225,000, with Asheville as the county seat, and attractions such as Biltmore Estate. Biltmore Estate is a private home that was completed in 1895 for the Vanderbilt family. At 250 rooms and 175,000 square feet, it is still the largest private home in the United States. The estate was opened to the

public in 1930 and became a museum in 1956. Since that time the 8,000 acre estate has become a popular attraction, receiving over 1 million visitors annually. Other attractions, such as the Blue Ridge Parkway and mountain recreation like hiking, golf, fishing and rafting, are also available to a wide variety of tourist typologies. Accommodation establishments are varied and include campgrounds, multinational hotels chains, bed and breakfasts and resorts. While there are many luxury B & Bs and resorts, most focus more on providing personal and recreational amenities rather than business-related amenities for guests.

Overall, there were clear geographical differences in the distribution of tourism accommodation establishments across the ARC. The northern and southern portions of the region had far more accommodation establishments than did the counties in the central portion of the ARC. As anticipated in the first hypothesis, this pattern followed the pattern of poverty in the region as well, with the central counties of the ARC having the highest levels of poverty and many of them being classified as “distressed” by the Appalachian Regional Commission. In 2005, the national poverty rate was 13.3 percent and more than 75 percent of the ARC counties had poverty rates that were higher than the national average. Dozens of the centrally located ARC counties had poverty rates above 25 percent while Owsley and Martin counties in Kentucky had poverty rates over 40 percent. Conversely, all of the top 20 counties listed in Table 1 had poverty rates below 25 percent, although many of these counties had poverty rates higher than the national average.

The relative spatial distribution of accommodation establishments as measured by location quotients was dramatically different from the spatial distribution of accommodation establishments in absolute terms (Figure 2). Specialized and geographically concentrated accommodation establishment clusters existed in the Smoky Mountain portions of North Carolina, Georgia and Tennessee, in addition to several other areas of specialization along the northern Virginia/eastern West Virginia border and along the southern New York/northern Pennsylvania border. Eighteen of the top 20 counties for accommodation LQs were classified as peripheral counties (Table 2). This indicates a disproportional dependence on tourism accommodation development for these counties in comparison to the more diversified urban core counties in the ARC region. Furthermore, as hypothesized, none of the top 20 ranked counties based on LQs were classified as healthy economies by the ARC status, indicating that despite their relative success in attracting a disproportionate amount of tourism investment, the counties are generally not economically robust.

Swain County, North Carolina had the highest LQ score (14.18), indicating a substantial level of specialization in tourist accommodation. Swain County is a rather small county with a population of just under 14,000 and is home to major tourist towns including Cherokee and Bryson City. For those seeking cultural attractions, Cherokee offers many cultural activities, such as tours of the Oconaluftee working village with demonstrations of traditional activities like basketry, canoe hulling and many others. There are also dramatic performances

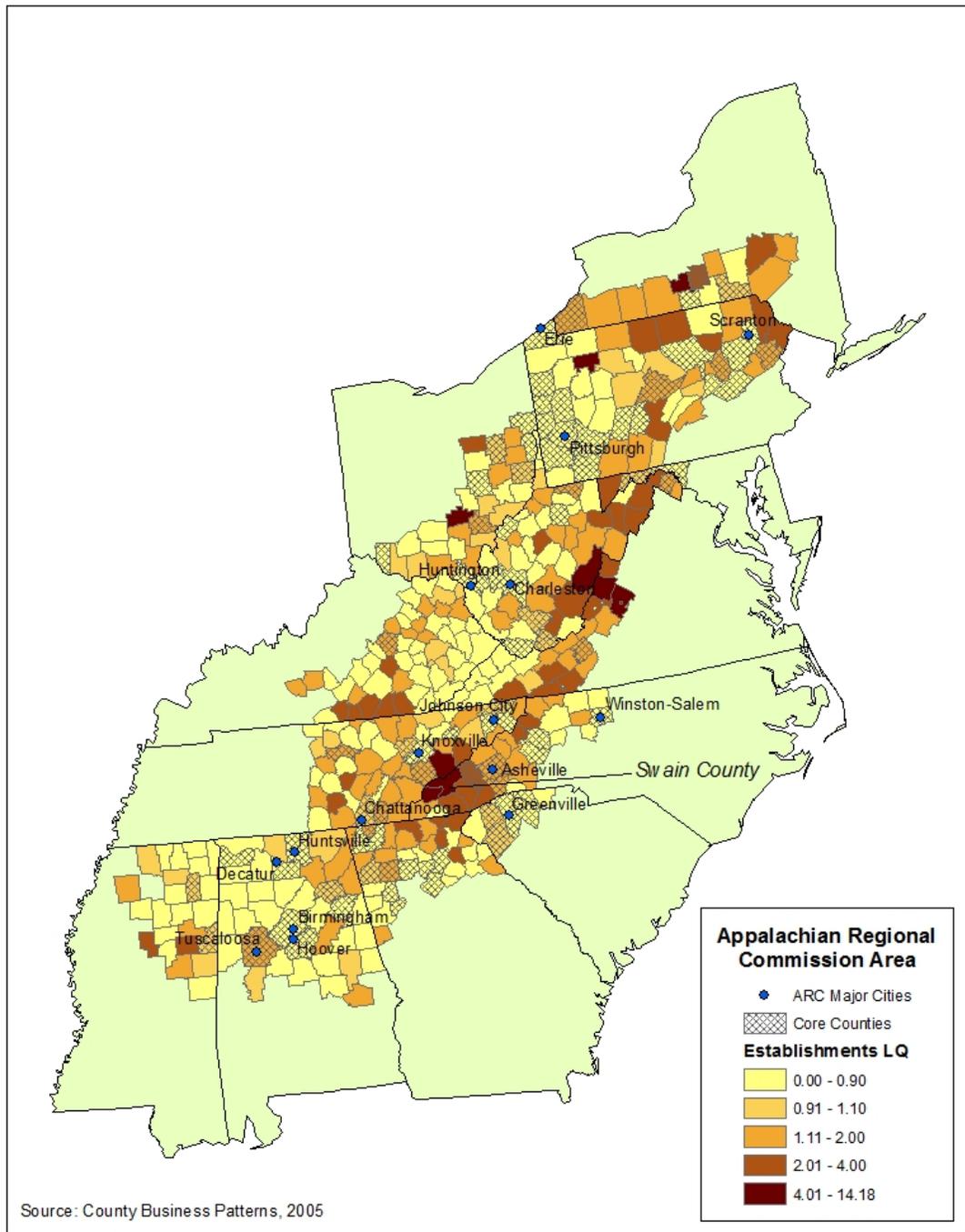


Figure 2. Accommodation Establishment Location Quotients by ARC County, 2005

Table 2. ARC Counties Ranked by Accommodation Establishment LQs, 2005

| Rank | County, State | Core/Periphery | ARC Status | LQ |
|------|--------------------|----------------|--------------|-------|
| 1 | Swain, NC | Periphery | Transitional | 14.18 |
| 2 | Sevier, TN | Periphery | Transitional | 9.44 |
| 3 | Bath, VA | Periphery | Transitional | 8.38 |
| 4 | Lexington city, VA | Periphery | N/A | 7.36 |
| 5 | Forest, PA | Periphery | Transitional | 6.17 |
| 6 | Schuyler, NY | Periphery | Transitional | 5.88 |
| 7 | Rockbridge, VA | Periphery | Transitional | 5.37 |
| 8 | Graham, NC | Periphery | Distressed | 4.36 |
| 9 | Pocahontas, WV | Periphery | Transitional | 4.04 |
| 10 | Hocking, OH | Periphery | Transitional | 4.01 |
| 11 | Banks, GA | Periphery | Transitional | 3.87 |
| 12 | White, GA | Periphery | Transitional | 3.85 |
| 13 | Rabun, GA | Periphery | Transitional | 3.76 |
| 14 | Haywood, NC | Core | Transitional | 3.71 |
| 15 | Pike, PA | Periphery | Transitional | 3.63 |
| 16 | Tompkins, NY | Core | Transitional | 3.53 |
| 17 | Wayne, PA | Periphery | Transitional | 3.41 |
| 18 | Sullivan, PA | Periphery | Transitional | 3.29 |
| 19 | Carroll, VA | Periphery | Transitional | 3.21 |
| 20 | McCreary, KY | Periphery | Distressed | 3.17 |

Source: U.S. Census Bureau, County Business Patterns

nightly that re-enact the tribe's history. In 1997, Harrah's Casino opened on the reservation, a casino and hotel owned by the Cherokee and operated by Harrah's. In addition to the Cherokee Indian reservation, Swain County also boasts more acreage in the Great Smoky Mountains National Park than any other county in the region with over 217,000 acres of parkland. Bryson City acts as a gateway into the GSMNP and also to water-based recreation with the Nantahala River drawing 200,000 paddlers annually (Swain County Chamber of Commerce, 2009) and the 10,000 acre Fontana Lake nearby. These amenities attract fishermen and tourists interested in kayaking, canoeing, rafting and

tubing. The variety of attractions in Swain County likely explains the relatively large accommodation investment since the 57 accommodation establishments made up 13 percent of the county's 425 total number of establishments.

The second-ranked county based on accommodation location quotients was Sevier County, TN with an LQ of 9.44. Sevier County was somewhat unusual in that it had more accommodation establishments in absolute terms (241) than any other county, as well as remarkably high levels of specialization. In fact, nearly nine percent of all forms of establishments in Sevier County were categorized as accommodation establishments whereas accommodation establishments made up only about one percent of all establishments in the ARC region. When compared to the overall ARC region, Sevier County was far more dependent upon the tourism industry and potentially less economically diversified than was typical for ARC counties.

The third ranked county was Bath County, VA with an LQ of 8.38. Bath had only 13 accommodation establishments, but those made up eight percent of the 164 total establishments that existed in the county. Bath was an extremely small county with a population of less than 5,000. Despite the small population, Bath County is home to a 5,000 acre resort of nearly 500 rooms and suites. The Homestead was established in 1766 to provide visitor access to the natural hot springs in the area. The resort now provides a full spectrum of recreational opportunities and amenities, including a championship golf course and alpine ski facilities as well as fine dining and spa treatments. Nightly room rates start

around \$175 and range to around \$505 for a one bedroom suite. Other than the Homestead, most of the accommodation establishments in Bath County were relatively small with less than 10 rooms and modest nightly rates of less than \$100. In fact, six of the 13 accommodation establishments were classified as Bed & Breakfast Inns and there were no chain hotels present in the county.

Although there were two core counties rated among the top 20 for accommodation establishment LQs, both of those were just over the threshold between core and periphery and could be described as modest in size with economies classified as “transitional” by the ARC. The two core counties in the top 20 included Haywood County, NC (14th) and Tompkins County, NY (16th). Haywood County had a population of about 66,000 and also benefited from Asheville, NC and Gatlinburg, TN, which were located in adjacent counties. In addition to the spillover effect from those tourist draws, Haywood County also had significant acreage in the Great Smoky Mountains National Park and had a couple of small amusement parks, such as Ghost Town in the Sky. Haywood County was also somewhat more urbanized than some of its neighboring counties, and it is not surprising that it had several chain hotels such as Days Inn and Best Western in addition to several modestly priced bed and breakfast inns and campgrounds. Tompkins County, NY was slightly bigger with a population of 100,000 and likely received a boost to its tourist sector from Cornell University which is located in the county, in addition to its location in the popular Finger Lakes region of New York.

4.1.2 Accommodation Employment in the ARC Region

Across the Appalachian Regional Commission area, there were over 87,000 jobs in the tourist accommodation industry. The geographic distribution of these jobs is noteworthy in that urban counties and those counties adjacent to major cities had the highest numbers of accommodation jobs in the region (Figure 3). Generally speaking, job totals were highest in counties containing and adjacent to the Pittsburgh, Atlanta and Birmingham metropolitan areas. Considerably fewer accommodation jobs were found in absolute terms in the central part of the ARC region across Kentucky and there were also few jobs in Mississippi. Not surprisingly, most of the highest numbers of accommodation jobs were found in the ARC core counties. When considering the top 20 counties in terms of accommodation job totals, 15 of the 20 were core counties (Table 3) and none were considered to be economically “distressed.”

Overall, the 86 core counties generated nearly 52,000 accommodation jobs or, around 60 percent of the 87,000 ARC jobs found in the tourist accommodation sector. The 331 peripheral counties generated the remaining 36,000 jobs, which was about 40 percent of the total accommodation jobs in the ARC, indicating that tourist accommodation jobs were even more geographically concentrated than establishments. While core counties typically had the most

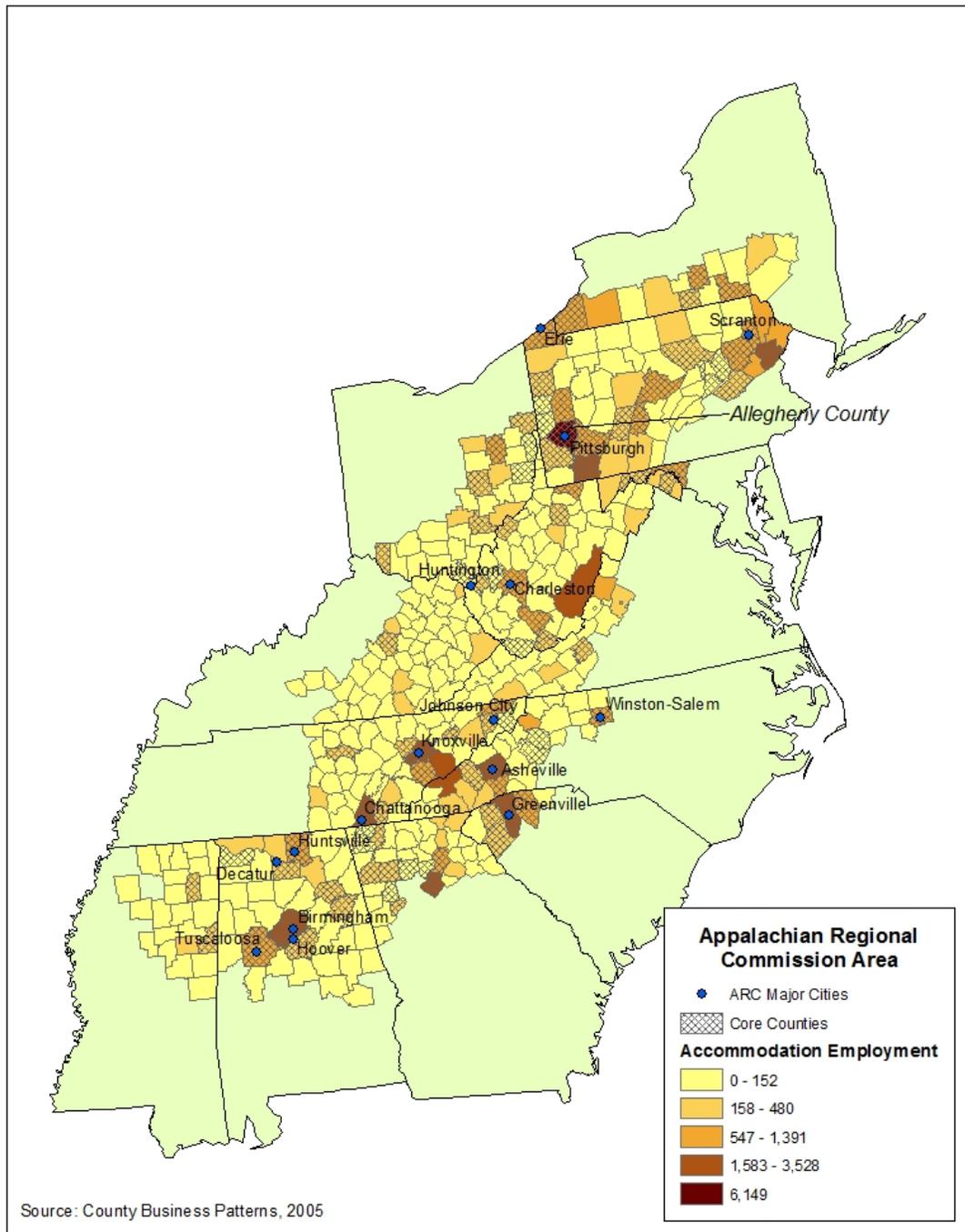


Figure 3. Accommodation Employment by ARC County, 2005

jobs, often those jobs played a smaller role in the overall local economy of the county relative to the peripheral counties. The more diversified economies of the major urban areas generated greater employment opportunities relative to the peripheral counties. Conversely, the less diversified economies of peripheral counties seemed to be far more dependent on the tourist sector for jobs.

Table 3. ARC Counties Ranked by Accommodation Employment, 2005

| Rank | County, State | Core/Peri. | ARC Status. | Emp. | Percent of Total |
|------|------------------|------------|--------------|-------|------------------|
| 1 | Allegheny, PA | Core | Attainment | 6,149 | 0.9% |
| 2 | Sevier, TN | Periphery | Transitional | 3,528 | 11.4% |
| 3 | Jefferson, AL | Core | Transitional | 2,618 | 0.8% |
| 4 | Fayette, PA | Core | Transitional | 2,324 | 6.5% |
| 5 | Buncombe, NC | Core | Competitive | 2,252 | 2.2% |
| 6 | Monroe, PA | Core | Transitional | 2,093 | 4.4% |
| 7 | Swain, NC | Periphery | Transitional | 1,750 | 30.6% |
| 8 | Greenbrier, WV | Periphery | Transitional | 1,750 | 15.5% |
| 9 | Pocahontas, WV | Periphery | Transitional | 1,750 | 49.5% |
| 10 | Greenville, SC | Core | Competitive | 1,740 | 0.8% |
| 11 | Hamilton, TN | Core | Competitive | 1,650 | 0.9% |
| 12 | Gwinnett, GA | Core | Attainment | 1,583 | 0.5% |
| 13 | Knox, TN | Core | Transitional | 1,583 | 0.8% |
| 14 | Wayne, PA | Periphery | Transitional | 1,391 | 9.9% |
| 15 | Madison, AL | Core | Attainment | 1,330 | 1.0% |
| 16 | Luzerne, PA | Core | Transitional | 1,245 | 1.0% |
| 17 | Kanawha, WV | Core | Transitional | 1,111 | 1.2% |
| 18 | Chautauqua, NY | Core | Transitional | 1,037 | 2.3% |
| 19 | Forsyth, NC | Core | Attainment | 954 | 0.6% |
| 20 | Westmoreland, PA | Core | Transitional | 936 | 0.7% |

Source: U.S. Census Bureau, County Business Patterns

Allegheny County in Pennsylvania, which contains the city of Pittsburgh, had the most accommodation jobs, with over 6,000, although this was only about one percent of the total jobs for the county. This small percentage indicated that,

while there were a lot of accommodation jobs in Allegheny County, the county was not dependent on those jobs. Allegheny County had the highest employment levels in the healthcare (NAICS 62) sector, with 25 percent of all jobs (Table 4.) Although retail was the sector with the second largest employment levels, the county still experienced respectable employment levels in important growth industries such as education, professional services and finance.

Table 4. Top Industries by Employment in Allegheny County, PA and Sevier County, TN, 2005

| <i>Allegheny County, PA</i> | | |
|-----------------------------|--------------|------------------------|
| Industry | Jobs | % of Total Jobs |
| 62: Healthcare | 120,567 | 18% |
| 44-45: Retail Trade | 75,355 | 11% |
| 54: Professional | 53,843 | 8% |
| 52: Finance | 46,440 | 7% |
| 61: Education | 45,610 | 7% |
| 721: Accommodation | 6,149 | 1% |
| <i>Sevier County, TN</i> | | |
| Industry | Jobs | % of Total Jobs |
| 44-45: Retail Trade | 7,828 | 25% |
| 721: Accommodation | 3,528 | 12% |
| 71: Arts, Entertainment | 2,185 | 7% |
| 53: Real Estate | 2,019 | 7% |
| 23: Construction | 1,929 | 6% |
| 62: Healthcare | 1,563 | 5% |

Source: US Census Bureau, County Business Patterns

The second ranking county for accommodation employment was Sevier County, TN with over 3,500 jobs. These job totals are proportionally more significant since those jobs made up 12 percent of the total jobs for the county compared to just one percent in Allegheny. The top industries in Sevier County

based on employment were retail trade, accommodation and arts and entertainment, reflecting an economy focused on providing attractions. Furthermore, industries such as professional services and finance had only two percent and three percent of the county's employment share, respectively. Education, which often reflects a large proportion of a county's employment, made up less than one percent of total employment in Sevier County.

Ranked third for accommodation employment was Jefferson County, AL. Jefferson County is home to the city of Birmingham and the University of Alabama at Birmingham and generated over 2,600 accommodation jobs. As might be expected for an urban core county, and similar to the ARC region as a whole, the impact of those jobs was not substantive since they made up less than one percent of the total jobs for the county.

As expected, the relative geographic distribution of accommodation jobs was markedly different from the absolute geography of accommodation employment (Figure 4). The highest LQs were found in the peripheral counties of the Poconos, Smoky Mountains and the Washington DC "tourism-shed" of western Virginia and eastern West Virginia. Only one of the top 20 counties ranked by LQ was a core county, indicating a high level of tourism specialization

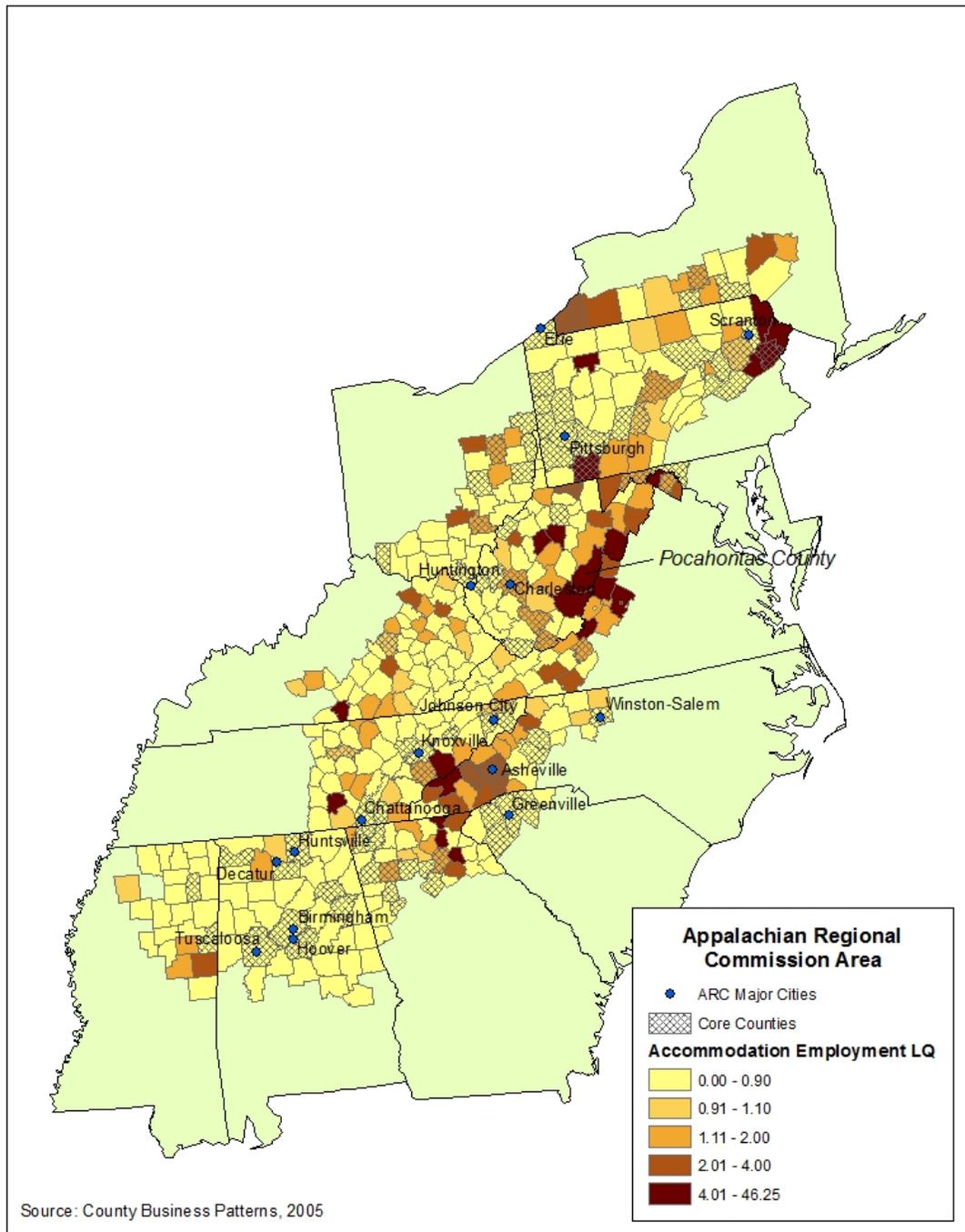


Figure 4. Accommodation Employment Location Quotients by ARC County, 2005

in several peripheral counties (Table 5). As expected, the lowest performing counties were also peripheral. While some peripheral counties seemed to have a strong tourism sector, 26 peripheral counties had no accommodation jobs or establishments. Pocahontas County, WV had the highest accommodation employment LQ with a score of 46.25, indicating an extreme dependence on the tourism industry for employment. The county was very small, with a population of close to 9,000. Of the 3,500 jobs in the county, around half of those were in the accommodation sector. While there were a few small inns, it is likely that the majority of this employment was associated with lodging at the 1,400 unit Snowshoe Resort. Snowshoe is primarily a ski resort, but also offers year-round recreation, such as biking, golfing and fishing.

Bath County, VA was the second-ranked county for relative accommodation employment, with an LQ of 38.51. As previously mentioned, the county is home to The Homestead, a large resort which employs around 850 year-round employees, according to the corporate website. As there were only about 1,800 jobs in total in Bath County, the 850 jobs offered by The Homestead, demonstrated a clear dependence on tourism accommodation for employment in Bath County.

Ranked third in accommodation employment LQs was Swain County, NC with an LQ of 28.58. Swain County had just over 5,700 total jobs and 1,750 of those, or 31 percent, were in the accommodation sector. Swain County has numerous chain hotels such as Holiday Inn, Hampton Inn and Econo Lodge, as

Table 5. ARC Counties Ranked by Accommodation Employment LQs, 2005

| Rank | County, State | Core/Periphery | ARC Status | LQ |
|------|--------------------|----------------|--------------|-------|
| 1 | Pocahontas, WV | Periphery | Transitional | 46.25 |
| 2 | Bath, VA | Periphery | Transitional | 38.51 |
| 3 | Swain, NC | Periphery | Transitional | 28.58 |
| 4 | Craig, VA | Periphery | Transitional | 16.40 |
| 5 | Greenbrier, WV | Periphery | Transitional | 14.52 |
| 6 | Sevier, TN | Periphery | Transitional | 10.67 |
| 7 | Towns, GA | Periphery | Transitional | 10.58 |
| 8 | Pike, PA | Periphery | Transitional | 10.47 |
| 9 | Wayne, PA | Periphery | Transitional | 9.21 |
| 10 | Morgan, WV | Periphery | Transitional | 8.57 |
| 11 | Lewis, WV | Periphery | Transitional | 7.35 |
| 12 | Fayette, PA | Core | Transitional | 6.03 |
| 13 | Banks, GA | Periphery | Transitional | 5.59 |
| 14 | Grundy, TN | Periphery | Distressed | 5.58 |
| 15 | Rockbridge, VA | Periphery | Transitional | 5.44 |
| 16 | Gilmer, WV | Periphery | Distressed | 4.99 |
| 17 | Forest, PA | Periphery | Transitional | 4.91 |
| 18 | Lexington city, VA | Periphery | N/A | 4.89 |
| 19 | Cumberland, KY | Periphery | Transitional | 4.57 |
| 20 | White, GA | Periphery | Transitional | 4.58 |

Source: U.S. Census Bureau, County Business Patterns

well as several smaller-scale inns that those jobs were distributed among. More specifically, there is a substantial portion of accommodations in Swain County attributable to the Cherokee village and associated casino.

4.1.3 Accommodation Size

Overall, for the ARC region the average accommodation establishment was about 17 employees per establishment. Although the core counties' average accommodation size is consistent with the regional average at 17 employees per establishment, the peripheral counties have much smaller accommodation size

on average with only 5 employees per establishment (Table 6.) While most counties have modest sized establishments, there were significant exceptions. For example, Pocahontas County, WV, which ranked first in average size accommodation establishment in the ARC, had an average of 175 employees across its 10 accommodation establishments largely due to the large Snowshoe Resort located in the county.

Table 6. ARC Counties Ranked by Average Accommodation Establishment Size, 2005

| Rank | County, State | Core/Periphery | ARC Status | Average Size |
|------|------------------|----------------|--------------|--------------|
| 1 | Pocahontas, WV | Periphery | Transitional | 175 |
| 2 | Fayette, PA | Core | Transitional | 101 |
| 3 | Greenbrier, WV | Periphery | Transitional | 83 |
| 4 | Lewis, WV | Periphery | Transitional | 75 |
| 5 | Craig, VA | Periphery | Transitional | 60 |
| 6 | Bath, VA | Periphery | Transitional | 58 |
| 7 | Hall, GA | Core | Transitional | 52 |
| 8 | Jackson, GA | Periphery | Transitional | 48 |
| 9 | Allegheny, PA | Core | Attainment | 48 |
| 10 | Blair, PA | Core | Transitional | 39 |
| 11 | Ashe, NC | Periphery | Transitional | 39 |
| 12 | Lackawanna, PA | Core | Transitional | 38 |
| 13 | Bristol city, VA | Periphery | N/A | 37 |
| 14 | Carbon, PA | Periphery | Transitional | 35 |
| 15 | Kanawha, WV | Core | Transitional | 33 |
| 16 | Monroe, PA | Core | Transitional | 32 |
| 17 | Towns, GA | Periphery | Transitional | 32 |
| 18 | Otsego, NY | Periphery | Transitional | 31 |
| 19 | Montour, PA | Periphery | Competitive | 30 |
| 20 | Fleming, KY | Periphery | Transitional | 30 |

Source: U.S. Census Bureau, County Business Patterns

Fayette County, PA was ranked second for accommodation size with 101 employees per establishment. Fayette County is located in southwestern Pennsylvania, south of Allegheny County and had a population of just under 145,000. In addition to its proximity to Pittsburgh, Fayette County is home to Fort Necessity National Battlefield, Fallingwater (a home designed by Frank Lloyd Wright) and Laurel Caverns, all which increase the tourism demand for the county. Additionally, the county is home to the Nemacolin Woodlands Resort, an upscale resort set on 3,000 acres offering a wide variety of outdoor activities and personal amenities as well as conference facilities. The resort employs 900 employees year round and nearly 1,200 seasonally, which likely skewed the average upward.

Greenbrier County, West Virginia also had rather large average jobs per establishment. A somewhat small county, Greenbrier, generated about 83 jobs for each of its 21 accommodation establishments. Most of the accommodation establishments in the county are modest inns with a couple of medium-sized chain hotels, such as Super 8 and Hampton Inn, with the exception of the well-known Greenbrier Resort. Given that the resort has over 700 rooms and suites and over 40 different activity offerings it was the predominant accommodation employer in the county. The resort stands out because of its AAA Five Diamond status in addition to its designation as a National Landmark. The resort is also well-known for its role as a secret Federal government bunker for several decades.

4.1.4 Accommodation Wage Bill

Of the \$255 billion the ARC region generated in total wages in 2005, the tourist accommodation sector provided nearly \$1.25 billion, or about one-half of one percent. Accommodation wages varied greatly, but the highest values were found in the core counties and those counties adjacent to urban areas. Figure 5 shows the geographic distribution of these wages. Although the presence of a major population center seemed to play a role in shaping the geography of accommodation wages, urbanity was not the only requirement for high performing counties, as evidenced by Sevier County and two other peripheral counties that had wages high enough to rank among the top 20 (Table 7). Core counties made up about two-thirds of the region's total accommodation wages with over \$840 million. Across the core counties that averages to about \$9 million in wages per county for the accommodation sector. Conversely, peripheral counties had about \$400 million in wages, for an average of about \$1.25 million in wages per county. Despite their higher accommodation wages, urban counties received a much smaller portion of their wages from accommodations than did the top performing peripheral counties. Generally speaking, top performing urban counties saw accommodation wages make up a small percentage of their total wages, while the peripheral counties consistently received substantially larger portions of their wages from the accommodation sector. None of the top 20 were classified as economically "distressed" by the ARC.

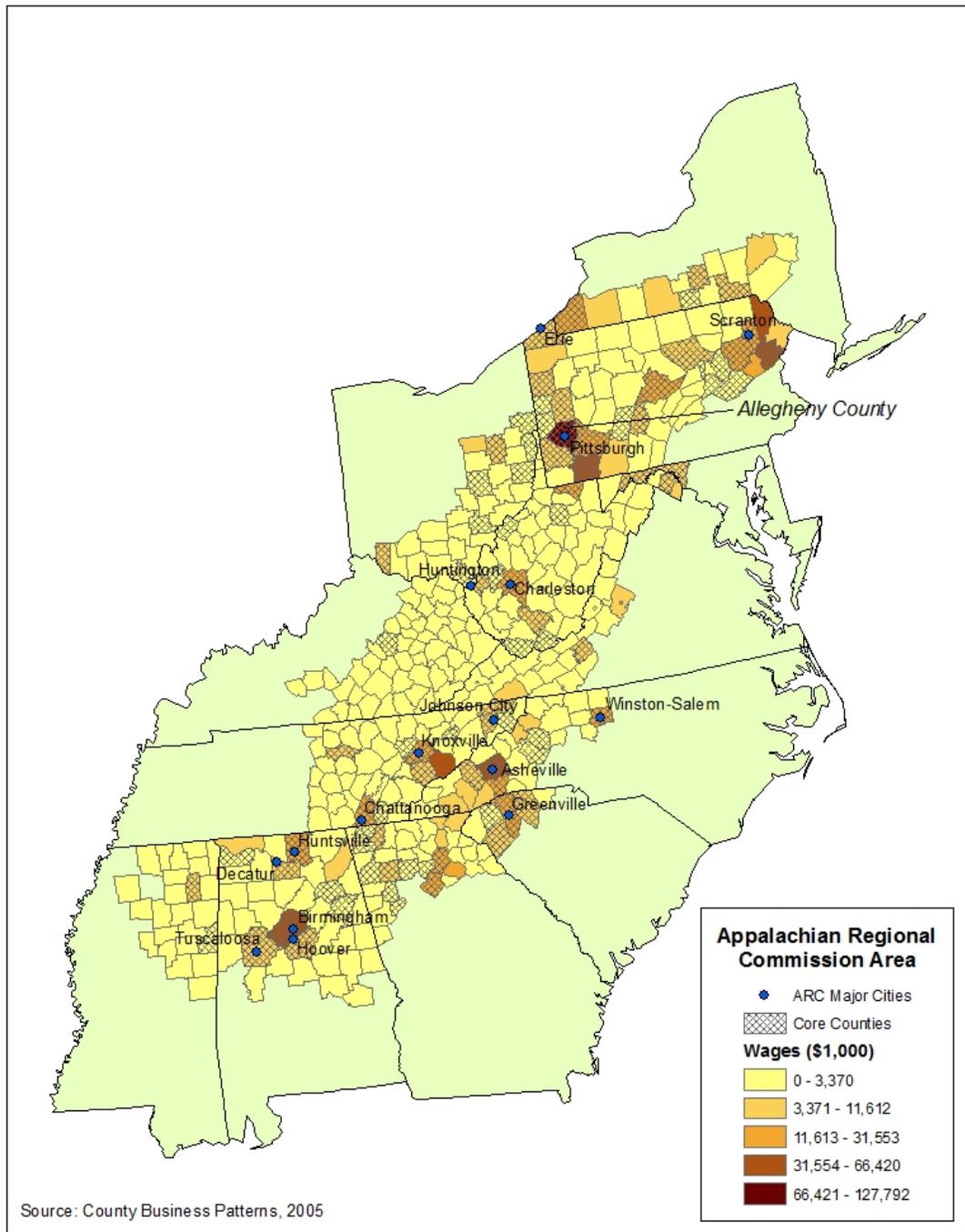


Figure 5. Total Accommodation Wage by ARC County, 2005

Ranked first among the top 20 for accommodation wages, Allegheny County, PA accounted for about 10 percent of the total for the ARC region, generating over \$128. Compared to the region as a whole, Allegheny County matched the ARC average with accommodation wages making up about one-half percent of the county's total wages, again indicating little economic dependence on the accommodation sector.

Table 7. ARC Counties Ranked by Total Accommodation Wage Bill, 2005

| Rank | County, State | Core/Peri. | ARC Status | Wage (\$1,000) | Percent of Total |
|------|------------------|------------|--------------|----------------|------------------|
| 1 | Allegheny, PA | Core | Attainment | 127,792 | 0.5% |
| 2 | Sevier, TN | Periphery | Transitional | 66,420 | 9.0% |
| 3 | Buncombe, NC | Core | Competitive | 50,824 | 1.7% |
| 4 | Fayette, PA | Core | Transitional | 46,818 | 5.4% |
| 5 | Jefferson, AL | Core | Transitional | 46,271 | 0.3% |
| 6 | Monroe, PA | Core | Transitional | 43,033 | 3.2% |
| 7 | Wayne, PA | Periphery | Transitional | 36,842 | 10.0% |
| 8 | Greenville, SC | Core | Competitive | 31,553 | 0.4% |
| 9 | Gwinnett, GA | Core | Attainment | 28,430 | 0.2% |
| 10 | Hamilton, TN | Core | Competitive | 24,684 | 0.4% |
| 11 | Knox, TN | Core | Transitional | 23,778 | 0.4% |
| 12 | Luzerne, PA | Core | Transitional | 18,363 | 0.5% |
| 13 | Kanawha, WV | Core | Transitional | 17,647 | 0.6% |
| 14 | Hall, GA | Core | Transitional | 17,398 | 0.8% |
| 15 | Madison, AL | Core | Attainment | 16,470 | 0.3% |
| 16 | Henderson, NC | Core | Competitive | 15,340 | 1.6% |
| 17 | Jackson, GA | Periphery | Transitional | 14,750 | 3.2% |
| 18 | Forsyth, NC | Core | Attainment | 14,544 | 0.2% |
| 19 | Monongalia, WV | Core | Transitional | 13,168 | 1.3% |
| 20 | Westmoreland, PA | Core | Transitional | 12,816 | 0.3% |

Source: U.S. Census Bureau, County Business Patterns

The next highest county, Sevier, TN, generated about five percent of the total accommodation wages for the entire ARC region at \$66 million. For Sevier

County those wages accounted for nine percent of the total wages within the county, further indicating the importance of this industry for the county. Wages for accommodation employment in Sevier County as a share of total wages were 18 times higher than for the ARC regional average (one-half percent).

Ranked third for accommodation wages, Buncombe County, NC had just under \$51 million in wages, or two percent of its total county wage bill. While this indicated a somewhat more locally significant tourism sector, Buncombe County was not overly dependent on accommodations for the county's wage needs.

The spatial distribution of relative wages as measured by LQs was unlike the distribution of absolute wages across the ARC region (Figure 6 and Table 8). Rather than being concentrated around urban areas, relative wages (LQs) were highest in the Poconos Mountain region of Pennsylvania and the Smoky Mountains of Tennessee. Relative to the expected wage levels, peripheral counties fared quite well and most of the top 20 were peripheral counties. Nearly all of these top 20 were classified as "transitional" by the ARC, with the exception of Grundy County, TN, which is classified as "distressed".

Top-ranked Wayne County, PA which is considered part of the Poconos, had an LQ of 20.52 for accommodation wages. Alternately stated, over 10 percent of the county's total wages were in the accommodations sector. Wayne County's Pocono location along with the Delaware River along its eastern

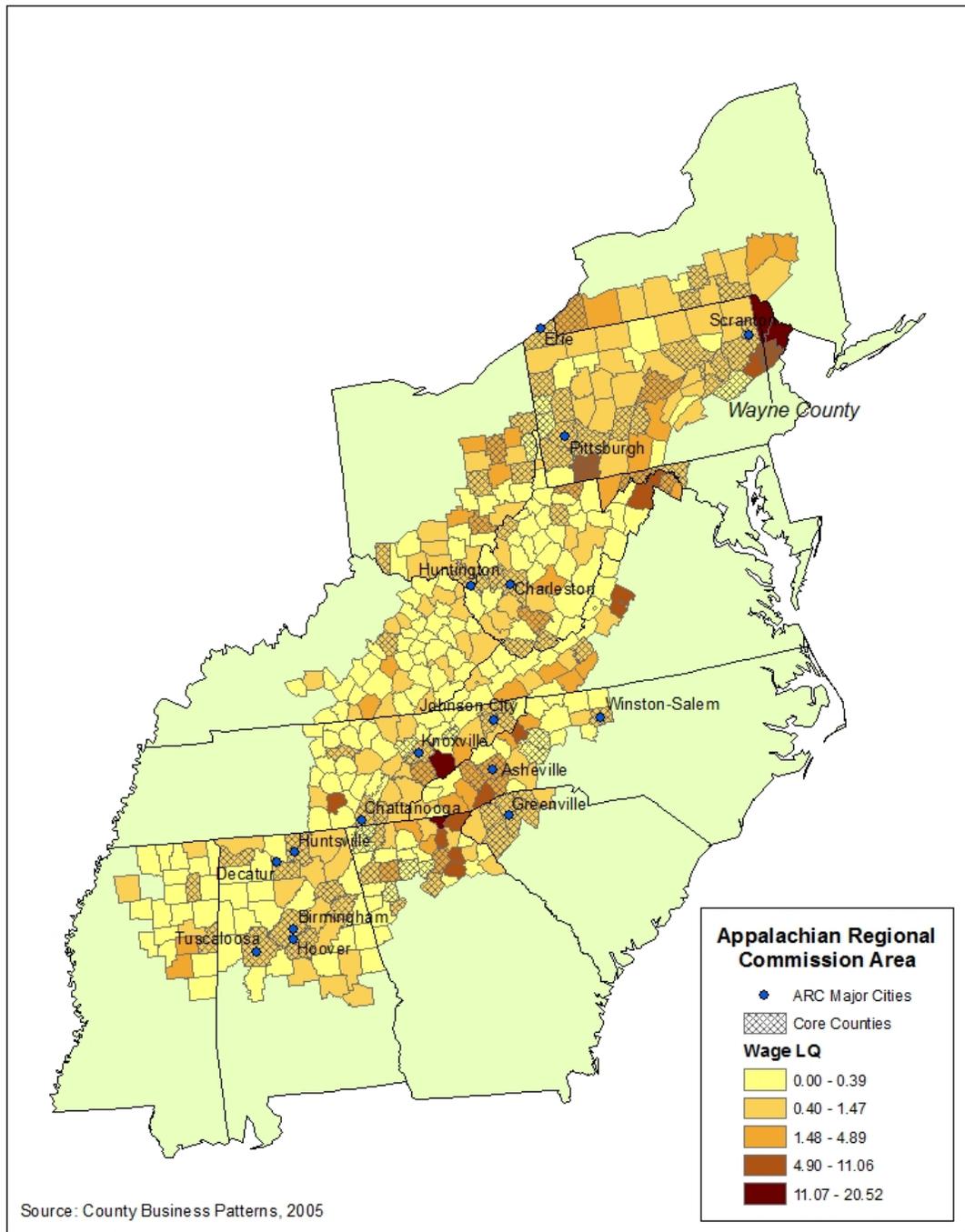


Figure 6. Accommodation Wage Location Quotients by ARC County, 2005

boundary and Lake Wallenpaupack affords the county numerous outdoor recreation activities such as skiing, fishing, boating, hunting and hiking. There are numerous independently operated inns, moderately-sized and priced family resorts, as well as chain hotels.

Table 8. ARC Counties Ranked by Accommodation Wage LQs, 2005

| Rank | County, State | Core/Periphery | ARC Status | LQ |
|------|--------------------|----------------|--------------|-------|
| 1 | Wayne, PA | Periphery | Transitional | 20.52 |
| 2 | Sevier, TN | Periphery | Transitional | 18.51 |
| 3 | Towns, GA | Periphery | Transitional | 18.13 |
| 4 | Pike, PA | Periphery | Transitional | 13.94 |
| 5 | Fayette, PA | Core | Transitional | 11.06 |
| 6 | Morgan, WV | Periphery | Transitional | 11.01 |
| 7 | Rockbridge, VA | Periphery | Transitional | 8.97 |
| 8 | Rabun, GA | Periphery | Transitional | 8.72 |
| 9 | Transylvania, NC | Periphery | Transitional | 8.13 |
| 10 | Carbon, PA | Periphery | Transitional | 8.03 |
| 11 | Avery, NC | Periphery | Transitional | 7.61 |
| 12 | White, GA | Periphery | Transitional | 6.74 |
| 13 | Monroe, PA | Core | Transitional | 6.61 |
| 14 | Jackson, GA | Periphery | Transitional | 6.57 |
| 15 | Grundy, TN | Periphery | Distressed | 6.41 |
| 16 | Lexington city, VA | Periphery | N/A | 5.97 |
| 17 | Hampshire, WV | Periphery | Transitional | 5.71 |
| 18 | Banks, GA | Periphery | Transitional | 5.57 |
| 19 | Watauga, NC | Periphery | Transitional | 4.89 |
| 20 | Haywood, NC | Core | Transitional | 4.44 |

Source: U.S. Census Bureau, County Business Patterns

Sevier County, TN ranked second with an LQ of 18.51 for accommodation wages. This was one of many indicators suggesting that Sevier County had a prolific tourism sector that contributed relatively significantly to the local economy. This indicated that not only did the county have a large percentage of

their wages from accommodations, but that those wages were also greater than expected in relation to both overall county wages and regional wages.

Ranked third, Towns County, GA also had a high accommodation wage LQ at 18. Although small in population with only 11,000, the north Georgia county boasts the 500 acre Brasstown Valley Resort, as well as independently owned hotels and the Ramada and Holiday Inn Express chains. Accommodation wages make up nine percent of the total wages for the county.

There were a few core counties that also had high accommodation wage LQs; however, it should be noted that none of those core counties contained any of the major ARC cities. Fayette County, PA had an accommodation wage LQ of 11.06. As mentioned above, Fayette County is adjacent to Pittsburgh and Allegheny County. Wayne County is in the Pocono sub-region and had a population of around 52,000, just over the cutoff for a core county as defined in this dissertation. Finally, Haywood County, NC had an accommodation LQ of 4.44. Haywood is in the Smoky Mountains sub-region and also had a population just over the core cutoff.

4.1.5 Average Annual Accommodation Wages

The ARC average wage for accommodation was \$16,207, compared to the overall average of \$31,274 for all jobs in the ARC region. Typically, average annual wages in the accommodation sector are lower than the overall average, although several counties in the ARC were exceptions to the norm (Figure 7).

Overall, the highest average wage rates were found among peripheral counties, with 17 of the top 20 being classified as peripheral (Table 9). None of these top 20 were classified as “distressed” by the ARC; in fact, all were transitional, with the exception of Buncombe, NC, which was classified as “competitive”. An underlying component for those counties seemed to be a high level of independent firms rather than large numbers of chain hotels. It is possible the “boutique” inns in more rural areas may require a somewhat more skilled labor force than many of the employment opportunities at moderately priced chain hotels found in the more urban areas.

Avery County, North Carolina generated the highest average annual accommodation wages in the ARC with an average of over \$47,000. The average accommodation wages compared very favorably to the overall average wage levels in Avery County, which were just \$22,000. While it has its share of chain hotels with brands such as Best Western and Holiday Inn Express, Avery County also has numerous small and medium hotels, inns and resorts that are upscale. For example, the Eseeola Lodge has 24 rooms that range in price from \$400 to \$1,050 per night, as well as an extensive amenities and services list. Additionally, there are a couple of wineries that also have accommodation offerings in the county. Three ski facilities in the county also boost the need for skilled accommodation workers in Avery County. The variety of upscale accommodations with luxury amenities and services require skilled labor which

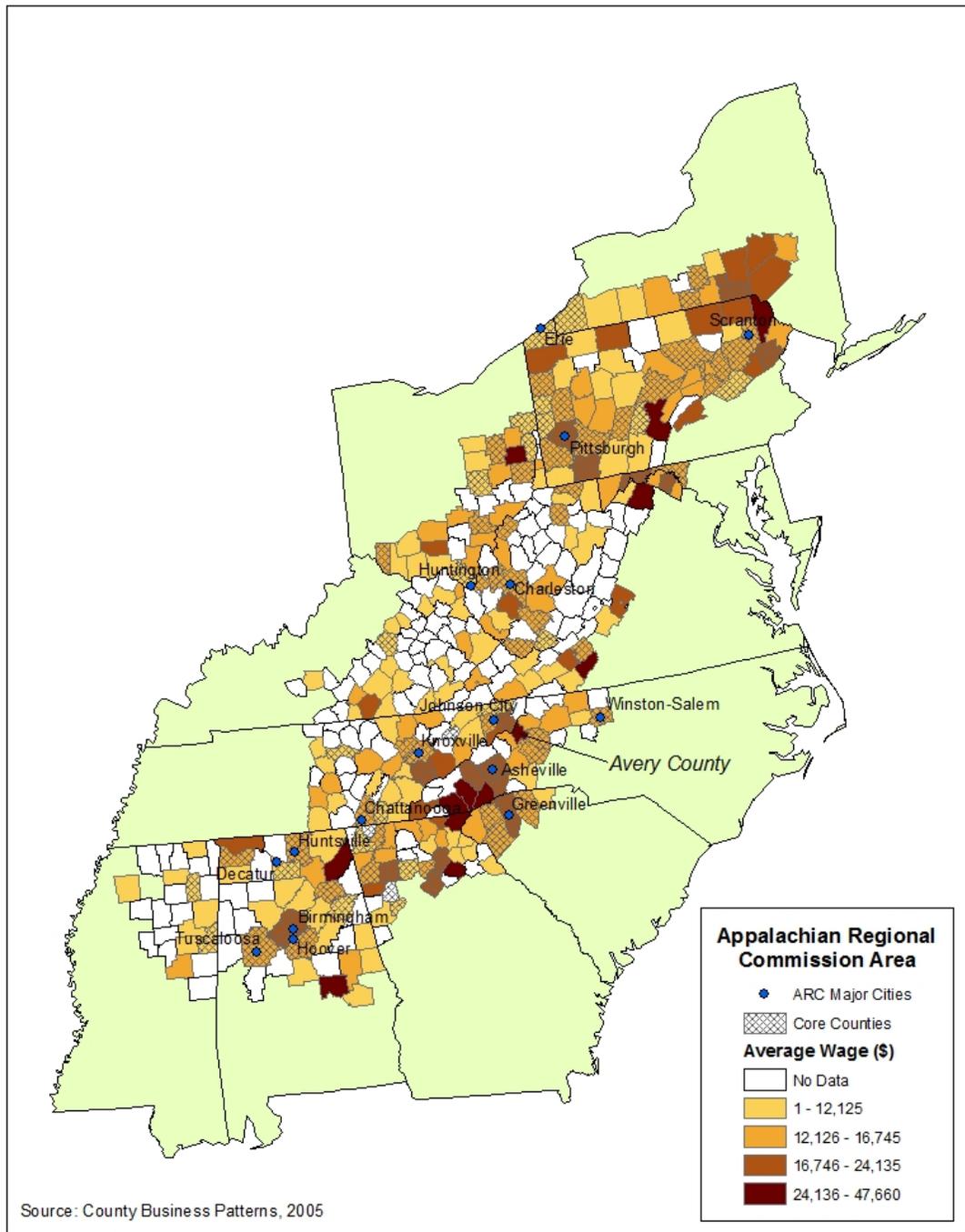


Figure 7. Accommodation Average Wages by ARC County, 2005

likely drove up the average wages in the accommodation sector for Avery County.

Table 9. ARC Counties Ranked by Average Accommodation Wages, 2005

| Rank | County, State | Core/Periphery | ARC Status | Avg. Wage (\$) |
|------|------------------|----------------|--------------|----------------|
| 1 | Avery, NC | Periphery | Transitional | 47,660 |
| 2 | Floyd, VA | Periphery | Transitional | 37,000 |
| 3 | Jackson, GA | Periphery | Transitional | 30,858 |
| 4 | Hampshire, WV | Periphery | Transitional | 30,661 |
| 5 | Rabun, GA | Periphery | Transitional | 28,433 |
| 6 | Elmore, AL | Periphery | Transitional | 27,365 |
| 7 | Harrison, OH | Periphery | Transitional | 27,083 |
| 8 | Wayne, PA | Periphery | Transitional | 26,486 |
| 9 | Transylvania, NC | Periphery | Transitional | 25,958 |
| 10 | Huntington, PA | Periphery | Transitional | 25,719 |
| 11 | Jackson, NC | Periphery | Transitional | 25,036 |
| 12 | DeKalb, AL | Periphery | Transitional | 24,857 |
| 13 | Macon, NC | Periphery | Transitional | 24,740 |
| 14 | Lauderdale, AL | Periphery | Transitional | 24,135 |
| 15 | Perry, PA | Periphery | Transitional | 23,565 |
| 16 | Susquehanna, PA | Periphery | Transitional | 22,978 |
| 17 | Carter, TN | Core | Transitional | 22,813 |
| 18 | Haywood, NC | Core | Transitional | 22,806 |
| 19 | Buncombe, NC | Core | Competitive | 22,568 |
| 20 | Bradford, PA | Periphery | Transitional | 22,041 |

Source: U.S. Census Bureau, County Business Patterns

Floyd County, Virginia was ranked second with an average wage of \$37,000 compared to the overall average wage of just under \$22,000 for the county as a whole. Floyd County is a rather rural county with a population of only about 15,000. There are numerous farm-style bed and breakfasts and small hotels that in conjunction with the county's music festivals seem to provide the impetus for a fairly strong and growing tourism sector. There is an apparent

theme towards the arts, environmental responsibility and organic food across many lodging establishments in the county. The town's proximity to the campuses of Virginia Tech and Radford University may also give a boost to the tourism sector in Floyd County.

Ranked third for average accommodation wage was Jackson County, GA with an annual average wage of just under \$31,000. Jackson County has several chain hotels such as Comfort Inn, Best Western and Hampton Inn, but it also has some independently owned establishments. The 275 room luxury Chateau Élan is such an establishment. As the largest winery in Georgia and also a luxury resort, the establishment needs specialized and skilled workers associated with higher average wages.

4.1.6 Accommodation Summary

Tourism is a widely touted mechanism for economic development that has been federally promoted in the Appalachian Regional Commission area since 1964. In addition to its proponents, tourism also has its share of critics that decry the often low wages associated with the industry. A key focus of this dissertation was to conduct a county-level spatial analysis of the tourism industry in the ARC from a core-periphery theoretical viewpoint to determine if tourism exhibited typical core-periphery relationships. The spatial analysis of tourist accommodation indicators in the ARC region showed that core-periphery relationships were indeed strong at the macro scale in absolute terms. However,

in addition to the conventional core-periphery relationships, there were several distinct anomalies in the region along the Blue Ridge and also along the Pennsylvania/New York border. Where tourist accommodations performed better in some peripheral counties, it might actually have been a propulsive economic force for those few counties, although overall for the region that was not the case.

Many of those peripheral counties were specialized, niche tourism centers and exhibited above-average levels of tourist accommodations, as well as relatively healthy overall economies (as classified by the ARC). Peripheral counties were considered to be highly specialized counties if they met any of the following three criteria: average tourist accommodation wage was higher than the ARC average, accommodation establishment LQ was higher than 2.0, or accommodation employment LQ was higher than 2.0. Based on those criteria, 88 peripheral counties were specialized.

Specialized areas of accommodation in the ARC region were found throughout the region in peripheral counties. Particularly robust tourism sectors were evident along the Appalachian ridgeline of North Carolina, Tennessee, and West Virginia and also the Poconos Mountains of Pennsylvania. Interestingly, most of those specialized counties were not serviced by an interstate, perhaps pointing to the importance of nature and a sense of remoteness as a key component. The Appalachian National Scenic Trail also runs through several of those most specialized counties. The National Parks Service estimates three to

four million people hike the Trail annually. The Great Smoky Mountain National Park is also located in this part of the ARC. It is a major visitor draw with around nine million visitors each year, double the attendance of any other national park.

Further bolstering the theory that natural amenities boost tourism industry performance, a significant positive correlation 0.22 ($P > 0.01$) existed between accommodation employment LQs and percent National Forest Service and National Park land for the ARC as a whole. The natural amenities effect was also evident for specialized counties, with a correlation of 0.42 ($P > 0.01$) between accommodation establishments and National Forest land. However, there was no significant correlation between average wages for accommodations and NPS land in specialized counties. The implication here is that while the tourist industry appeared to thrive in counties rich in natural attractions and remoteness, these qualities do not improve the often abysmal wages in the tourism industry.

Additionally, many of the clusters of specialized counties are within driving distance of a megalopolis for weekend travel. The strong accommodation cluster found in the Smoky Mountains counties has traditionally served as a destination for many, since it lies within driving distance of several large cities such as Atlanta, Knoxville, and Charlotte and offers a cool retreat during warm summer months and a place to ski during the winter. Similarly, the counties along the Virginia-West Virginia border serve as a year-round escape for residents of the Washington, D.C. metro area and Pittsburgh, while the Poconos and Catskills of

the Alleghany Plateau provide a retreat for residents of New York and Philadelphia.

4.2 Tourism Supporting Service Indicators

4.2.1 Tourism Supporting Service Establishments

Although the accommodation industry is most directly associated with tourism, there are other industries that can be important components of a healthy tourism market, including arts, entertainment and recreation. Table 10 provides an overview of the composition of the tourism supporting services sector in the ARC region by listing the percentage each supporting service contributes to the whole. Both in terms of number of establishments and employment share, it appears that Food Services and Drinking Establishments (NAICS 722) are a significant proportion of all supporting services. For example, the sector accounted for 42.6 percent of all tourism-related supporting service establishments in the ARC. That said, it is important to note that not all of the demand for restaurants and bars can be attributed to tourists, since a significant element of demand likely comes from residents.

Real Estate establishments (NAICS 531) followed with almost 16 percent of the tourism supporting service sector for the ARC region. Undoubtedly, the more than 375,000 Vacant Recreational Homes in the region gives some support to an active second-home real estate market throughout the region. Interestingly, both the core and the periphery counties average close to 900 such homes per

county. It should be noted that a sizeable portion of the real estate market is not attributable to tourism and vacation homes, but rather to local demand for the service.

Table 10. ARC Tourism Supporting Service Sectors

| NAICS Sector | Establishments | |
|--|----------------|--------------|
| | Value | % of TSS |
| 722 (Food Services and Drinking Establishments) | 39,596 | 42.6 |
| 531 (Real Estate) | 14,631 | 15.7 |
| 5311 (Lessors of Real Estate) | 6,150 | 6.6 |
| 445 (Food and Beverage Stores) | 10,985 | 11.8 |
| 4451 (Grocery Stores) | 7,318 | 7.9 |
| 4452 (Specialty Food Stores) | 1,574 | 1.7 |
| 453 (Miscellaneous Store Retailers) | 10,455 | 11.2 |
| 71 (Arts, Entertainment and Recreation) | 7,769 | 8.3 |
| 711 (Performing Arts, Spectator Sports and Related Industries) | 1,483 | 1.6 |
| 712 (Museums, Historical Sites and Similar Institutions) | 529 | 0.5 |
| 713 (Amusement, Gambling and Recreation Industries) | 5,751 | 6.2 |
| 532 (Rental and Leasing) | 5,080 | 5.5 |
| 5321 (Automotive Equipment Rental and Leasing) | 752 | 0.8 |
| 5322 (Consumer Goods Rental) | 2,999 | 3.2 |
| 451 (Sporting Goods, Hobby, Book and Music Stores) | 4,503 | 4.8 |
| Total | 92,992 | 99.9% |

Source: U.S. Census Bureau, County Business Patterns

The geographic distribution of tourism-related supporting service establishments is illustrated in Figure 8. The spatial distribution closely mimicked the patterns of urbanization in that the highest values were correlated with the major cities in the ARC region. Sevier County was the only peripheral county to appear in Table 11, which ranked in the top 20 counties based on number of

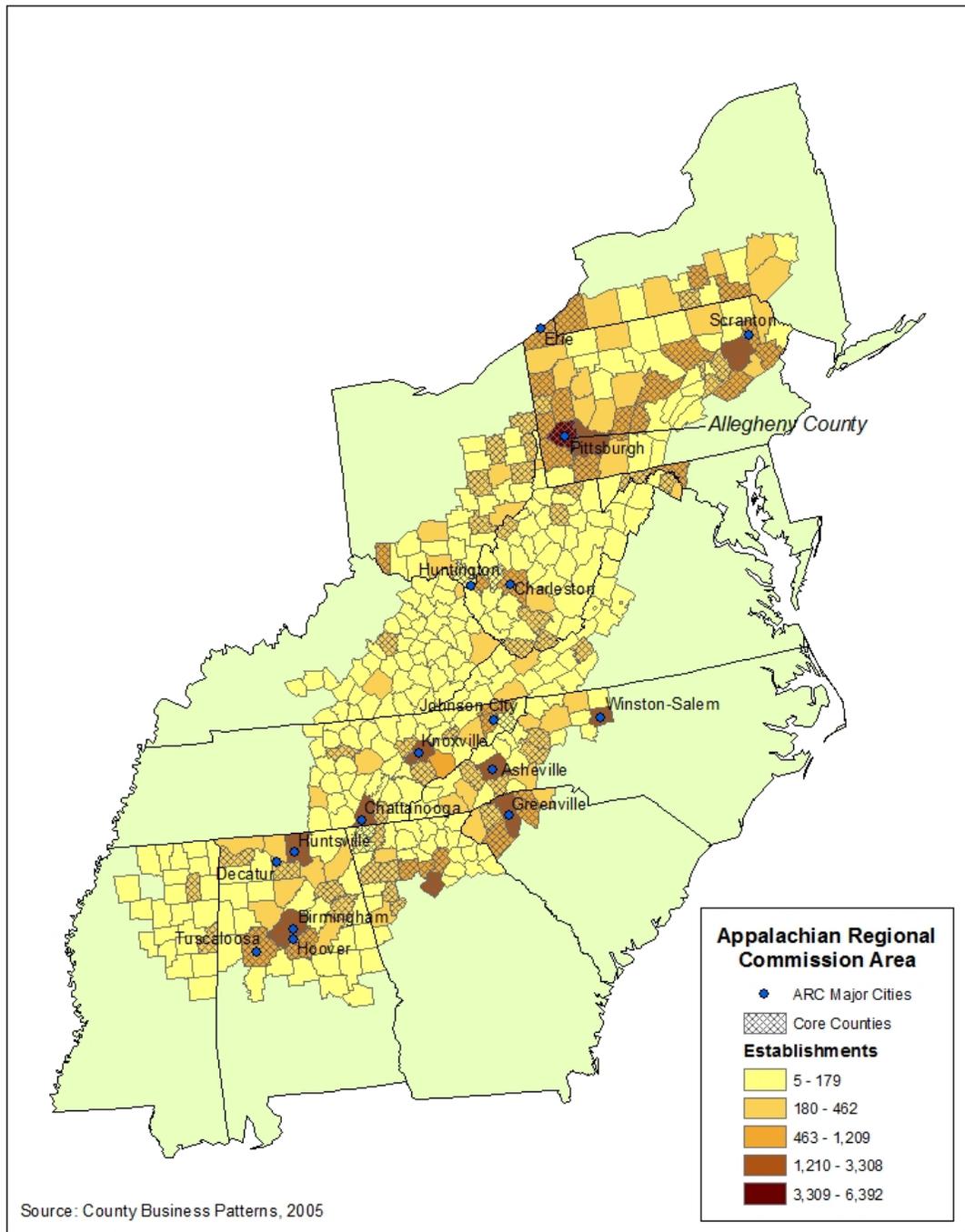


Figure 8. Tourism Supporting Services Establishments by ARC County, 2005

Table 11. ARC Counties Ranked by Tourism Supporting Service Establishments, 2005

| Rank | County, State | Core/Peri. | ARC Status | Estab. | Percent of Total |
|------|------------------|------------|--------------|--------|------------------|
| 1 | Allegheny, PA | Core | Attainment | 6,392 | 18.3% |
| 2 | Gwinnett, GA | Core | Attainment | 3,308 | 15.7% |
| 3 | Jefferson, AL | Core | Transitional | 2,850 | 16.3% |
| 4 | Greenville, SC | Core | Competitive | 2,032 | 17.0% |
| 5 | Knox, TN | Core | Transitional | 1,894 | 16.8% |
| 6 | Westmoreland, PA | Core | Transitional | 1,578 | 17.4% |
| 7 | Hamilton, TN | Core | Competitive | 1,566 | 17.6% |
| 8 | Forsyth, NC | Core | Attainment | 1,554 | 17.8% |
| 9 | Luzerne, PA | Core | Transitional | 1,438 | 18.5% |
| 10 | Buncombe, NC | Core | Competitive | 1,352 | 19.2% |
| 11 | Madison, AL | Core | Attainment | 1,347 | 17.5% |
| 12 | Erie, PA | Core | Transitional | 1,209 | 18.3% |
| 13 | Spartanburg, SC | Core | Transitional | 1,121 | 17.0% |
| 14 | Lackawanna, PA | Core | Transitional | 1,028 | 18.9% |
| 15 | Kanawha, WV | Core | Transitional | 1,020 | 17.8% |
| 16 | Broome, NY | Core | Transitional | 814 | 19.0% |
| 17 | Washington, PA | Core | Transitional | 780 | 15.4% |
| 18 | Monroe, PA | Core | Transitional | 780 | 21.1% |
| 19 | Sevier, TN | Periphery | Transitional | 774 | 28.7% |
| 20 | Butler, PA | Core | Competitive | 733 | 15.8% |

Source: U.S. Census Bureau, County Business Patterns

supporting service establishments. Demonstrating their relative economic strength, all were at least “transitional” and many of those core counties were designated as “competitive” or “attainment” by the ARC. Conversely, all of the bottom 241 performing counties for this indicator were peripheral. Those same bottom 241 counties are roughly two-thirds of all the counties in this region, but contain only about 20 percent of the region’s population. This could indicate that tourism supporting services establishments required more agglomeration than was found among accommodation sector establishments. Supporting service

establishments are more dependent on resident demand than accommodation establishments, so it is logical that those establishments would be more dependent on locales with a larger population base.

Allegheny County, Pennsylvania (i.e. Pittsburgh) had the highest number of supporting service establishments with nearly 6,400 in 2005. The sector's establishments made up 18 percent of the total establishments in the county. Of the seven sectors included in the aggregate tourism support services sector, nearly half (46 percent) of these establishments in Allegheny County were found in the Food Services and Drinking Establishments industry. All of the Allegheny County supporting services were within five percentage points of the overall regional tourism-related supporting services shares, perhaps indicating that the mix of services in Pittsburgh and the surrounding area were representative of the ARC region.

Ranked second, Gwinnett County, Georgia in the northeast Atlanta metro area had over 3,300 tourism-related supporting services establishments which made up about 16 percent of the total establishments for the county. Food Services and Drinking Establishments comprised 40 percent of all supporting services while Real Estate services accounted for 28 percent of all services, which was well above the regional share of 16 percent. According to the US Census Bureau, there were only 354 vacant recreational houses in Gwinnett County, compared to the regional ARC average of 900 per county. The suggestion here is that few of the Gwinnett County real estate establishments are

engaged in selling, managing or leasing tourism-related real estate but instead were more directly related to the rapid suburban growth of northeast Atlanta.

Third ranked Jefferson County, Alabama (i.e. Birmingham) had nearly 2,900 of the tourist-related supporting service establishments. Similar to the ARC region as a whole, those establishments made up about 16 percent of the total number of establishments in Jefferson County. Also following the trend of the ARC, Jefferson had about 40 percent of its supporting services in Food Services and Drinking Establishments.

Sevier County, Tennessee which has consistently been present in many of the top 20 indicators in this study was ranked 19th in tourism supporting services establishments and was the only peripheral county in the top 20. Sevier County had 774 such establishments. Those tourism supporting industries made up 29 percent of the total establishments that existed in Sevier County which was much higher than the ARC average of 16 percent and higher than urban areas like Pittsburgh (18 percent), Atlanta (16 percent) and Birmingham (16 percent).

Of the tourism supporting establishments, more than 160 establishments in Sevier County were Miscellaneous Store Retailers (e.g. gift and souvenir stores), compared to an average of only 25 for the ARC as a whole. Sevier County has a broad array of gift shops, including candy shops, glass blowing, baskets, Christmas-themed stores and country-themed shops among others. There were 157 Real Estate establishments in Sevier County, while the ARC regional average was about 35. As Sevier County had 5,639 vacant recreation

homes compared to the ARC average of 900, it is possible that the elevated level of real estate establishments was directly related to tourism and the vacation home market. Conversely, both Food Services and Drinking Establishments and Food and Beverage Stores were substantially smaller components of the tourism sector than was found in the ARC as a whole.

The relative specialization of tourism-related supporting services as measured by LQs did not seem to follow conventional urbanization patterns. Instead, clusters of supporting services specialization were found in the Smoky Mountain sub-region and also in the Appalachian counties of New York (Figure 9). Most of the top 20 listed by LQ (Table 12) were classified as peripheral counties and considered economically “transitional” or “distressed” by the ARC. Only three of the top 20 were core counties, and one of those, Athens County, Ohio was the only core county classified as “distressed” in the ARC region with a poverty rate of 31.5 percent.

Ranked highest was the Smoky Mountain county of Swain, North Carolina with an LQ of 2.69. In Swain County the tourism-related support service establishments accounted for 144 of the county’s 425 total establishments, a 34 percent share. More specifically, Food Services and Drinking Places made up only one-third of the tourism-related supporting services establishments in Swain County compared to an ARC share of 42 percent. Instead, the more important supporting services in Swain County included Miscellaneous Store Retailers with

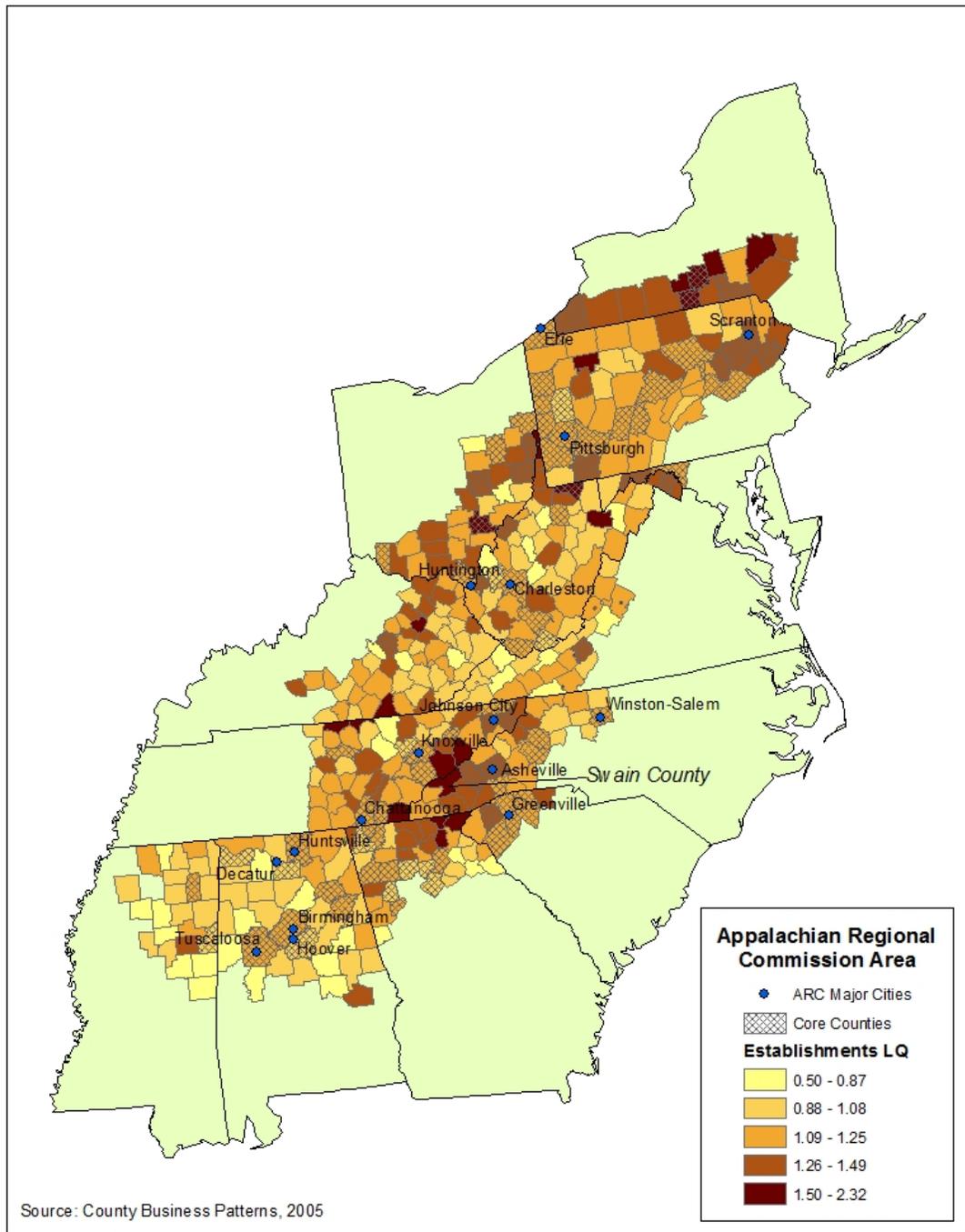


Figure 9. Tourism Supporting Services Establishment Location Quotients by ARC County, 2005

an LQ of 4.46, Arts, Entertainment and Recreation (3.57) and Sporting Goods, Hobby, Book and Music Stores (2.52). There are numerous gift stores in Swain County that specifically cater to visitors with an interest in Cherokee crafts and artwork. The high LQs support the notion that arts, crafts, and shopping in conjunction with cultural and recreation opportunities provide an important type of support for the tourism industry in Swain County.

Table 12. ARC Counties Ranked by Tourism Supporting Service Establishment Location Quotients, 2005

| Rank | County, State | Core/Periphery | ARC Status | LQ |
|------|--------------------|----------------|--------------|------|
| 1 | Swain, NC | Periphery | Transitional | 2.69 |
| 2 | Sevier, TN | Periphery | Transitional | 2.28 |
| 3 | Tucker, WV | Periphery | Transitional | 2.21 |
| 4 | McCreary, KY | Periphery | Distressed | 2.09 |
| 5 | Clay, TN | Periphery | Distressed | 2.04 |
| 6 | Brooke, WV | Periphery | Transitional | 2.02 |
| 7 | Hancock, WV | Periphery | Transitional | 1.97 |
| 8 | Athens, OH | Core | Distressed | 1.92 |
| 9 | Otsego, NY | Periphery | Transitional | 1.91 |
| 10 | Forest, PA | Periphery | Transitional | 1.85 |
| 11 | Lexington city, VA | Periphery | N/A | 1.85 |
| 12 | Cocke, TN | Periphery | Transitional | 1.84 |
| 13 | Cortland, NY | Periphery | Transitional | 1.84 |
| 14 | Pickett, TN | Periphery | Transitional | 1.84 |
| 15 | Polk, TN | Periphery | Transitional | 1.83 |
| 16 | Chemung, NY | Core | Transitional | 1.81 |
| 17 | White, GA | Periphery | Transitional | 1.81 |
| 18 | Tompkins, NY | Core | Transitional | 1.80 |
| 19 | Menifee, KY | Periphery | Distressed | 1.79 |
| 20 | Galax city, VA | Periphery | N/A | 1.78 |

Source: U.S. Census Bureau, County Business Patterns

Ranked second for the relative number of tourism supporting services establishments was Sevier County, Tennessee with an LQ of 2.28. The highest performing industry in terms of LQs in Sevier County was Miscellaneous Store Retailers with an LQ of 3.04. Additionally, Arts, Entertainment and Recreation along with Sporting Goods, Hobby, Book and Music Stores had LQs of just over two. The LQs of the tourism supporting services sector in Sevier County in conjunction with neighboring Swain County, NC further indicate an apparent Smoky Mountains tourism cluster.

Tucker County, West Virginia was ranked third with an LQ score of 2.21 for its tourism supporting service establishments. Tucker County's 58 tourism supporting services establishments comprised 28 percent of the county's total number of establishments. The bulk of this elevated score was likely generated by the Arts, Entertainment and Recreation industry which had an LQ of 4.29 for 13 establishments. Not surprisingly, the county's tourism bureau listed numerous horseback riding, biking and hiking businesses for treks through the state and national forests and wilderness areas in the county. These LQs in conjunction with the existing natural amenities and associated businesses indicated a possible outdoor recreation niche in Tucker County.

4.2.2 Tourism Supporting Service Employment

It can be argued that an indicator even more critical to a local economy than the number of establishments is the total job count that an economic sector

brings to the community. The spatial distribution of the absolute employment of tourism-related supporting services closely followed the ARC metropolitan areas (Figure 10). In fact, most of the counties that generated high levels of supporting service employment also hosted a major city. Almost all of the top 20 counties for employment in the aggregate tourism supporting services sector were core counties, with Sevier County, TN as the only peripheral county (Table 13). None of the top performing counties were classified as economically distressed. In contrast, five of the top counties in tourism service employment had the highest classification rating of “attainment.”

As a region, tourism supporting services employment provided about 15 percent of total employment. This was consistent for both the core and periphery which also received about 15 percent of their employment total from tourism supporting services. More than half (56 percent) of this employment was attributable to Food Services and Drinking Places and another 21 percent to Food and Beverage Stores, indicating food-related services were responsible for at least 75 percent of the tourism supporting services employment in the ARC region. Arts, Entertainment, and Recreation only made up about eight percent of tourism supporting services employment and the rest of the sectors contributed five percent or less to the aggregate sector’s employment for the ARC region.

Examining the top ranked counties for employment in tourism supporting services, Allegheny County, PA had considerably more employment in

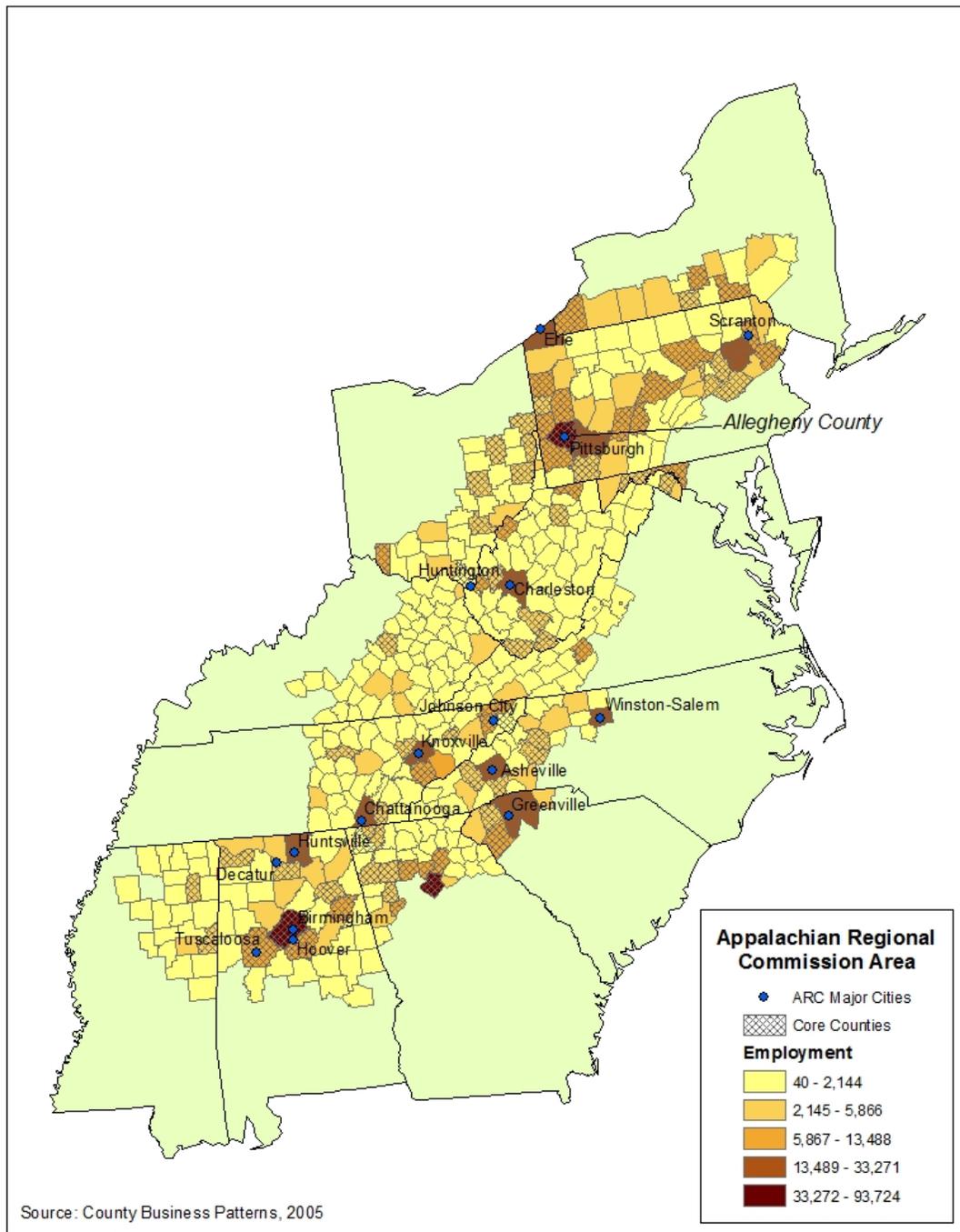


Figure 10. Tourism Supporting Services Employment by ARC County, 2005

supporting services than any other county with over 93,000 jobs. Tourism supporting services jobs in Allegheny County made up about 14 percent of the county's employment. More than half of those jobs were in Food Services and Drinking Places. The rankings for employment were nearly identical to the rankings for tourism-related supporting service establishments.

Table 13. ARC Counties Ranked by Tourism Supporting Service Employment, 2005

| Rank | County, State | Core/Peri. | ARC Status | Emp. | Percent of Total |
|------|------------------|------------|--------------|--------|------------------|
| 1 | Allegheny, PA | Core | Attainment | 93,724 | 14.0% |
| 2 | Jefferson, AL | Core | Transitional | 45,602 | 13.1% |
| 3 | Gwinnett, GA | Core | Attainment | 45,384 | 14.9% |
| 4 | Knox, TN | Core | Transitional | 33,271 | 16.5% |
| 5 | Greenville, SC | Core | Competitive | 26,467 | 11.6% |
| 6 | Hamilton, TN | Core | Competitive | 23,206 | 12.9% |
| 7 | Forsyth, NC | Core | Attainment | 21,817 | 13.0% |
| 8 | Westmoreland, PA | Core | Transitional | 20,888 | 16.3% |
| 9 | Madison, AL | Core | Attainment | 19,209 | 13.8% |
| 10 | Luzerne, PA | Core | Transitional | 18,536 | 14.8% |
| 11 | Buncombe, NC | Core | Competitive | 17,453 | 17.4% |
| 12 | Erie, PA | Core | Transitional | 17,149 | 14.5% |
| 13 | Spartanburg, SC | Core | Transitional | 15,439 | 13.1% |
| 14 | Kanawha, WV | Core | Transitional | 14,975 | 16.4% |
| 15 | Lackawanna, PA | Core | Transitional | 13,488 | 14.4% |
| 16 | Sevier, TN | Periphery | Transitional | 12,698 | 41.1% |
| 17 | Broome, NY | Core | Transitional | 12,592 | 16.5% |
| 18 | Washington, PA | Core | Transitional | 12,267 | 16.2% |
| 19 | Tuscaloosa, AL | Core | Transitional | 11,516 | 15.5% |
| 20 | Shelby, AL | Core | Attainment | 10,897 | 15.9% |

Source: U.S. Census Bureau, County Business Patterns

Ranked second was Jefferson County, AL with an employment level of nearly 46,000 in tourism-related supporting services. Employment in this sector

comprised just over 13 percent of the county's total employment. A closer examination of each supporting service percent share in Jefferson County suggested it matched the overall ARC composition.

Gwinnett, GA was the third largest market with over 45,000 supporting service jobs. As with the other core counties in the top 20, these jobs made up about 15 percent of the county's total employment. These levels were expected given the county's level of urbanity and proximity to Atlanta.

The central, more isolated, less populated counties had much lower absolute levels of supporting service employment. The singular exception was Sevier County, TN which was the only peripheral county among the top 20 for tourism supporting services employment. The county generated nearly 13,000 jobs in supporting services which accounted for a remarkable 41 percent of the county's total jobs, compared to the regional average of 15 percent. An examination of the composition of this sector further differentiated the geography of the periphery versus that of the core. Sevier County had a much higher percentage of employees in Arts, Leisure and Recreation (seven percent) and Real Estate (seven percent) than the top core county of Allegheny County, PA (one and one-half percent and one percent, respectively.) Such substantial differences in economic structure could be another indication of a strong tourism sector in Sevier.

Analysis of the specialization of employment in tourism supporting services yielded a spatial distribution in which most counties with elevated levels

of specialization were found some distance from the metro areas (Figure 11). All of the top 20 counties were peripheral with the exception of Athens, OH (Table 14). Five of the top 20 were classified as “distressed” by the ARC, while three counties were “competitive” and the rest of the top counties were classified as “transitional.”

Ranked highest for specialization in tourism supporting services employment was Tucker County, WV. Tucker County, which bills itself as “As far from work as you can get” (www.canaanvalley.org accessed August 19, 2009), had an LQ of 2.99 in tourism supporting services employment. Although Tucker County had just over 1,000 such jobs, they accounted for 45 percent of total jobs in the county. Tucker County’s supporting service employment was concentrated in Arts, Leisure and Recreation, with 478 jobs, or 20 percent of the supporting services jobs, partly as a result of the popularity of mountain biking and hiking in the county and the niche businesses catering to those activities.

Ranked second was Sevier County, TN with an LQ of 2.76. Of the tourism supporting services sectors, Real Estate produced the highest LQ in Sevier County with a score of 7.77. Other highly specialized services included Arts, Leisure and Recreation and Miscellaneous Store Retailers with LQs of 5.86 and 4.12, respectively. High LQs in the Real Estate supporting services sector may

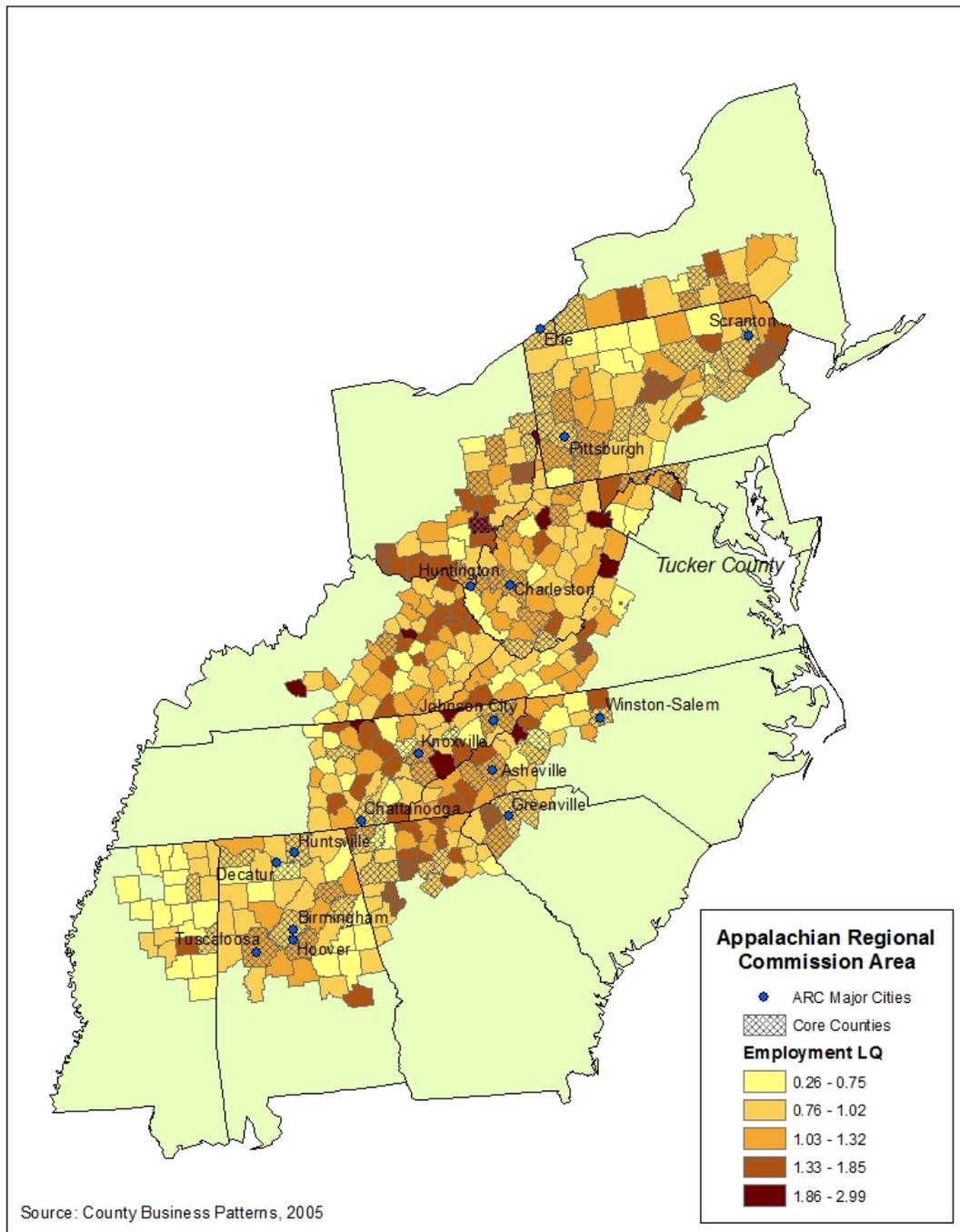


Figure 11. Tourism Supporting Services Employment Location Quotients by ARC County, 2005

point to an elevated market for “vacation home” rental and leasing. Closer inspection of the Arts, Leisure and Recreation sector (NAICS 71) found that Sevier County had an especially diverse sector, including theme parks, guided hiking, and museums.

Table 14. ARC Counties Ranked by Tourism Supporting Service Employment Location Quotients, 2005

| Rank | County, State | Core/Periphery | ARC Status | LQ |
|------|--------------------|----------------|--------------|------|
| 1 | Tucker, WV | Periphery | Transitional | 2.99 |
| 2 | Sevier, TN | Periphery | Transitional | 2.76 |
| 3 | Hancock, TN | Periphery | Distressed | 2.51 |
| 4 | Avery, NC | Periphery | Transitional | 2.22 |
| 5 | Hancock, WV | Periphery | Transitional | 2.07 |
| 6 | Powell, KY | Periphery | Transitional | 2.06 |
| 7 | Doddridge, WV | Periphery | Transitional | 1.99 |
| 8 | Athens, OH | Core | Distressed | 1.98 |
| 9 | Edmonson, KY | Periphery | Transitional | 1.94 |
| 10 | Pickett, TN | Periphery | Transitional | 1.94 |
| 11 | Highland, VA | Periphery | Transitional | 1.93 |
| 12 | Jefferson, WV | Periphery | Competitive | 1.85 |
| 13 | Lexington city, VA | Periphery | N/A | 1.79 |
| 14 | McCreary, KY | Periphery | Distressed | 1.79 |
| 15 | Craig, VA | Periphery | Transitional | 1.77 |
| 16 | Meigs, OH | Periphery | Distressed | 1.75 |
| 17 | Pickens, GA | Periphery | Competitive | 1.75 |
| 18 | Elliott, KY | Periphery | Distressed | 1.74 |
| 19 | Dawson, GA | Periphery | Competitive | 1.73 |
| 20 | Watauga, NC | Periphery | Transitional | 1.71 |

Source: U.S. Census Bureau, County Business Patterns

Despite a population of less than 7,000, third-ranked Hancock County, TN had an LQ of 2.51 for employment in tourism-related supporting services. More specifically, Food and Beverage Stores services generated an employment LQ of 5.64 although this only generated 60 jobs in two establishments. Similarly, Rental

and Leasing Services had an LQ of 5.16, although there were only 10 employees in a single establishment. These observations seem to indicate that perhaps elevated LQs in this county are not because of a robust tourism sector, but instead are a result of the disproportional weight placed on any industry because of this county's unusually small population.

Although not a peripheral county, Athens County, OH made the top 20 for specialization in employment in the aggregate tourism supporting services. The county's population was close to the core-periphery threshold and Athens does not have interstate access nor does it contain any major cities, but instead has a few moderately sized towns. Furthermore, Athens was the only core county classified as "distressed," indicating an economy atypical of core counties.

4.2.3 Tourism Supporting Service Wage Bill

Figure 12 shows the distribution of absolute values of wages in the aggregate tourism supporting services sector, indicating a pattern that mimicked the ARC population distribution. All of the counties with the top 20 highest wages for tourism supporting service were also among the top 25 most populated, with the exception of Sevier, TN. Nine of the top twenty were classified with the designations of "attainment" or "competitive" by the ARC and none were economically "distressed" (Table 15). Only one county in the top twenty for absolute wages in tourism supporting services was a peripheral county. Overall,

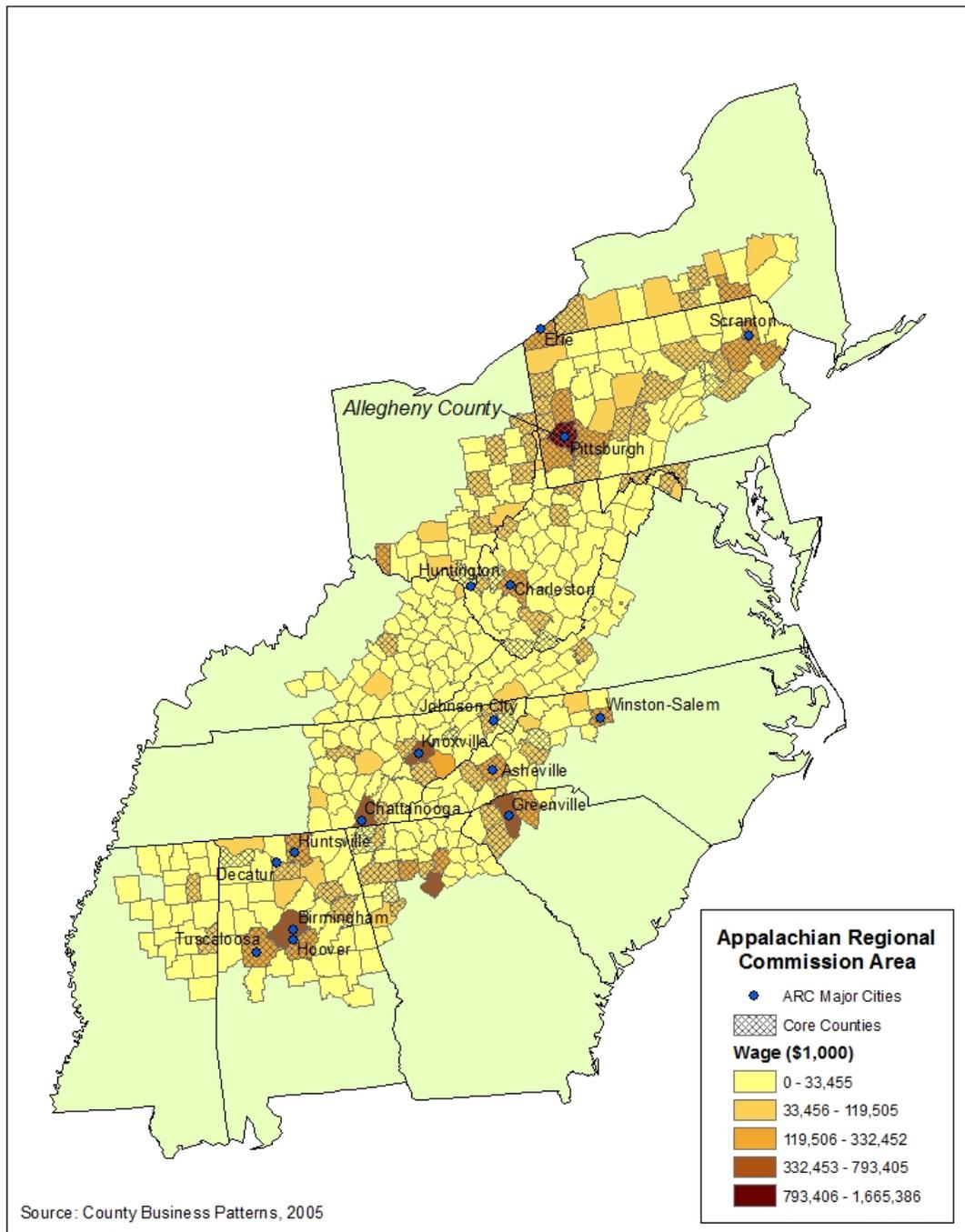


Figure 12. Total Tourism Supporting Services Wage by ARC County, 2005

over \$15.6 billion in wages were reported for tourism supporting service across the ARC region. Those wages amounted to about six percent of the region's total wages of \$255 billion. A breakdown of the ARC wage bill in tourism supporting services is indicated in Table 16, although it should be noted that there were some disclosure issues in the wage data and such data suppression may have artificially depressed the actual wage values.

Table 15. ARC Counties Ranked by Tourism Supporting Service Wages, 2005

| Rank | County, State | Core/Peri. | ARC Status | Wage (\$1,000) | Percent of total |
|------|------------------|------------|--------------|----------------|------------------|
| 1 | Allegheny, PA | Core | Attainment | 1,612,662 | 6.1% |
| 2 | Gwinnett, GA | Core | Attainment | 776,132 | 6.3% |
| 3 | Jefferson, AL | Core | Transitional | 679,472 | 5.0% |
| 4 | Knox, TN | Core | Transitional | 448,680 | 6.8% |
| 5 | Greenville, SC | Core | Competitive | 423,130 | 5.3% |
| 6 | Hamilton, TN | Core | Competitive | 422,057 | 7.2% |
| 7 | Forsyth, NC | Core | Attainment | 330,319 | 5.1% |
| 8 | Sevier, TN | Periphery | Transitional | 273,365 | 37.3% |
| 9 | Buncombe, NC | Core | Competitive | 262,050 | 8.9% |
| 10 | Hall, GA | Core | Transitional | 257,202 | 12.5% |
| 11 | Westmoreland, PA | Core | Transitional | 250,824 | 6.4% |
| 12 | Madison, AL | Core | Attainment | 249,219 | 4.7% |
| 13 | Luzerne, PA | Core | Transitional | 230,970 | 6.3% |
| 14 | Spartanburg, SC | Core | Transitional | 220,419 | 5.3% |
| 15 | Erie, PA | Core | Transitional | 209,151 | 5.9% |
| 16 | Kanawha, WV | Core | Transitional | 193,901 | 6.7% |
| 17 | Lackawanna, PA | Core | Transitional | 178,718 | 6.7% |
| 18 | Washington, PA | Core | Transitional | 175,246 | 6.7% |
| 19 | Cherokee, GA | Core | Attainment | 163,841 | 14.2% |
| 20 | Shelby, AL | Core | Attainment | 163,376 | 6.4% |

Source: U.S. Census Bureau, County Business Patterns

Allegheny County, PA had the highest absolute wages in tourism supporting services with over \$1.6 billion. This wage bill is about six percent of

the county's overall wages, matching the regional average. While the overall wages in this sector matches the regional averages a breakdown of wages in each sub-sector shows substantial variation from the regional norms. Specifically, Allegheny County had more than 24 percent of its supporting services wages in the Arts, Leisure and Recreation sector, which was 13 percentage points higher than the ARC regional breakdown. When that sector was further scrutinized, it was found that well over 60 percent of those wages were in the Performing Arts, Spectator Sports and Related Industries sector (NAICS 711). Such elevated wages could be associated with the strong presence of professional sports teams in Pittsburgh. Allegheny County was surprisingly 10 percentage points lower than the regional average for wages in Food Services.

Table 16. ARC Region Tourism Supporting Service Wage Bill by Sector, 2005

| NAICS Sector | Value (\$1,000) | Percentage |
|---|--------------------|------------|
| 445 (<i>Food and Beverage Stores</i>) | 3,311,753 | 21 |
| 451 (<i>Sporting Goods, Hobby, Book and Music Stores</i>) | 499,341 | 3 |
| 453 (<i>Miscellaneous Store Retailers</i>) | 932,603 | 6 |
| 531 (<i>Real Estate</i>) | 1,782,538 | 11 |
| 532 (<i>Rental and Leasing</i>) | 696,508 | 4 |
| 71 (<i>Arts, Entertainment and Recreation</i>) | 1,694,901 | 11 |
| 722 (<i>Food Services and Drinking Places</i>) | 6,696,670 | 43 |
| Regional total | 15,614,314 | 99 |

Source: US Census Bureau, County Business Patterns

Ranked second for wages in tourism supporting services was Gwinnett County, Georgia with \$793 million. This sector made up six percent of the

county's total wages, similar to that of the ARC region. The Real Estate sector brought in significantly more wages than for the region, with 23 percent of the supporting services wages coming from Real Estate, while the region had only 11 percent of wages from that sector. All other sectors were within 10 percentage points of the regional sector breakdown. As there are not a large number of Vacant Recreational Homes as classified by the Census, it is possible that the elevated Real Estate wages are not due as much to tourism and second homes but instead to the proximity to Atlanta which has had huge growth in recent years.

Jefferson, Alabama ranked third in tourism supporting services wages with over \$700 million. These wages accounted for about five percent of the county's total wages. All of the reporting sub-sectors had wages within 10 percentage points of the region, indicating that Jefferson County, AL was on par with regional averages and not performing unusually strong in wages for any of the tourism supporting services. Instead, its high wages were likely a result of urbanity and associated large population rather than a substantial tourist industry.

Ranked eighth was Sevier County, TN, the only peripheral county in the top 20 for wages in tourism supporting services. Unlike most of the other top performing counties for absolute wages in tourism supporting services, Sevier County received over 37 percent of its \$273 million in wages from this sector. Sevier County was 14 percentage points below the regional average wages in Food and Beverage Stores. However, the Real Estate sector came in at 17

percentage points higher in wages than the regional average, which seems to point toward a significant second home tourism niche. The Arts, Leisure and Recreation sector was also high performing in wages, at 12 percentage points above the ARC average.

The geographic distribution of high performing counties for tourism supporting services wage LQs was found to be in complete contrast to the distribution patterns for absolute wages. Instead, high relative wages were found scattered among peripheral counties throughout the region (Figure 13 and Table 17) and no core counties were found among the top 20. All of these counties were either classified to be either economically “transitional” or “distressed” by the ARC. It should be noted that there are numerous disclosure issues in the wage data because of the small size of these counties in conjunction with small industry size and, therefore, LQs may be somewhat inflated.

Ranked highest for tourism supporting service wage LQs, Pickett, County Tennessee had an LQ of 8.96. Pickett County is a very small county with a population of only 4,762 in 2007. In particular, the Rental and Leasing Services sector is important to the county, with over 13 percent of wages coming from just that sector. As a comparison, Allegheny County, PA (Pittsburgh) had a mere 0.4 percent of their wages from the same sector. There are several marinas in the

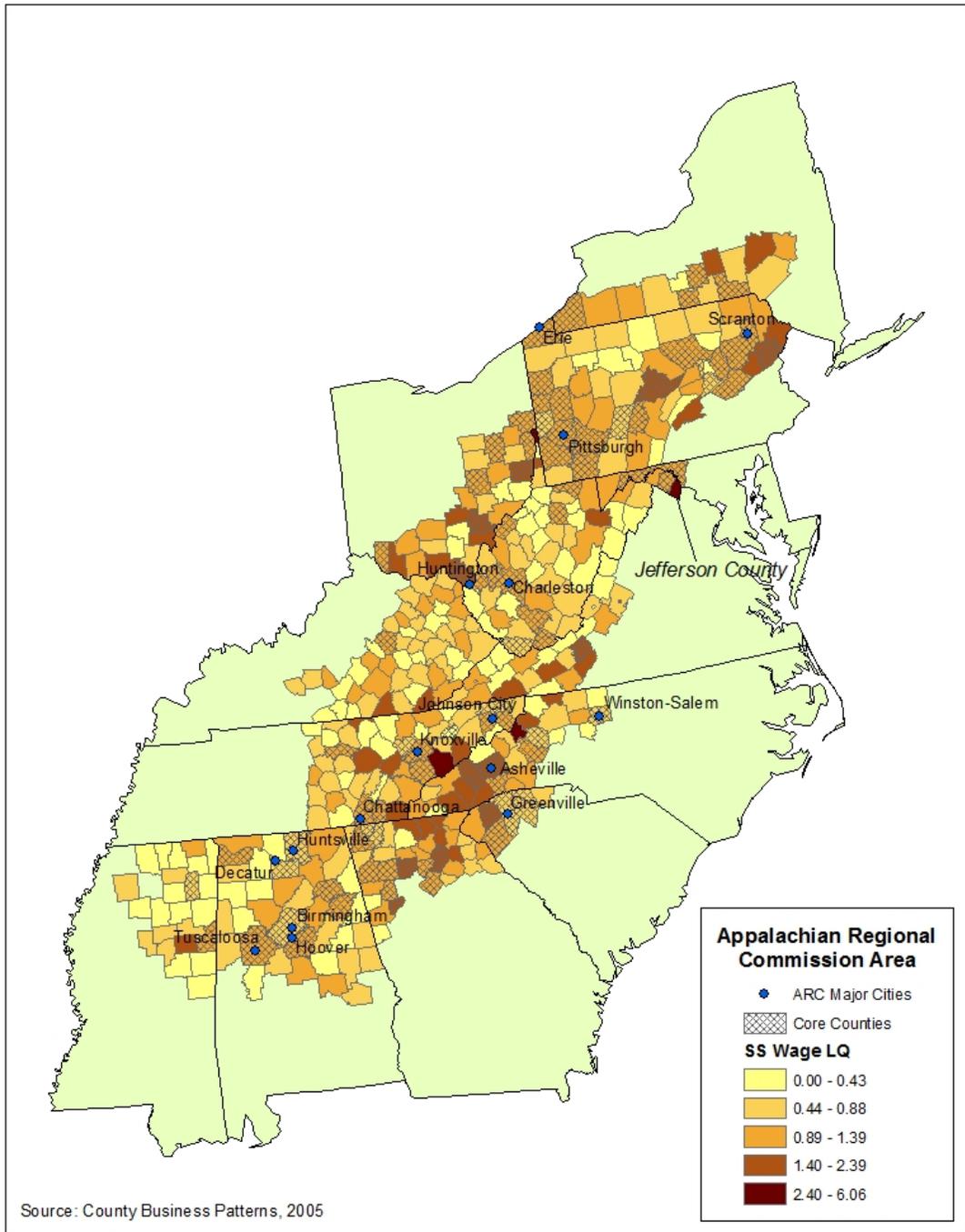


Figure 13. Tourism Supporting Services Wage Location Quotient by ARC County, 2005

county that lease boating equipment for use on Dale Hollow Lake and Lake Cumberland, likely elevating overall wages in that sector.

Fleming County, KY ranked second with an LQ of 8.42. Fleming County is very rural, lying some 25 miles from the nearest interstate (I-64) and having a population of less than 15,000. Its elevated LQs seem to stem from its high LQs in Miscellaneous Store Retailers wages (8.01). Flemingsburg, KY the county seat boasts numerous arts, crafts and antique shops, perhaps boosting this sector for the county.

Table 17. ARC Counties Ranked by Tourism Supporting Service Wage Location Quotients, 2005

| Rank | County, State | Core/Periphery | ARC Status | LQ |
|------|----------------|----------------|--------------|------|
| 1 | Pickett, TN | Periphery | Transitional | 8.96 |
| 2 | Fleming, KY | Periphery | Transitional | 8.42 |
| 3 | Lincoln, KY | Periphery | Transitional | 8.28 |
| 4 | Monroe, WV | Periphery | Transitional | 6.76 |
| 5 | Sevier, TN | Periphery | Transitional | 6.47 |
| 6 | Madison, GA | Periphery | Transitional | 6.40 |
| 7 | Rockbridge, VA | Periphery | Transitional | 6.34 |
| 8 | Meigs, OH | Periphery | Distressed | 6.20 |
| 9 | Avery, NC | Periphery | Transitional | 6.16 |
| 10 | Roane, WV | Periphery | Distressed | 6.11 |
| 11 | Clay, NC | Periphery | Transitional | 6.03 |
| 12 | Perry, OH | Periphery | Transitional | 5.98 |
| 13 | Pendleton, WV | Periphery | Transitional | 5.95 |
| 14 | Yalobusha, MS | Periphery | Distressed | 5.67 |
| 15 | Schuyler, NY | Periphery | Transitional | 5.37 |
| 16 | Lewis, KY | Periphery | Distressed | 5.05 |
| 17 | Taylor, WV | Periphery | Transitional | 4.92 |
| 18 | Towns, GA | Periphery | Transitional | 4.57 |
| 19 | Alleghany, NC | Periphery | Transitional | 4.37 |
| 20 | Hancock, WV | Periphery | Transitional | 4.35 |

Source: U.S. Census Bureau, County Business Patterns, 2005

4.2.4 Tourism Supporting Service Average Annual Wages

In order to calculate average wages for tourism support services, all counties were discarded that had any “D”, or disclosure issue reported for wages in any of the sub-sectors used within tourism supporting services. As a result, 70 counties were utilized, 37 of those were core and 33 were peripheral (Figure 14). The average wage of those counties was \$14,786, significantly lower than the regional average wages for all industries of \$32,812. Many of the sectors included are retail or food service and, therefore, tend to have low-end wages, similar to those of tourist accommodation. Table 18 ranks the top 20 counties by average wages in tourism supporting services. Most of the top 20 were core counties, but there were six peripheral counties, including the top-ranked Jefferson, WV. None of the top-ranked counties were classified as distressed and four counties had reached the “attainment” economic classification by the ARC.

Jefferson County, WV had the highest average wages in tourism supporting service with \$18,800. Despite its high ranking, the average wage in tourism supporting services was still around \$8,000 lower than the overall average wage in the county. Jefferson County is a peripheral county located in the greater Washington Metro Area. The county lies in the Shenandoah Valley region and has a strong cultural draw for history lovers with Harper’s Ferry National Historical Park and countless other historic sites. The particularly strong cultural draw may have helped to elevate the average wages of the Arts

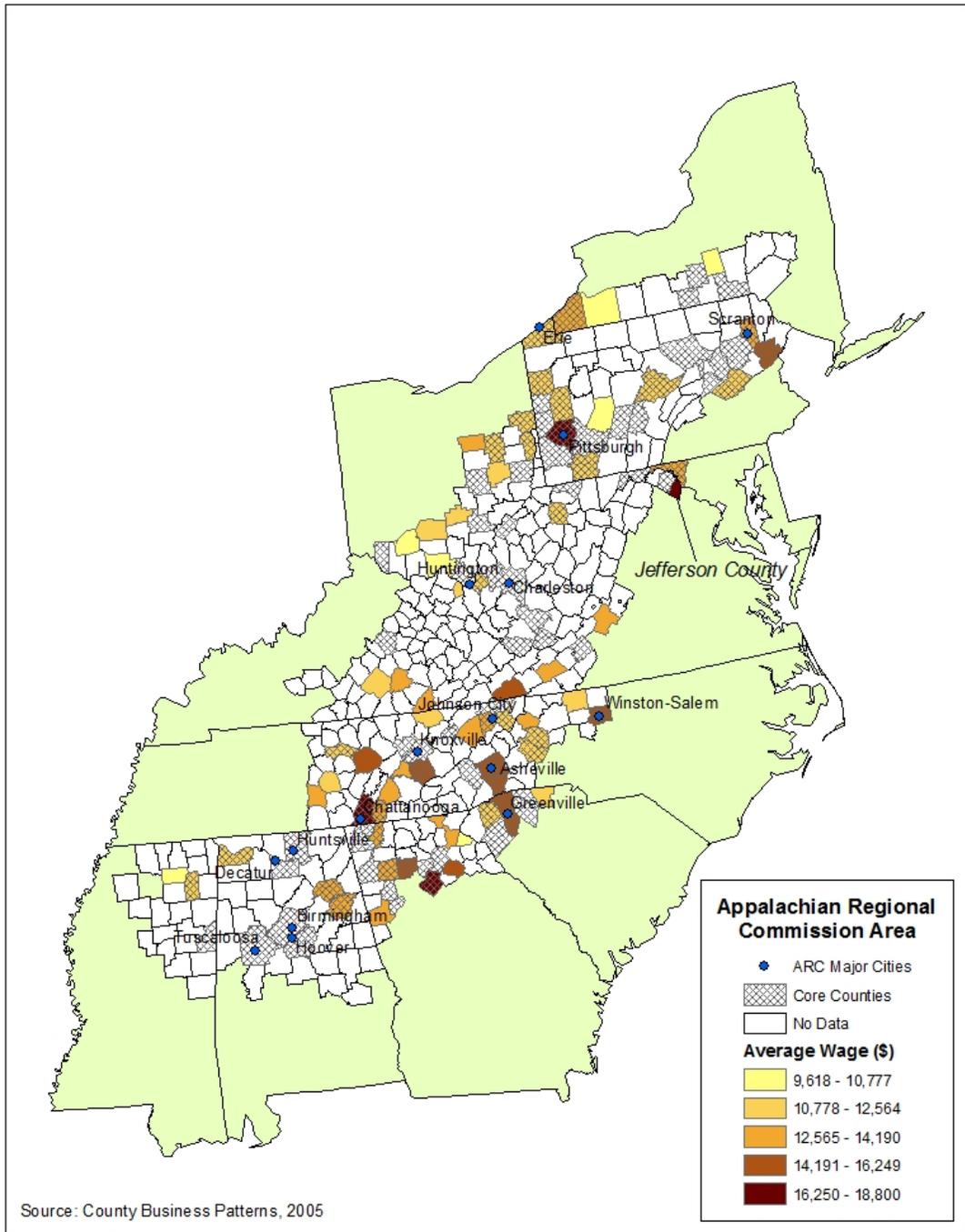


Figure 14. Tourism Supporting Services Average Wages by ARC County, 2005

Entertainment and Recreation industry, which had average wages of \$34,534 in Jefferson County.

Table 18. ARC Counties Ranked by Average Wages in Tourism Supporting Services, 2005

| Rank | County, State | Core/Periphery | ARC Status | Avg. Wage (\$) |
|------|----------------|----------------|--------------|----------------|
| 1 | Jefferson, WV | Periphery | Competitive | 18,800 |
| 2 | Hamilton, TN | Core | Competitive | 18,366 |
| 3 | Allegheny, PA | Core | Attainment | 17,769 |
| 4 | Gwinnett, GA | Core | Attainment | 17,482 |
| 5 | Blount, TN | Core | Competitive | 16,249 |
| 6 | Greenville, SC | Core | Competitive | 16,171 |
| 7 | Cumberland, TN | Periphery | Transitional | 15,958 |
| 8 | Cherokee, GA | Core | Attainment | 15,891 |
| 9 | Jackson, GA | Periphery | Transitional | 15,563 |
| 10 | Forsyth, NC | Core | Attainment | 15,238 |
| 11 | Henderson, NC | Core | Competitive | 15,166 |
| 12 | Washington, VA | Periphery | Transitional | 15,163 |
| 13 | Buncombe, NC | Core | Competitive | 14,917 |
| 14 | Monroe, PA | Core | Transitional | 14,886 |
| 15 | Watauga, NC | Periphery | Transitional | 14,190 |
| 16 | Whitfield, GA | Core | Competitive | 14,186 |
| 17 | Bartow, GA | Core | Transitional | 14,117 |
| 18 | Loudon, TN | Periphery | Competitive | 13,787 |
| 19 | Washington, MD | Core | Competitive | 13,785 |
| 20 | Chautauqua, NY | Core | Transitional | 13,776 |

Source: U.S. Census Bureau, County Business Patterns

Also exhibiting relatively high average wages in tourism supporting services was Hamilton County, TN at \$18,366 and Allegheny County, PA at \$17,769. Both of these counties are core counties with the major cities of Chattanooga and Pittsburgh. As such, their overall average wages are significantly higher than the average wages found in the tourism supporting services sector. Such findings further strengthen the argument that although

tourism agglomeration raises wages within the sector, the sector still does not compete well against the overall average wage.

4.2.5 Tourism Supporting Services Summary

Various tourism supporting services were selected for analysis because of their linkages to the tourism industry and accommodations. Although tourism supporting services are largely considered indirect tourism sectors in this study, they can play a larger role in the overall economy than accommodation. In the ARC, the tourist accommodation industry accounted for about \$1.25 billion dollars in wages, generating 87,000 jobs in more than 5,000 establishments. While the economic impact of accommodations on the ARC economy is substantive, the tourism supporting services in the ARC generated \$15.6 billion dollars in wages and 1.2 million jobs across 93,000 establishments. The tourism supporting services sector is larger than accommodations partly because it is a more expansive definition that includes seven industries aggregated into one sector for this study, while accommodations is only one industry. Furthermore, tourism supporting services are indirect suppliers of tourism services, meaning that not only do they serve the needs of tourists they are also important to residential needs, whereas accommodations is primarily utilized by visitors. Such a difference in the demand characteristics and number of industries considered significantly impacts the relative size of the tourism supporting services and accommodations sectors in the ARC.

Accommodations and tourism supporting services combined supplied 16 percent of all jobs in the ARC region but only about seven percent of all wages. A job/wage differential of that magnitude may imply that while tourism is important in the number of jobs it brings to the ARC, those jobs seem to be underperforming in regards to wages largely due to the poor quality of a large proportion of these jobs. Although there were apparent niche markets of tourism supporting services found along the Great Smoky Mountain range of eastern Tennessee and western North Carolina, in addition to the Poconos Mountains of eastern Pennsylvania, the level of specialization was typically not enough to offset the low wages found in sectors such as food services and drinking places or retail. Average wages in tourism supporting services were low at \$16,207, just shy of the \$16,368 average wage found in accommodations.

Although tourism supporting services were measured as an aggregate sector, individual industries within the aggregate sector were examined to give a better understanding of the potential niche markets for each county in activities such as second home development, water sports and shopping niches, among others. It was, therefore, possible to identify unusual geographies of intense activity, including the two counties that host the two major gateway entry points to the most visited national park in the nation—the Great Smoky Mountains National Park (GSMNP). The most heavily trafficked gateway is the Gatlinburg, Tennessee entrance located in Sevier County, which attracted 3.5 million of the park's 9.5 million visitors in 2009. Sevier also had elevated real estate

employment levels that appeared to be associated with large numbers of recreational homes in the county. The second most heavily trafficked entrance was the Cherokee entrance found in Swain County, North Carolina with over two million visitors passing through that entrance. Swain County also had attractions such as the Cherokee reservation, Harrah's Casino, and the scenic Great Smoky Mountains Railroad. Additionally, the county had many highly specialized gift shop and souvenir stores stylized like old-fashioned country stores, such as The Old Mill, and other shops like Mud Leaf Pottery offering paintings, basketry, pottery, artwork or homemade candles. There were also numerous outdoor activities available in Swain County, such as kayaking, tubing, white water rafting, hiking, and fishing among others. Sevier County, TN had higher absolute numbers of establishments and jobs in tourism supporting services, while Swain County had higher LQs. Similar trends were found for accommodations for the two counties. Despite the larger absolute number of establishments and jobs found in association with attractions like Dollywood and the GSMNP in Sevier County, it appeared as though the various outdoor activities associated with Swain County acted to create a more diverse tourism destination of greater local magnitude, as evidenced by the higher LQs. A comparison of wages for these two counties was not possible since wages for Swain County were not available for many of the tourism supporting services.

Examining the tourism supporting services sector from a core-periphery context, it was found that core counties accounted for about two-thirds of the

tourism supporting services establishments and employment in the ARC, but nearly 75 percent of the wages for the sector. That was similar to the core-periphery trends found for accommodation as the core made up 59 percent of the jobs in that sector but 67 percent of the wage bill. The large share of tourism related businesses found in core counties is not unexpected given the population geography of the ARC and the more diverse economy relative to the peripheral counties. The increased wages in core counties are likely associated with a higher cost of living and higher skill levels. For example, 19 percent of the population aged 25 or older in the core counties had a B.A. or higher compared to just 11 percent in the peripheral counties. Additionally, it is likely easier for a dissatisfied skilled worker in a core county to find similar work with a competing establishment for better wages or working conditions given the proliferation of accommodation establishments than might be the case for a worker in a peripheral county with fewer accommodation establishments from which to choose. Furthermore, while it may be possible for a dissatisfied worker to change jobs in the specialized periphery, the wage “ceiling” is likely to be higher in the core, often creating a “brain drain” of skilled workers migrating from periphery to core.

In terms of location quotients, the geographic distribution of tourism supporting services was similar to that of the geography of the accommodation sector. Many peripheral counties scored higher LQs than the core counties, demonstrating what may be a greater dependence on tourism in these more

remote counties. Most of the high-performing peripheral counties were found along the Appalachian ridgeline in largely remote areas, especially counties with a lot of National Forest and/or National Park acreage. However, it was found that those peripheral counties with a greater dependence on those low-wage tourism supporting services typically did not have increased overall county-wide average wages. While there were some peripheral counties with high LQs, the majority of peripheral counties had few, if any, tourism-related establishments in absolute terms. The lowest performing counties were found in the central and southernmost counties of the ARC. Core counties typically did not have elevated LQs in tourism supporting services and instead consistently scored around 1.0.

4.3 Correlation Analysis

A Spearman's rank-order correlation coefficient matrix was calculated for the ARC that consisted of 21 variables including seven accommodation variables (number of establishments, establishment LQs, total employment, employment LQs, annual wage, annual wage LQs, and average wage), seven socio-economic variables (total employment, overall average wage, poverty, unemployment, percent with a BA or higher, median household income, and per capita income) and six surrogate remoteness variables (absence of an interstate, number of vacant recreational housing units, percent farmland, percent National Park Service land, percent National Forest Service land, and percent combined state and federal park land). Spearman's was selected because it is a non-parametric

test and it does not assume a normal distribution within the data. The nature of core-periphery relationships across the ARC implies that employment and establishments would tend to be skewed rather than normally distributed across the region.

The correlation matrix was calculated for all ARC counties (n=417) and also for just the specialized peripheral counties (n=87). Both the ARC and specialized periphery matrix resulted in over 200 correlation coefficients. Correlation analyses that included the wage variables encompassed 285 counties rather than the complete set of 417 counties and independent cities due to disclosure issues. Correlations were not calculated for the tourism supporting services because of the numerous disclosure issues encountered for many counties. The correlations found to exhibit some of the highest value correlation coefficients that were statistically significant were selected for discussion.

4.3.1 ARC Correlation Analysis

Accommodation Establishment LQs and Accommodation Average Wage

Core-periphery models and agglomeration theory suggest that industrial clustering should increase competition between businesses within an industry and also create economies of scale and scope, thus driving up the skill and knowledge level of workers within an industry. Disproportionately large and highly specialized tourism accommodation economies may match these theoretical expectations since a proliferation of hotels, bed and breakfasts, inns, and resort

accommodation complexes might provide the most motivated and highly skilled accommodation workers with the opportunity for upward mobility and higher wages. Theoretically, such economic gains could be transferred to the greater economy in terms of higher overall average wages affiliated with this type of intense industrial clustering. To test these theoretical assumptions, correlation coefficients were calculated for total accommodation employment LQs and accommodation establishment LQs against accommodation average wages to determine whether or not a specialization in tourist accommodation by ARC county positively impacted average wages in the industry.

The Spearman's rank-order correlation coefficient test for accommodation establishment LQs and accommodation average wages was 0.37 (at the 1% level of significance), suggesting that a moderate and positive correlation exists between the two variables for the ARC. The scatter diagram line of best fit (Figure 15) indicates that as accommodation establishment LQ increases, average accommodation wages increase in a similar fashion. Additionally, the scatter diagram indicates that there are few anomalous core counties, while there is a great deal of variability among peripheral counties. Counties that seem to best fit this scenario were Avery, NC, and Floyd, VA. For example, Avery County, which is a largely mountainous ski resort community, located south of Boone and contains the towns of Banner Elk, Linville, Beech Mountain and Sugar Mountain had an average accommodation wage of around \$47,000 and an accommodation establishment LQ of 2.4. The average accommodation wage for

each of these three counties was significantly higher than the ARC average accommodation wage of about \$16,000.

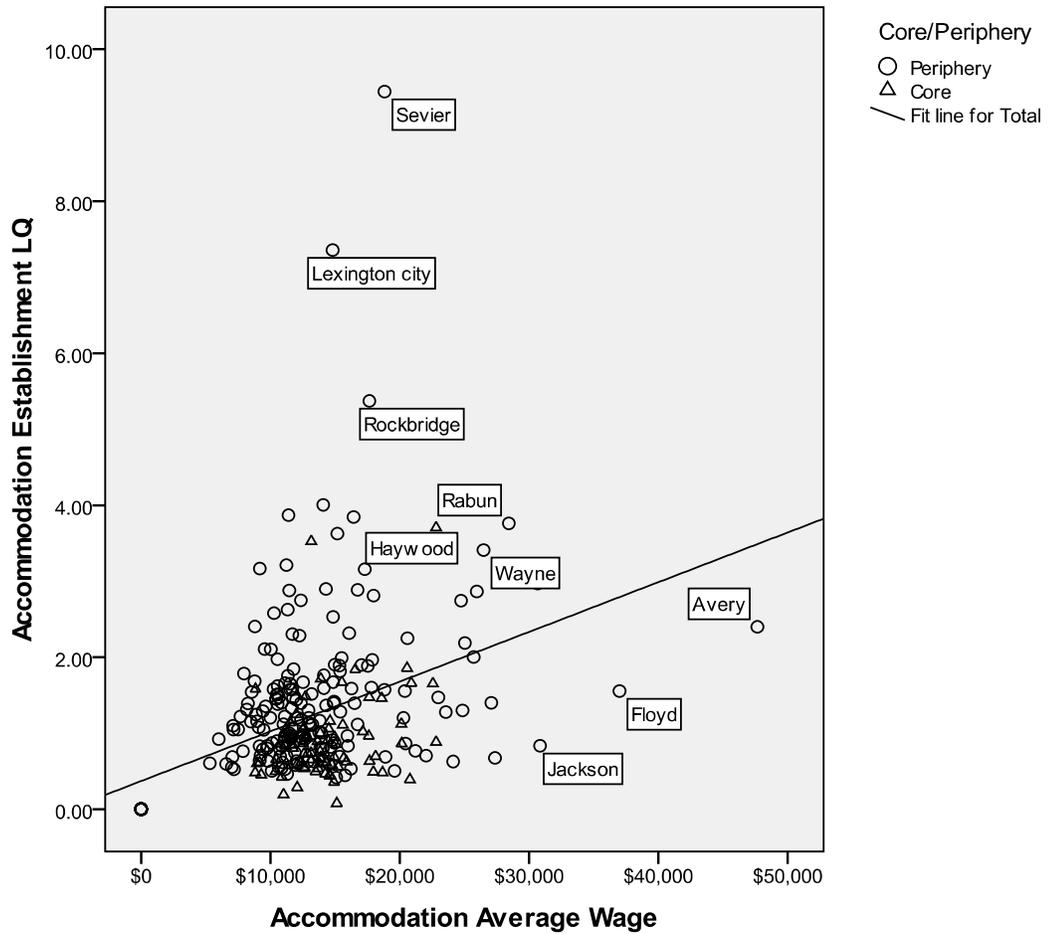


Figure 15. Scatter Plot of Accommodation Establishment LQs versus Accommodation Average Wage for all ARC Counties, 2005

However, all three of these “best practice” counties had small absolute numbers of accommodation establishments with 13 in Avery, 10 in Hampshire and only four in Floyd, although some of these establishments offered a broad

range of amenities such as the Eseeola Lodge at Linville Golf Club in Avery County. The Eseeola Lodge features 24 guestrooms and a private cottage with rates ranging from \$400 a night to \$1,050 with breakfast and dinner included. Some included amenities are fresh flowers, turn-down service, down bedding and on-site facilities, such as a library, extensive spa services, private porch or balcony, tennis, fitness center and an 18-hole championship golf course, all on the Lodge's 3,000 acre site. The Eseeola Lodge also has facilities to host meetings and events such as weddings for up to 250 people. Given the full service provisions and emphasis on high-end customer services, it is likely that average wages will trend up in an attempt to attract quality workers.

There were some anomalies to the overall trend including counties such as Sevier, TN and Rockbridge, VA, plus Lexington city in Virginia, which all exhibited unusually high accommodation establishment LQs even though the average accommodation wages were not as high as expected based on the line of fit. For example, Sevier, TN had an accommodation establishment LQ of 9.44, even though average accommodation wages were only about \$19,000. Sevier County acts as the major gateway into the GSMNP and also hosts the 130 acre Dollywood amusement park, which sees 2.5 million visitors annually and employees around 2,000 workers during the peak season. Most of the accommodation establishments in Sevier are moderate or value-priced establishments geared toward families. Given the emphasis on budget pricing

most of these establishment operators are likely under intense pressure to minimize labor costs.

By contrast, the high tourism LQs in Rockbridge County (which includes the independent city of Lexington and is located in north central Virginia) is likely triggered by natural attractions like the Natural Bridge, the Blue Ridge Parkway, Jefferson National Forest, as well as whitewater canoeing and kayaking on the Maury River. Additional cultural attractions include the Virginia Military Institute and the Washington and Lee University—both of which are National Historic Landmarks, as well as numerous other historic sites like Cyrus McCormick’s farm. Rockbridge County’s accommodation sector includes moderately priced bed and breakfasts and many major chain hotels such as Best Western, Days Inn and Holiday Inn Express. As most of the accommodation establishments in these anomalous counties are moderately priced, it is possible that they do not require highly skilled workers and, therefore, wage levels remain low compared to overall average wages.

Accommodation Employment LQs and Accommodation Average Wage

Accommodation employment LQs were examined against the average accommodation wage because an agglomeration of accommodation establishments does not necessarily translate into large numbers of jobs given that most accommodation establishments are relatively small in size, especially in the peripheral counties. The Spearman’s rank-order correlation coefficient for

accommodation employment LQs and average accommodation wage was 0.40 (at the 1% level of significance) for the ARC, suggesting a positive and moderate-sized correlation. A visual examination of the scatter plot (Figure 16) suggests that as accommodation employment LQs increase, accommodation average wages tend to increase in a similar fashion. Furthermore, the scatter diagram indicates that there are few anomalous core counties, while there is a increased level of variability among peripheral counties This was particularly the case in peripheral counties such as Jackson, GA and Rabun, GA that approximated the line of fit. Jackson County is located to the northeast of Atlanta off of I-85 and had an accommodation employment LQ of 2.76 and an average accommodation wage of nearly \$31,000. In addition to chain hotels such as Comfort Inn and Holiday Inn Express, Jackson County also hosts the more upscale Chateau Élan, with room rates ranging from \$169 to \$824 and featuring extensive amenities and a winery on-site. Chateau Élan sits on 3,500 acres and features 275 guestrooms, including an 1,832 square foot suite and a 1,333 square foot suite, as well as several private villas. Extensive spa services are available and there are special packages available, such as culinary classes, romantic, golf and spa packages. In addition to lavish accommodations, Chateau Élan has two 18-hole championship golf courses and a smaller 9-hole par three, as well as a private golf club. The hotel does not just cater to the pleasure traveler as there is also a 25,000 square foot conference center for meetings.

The 40 minute drive from Atlanta makes the location feasible for corporate get-away meetings.

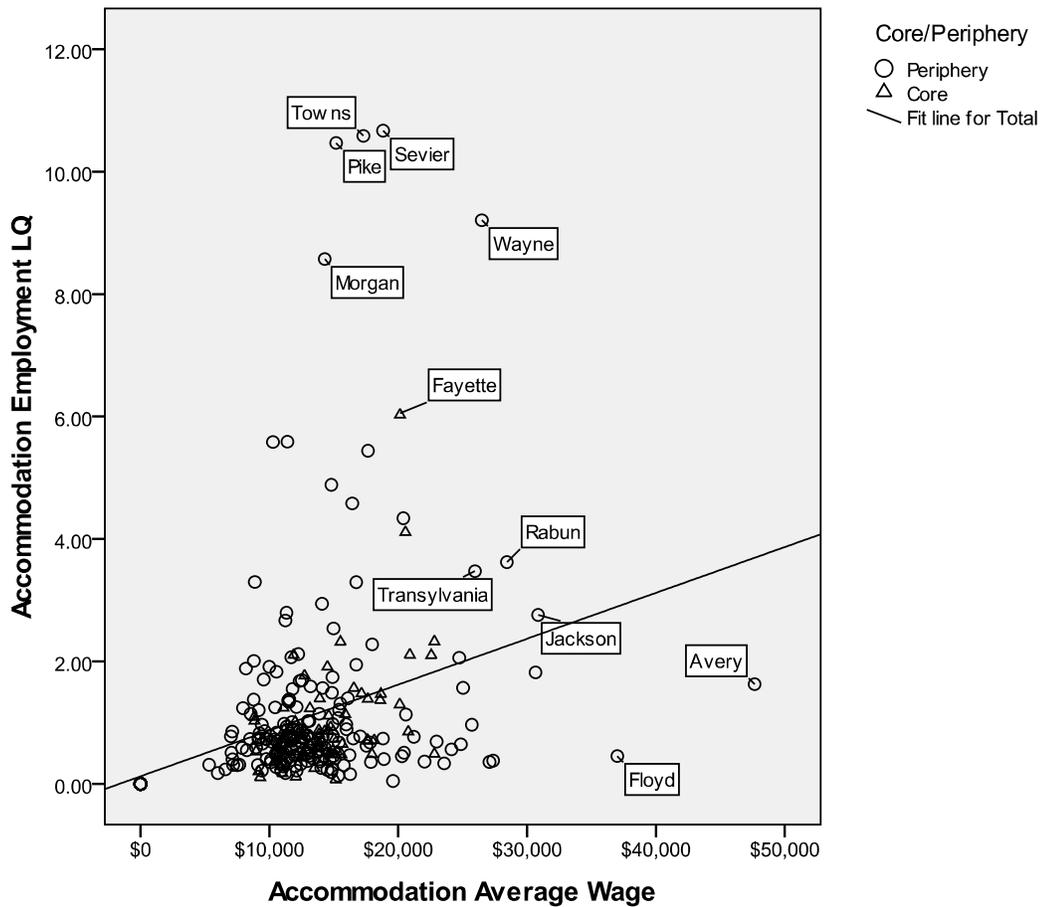


Figure 16. Scatter Plot of Accommodation Employment LQs versus Accommodation Average Wage for all ARC Counties, 2005

Similarly, Rabun County is home to the Dillard House, which also offers an extensive list of amenities but is somewhat more affordable with rates ranging from \$59 to \$219 and is geared toward families and outdoor activities. For example, there is an on-site children’s petting zoo, stables offering horseback

riding and two stocked trout ponds. The Dillard House is also somewhat smaller than Chateau Élan with 92 guestrooms and 28 cottage/chalets available. While it is likely that the extensive amenities offered by both of these accommodation establishments required more skilled workers than needed at establishments such as the Best Western, the more family-oriented Dillard House in Rabun County did not have the skill needs found at Jackson County's Chateau Élan and this is likely reflected in the slightly lower average accommodation wages found in Rabun County versus Jackson County.

Despite the trend of increasing average accommodation wages with increasing accommodation employment specialization, there was a noticeable cluster of anomalies. Most of the anomalies were peripheral counties including Sevier, TN, Towns, GA, Pike, PA and Wayne, PA, which had elevated accommodation employment LQs and slightly above average accommodation wages, although these wages were not as high as expected given the line of fit. Pike and Wayne Counties are located in the Poconos region of Pennsylvania and both counties offer a full spectrum of lodging options at a variety of rates. Most of the accommodations are affordably priced, ranging from around \$50 to \$129 a night and do not offer specialized amenities. However, there are a few family-oriented resorts with more activities and amenities available. Additionally there are a few high-end resorts, such as The Lodge at Woodloch in Wayne County which offers 58 guestrooms ranging from \$249 to \$759 nightly, including three meals and also offers spa services, culinary, art and fitness classes among other

amenities. The skill-set needed for workers at The Lodge at Woodloch likely explains Wayne County having among the top 10 average accommodation wages in the ARC. Although all of these counties have a disproportionate amount of accommodation employment and somewhat elevated accommodation wages, most seem to be unable to offer a competitive living wage compared to the overall county average wage, despite the amenities being offered in the existing accommodation establishments. Furthermore, the potentially higher wage jobs that likely exist in the more upscale resorts are outnumbered by the more prevalent chain and family-priced offerings that bring down overall average accommodation wages.

The only anomalous core county was Fayette, PA located southeast of Pittsburgh within the Pittsburgh MSA. The accommodation employment LQ for Fayette County was 6.45, although the average accommodation wage was just over \$20,000. Fayette County is home to the Frank Lloyd Wright “Fallingwater” home and numerous other cultural attractions, as well as many outdoor recreation opportunities, such as hiking, fishing and canoeing. Although the Fayette County average accommodation wage was higher than the ARC average accommodation wage, it was less than the county’s overall average wage of \$24,000. Fayette County contains the Nemaquin Woodlands Resort, a 2,000 acre AAA four-diamond resort with rates ranging from \$399 to \$3,000. Nemaquin features two 18-hole championship golf courses, an equestrian center, on-site ski facilities, a AAA five-diamond restaurant, spa services, shooting and culinary

classes, as well as over 32,000 square feet of conference facilities among other amenities. Fayette County also features several inns, bed and breakfasts, motels, and numerous campgrounds, but few chain hotels. It is likely that the campground and motel wages depress the wage potential for the county found in the higher end resorts.

Accommodation Establishment LQs and Remoteness

This dissertation has focused on the core-periphery differences found in ARC tourism geographies and has found that while tourism usually thrives in the core, tourism specialization in the ARC is more likely to be found in the periphery. By definition, the periphery is characterized by its remoteness and for decades scholars such as Christaller (1963) have argued for tourism as an economic development tool in such isolated areas. Recently, Michael et al. (2007) examined micro-clusters of tourism in peripheral Australia and found that such clusters exist and thrive because of their uniqueness and small-scale development and, in fact, would not likely be as successful were they larger developments. This dissertation uses an extension of that theory, asserting that micro-clusters of tourism exist in Appalachia, albeit in a different form than found in Australia since the geographies are somewhat dissimilar. Peripheral micro-clusters of tourism in the ARC are thought to be largely based on a sense of isolation or remoteness in association with some natural amenities. To test that supposition, a Spearman's rank-order correlation coefficient was calculated using

the percentage of combined National Forest (NF) and National Park (NP) land in each county against accommodation establishment LQs. It is assumed that NF and NP variables act as a surrogate for remoteness and that the correlation will provide an indication of the relative contribution of remoteness to the tourism specialization found in each county. State Parks were not included as part of the remoteness surrogate because of state level differences in the definitions of parks, whereas Federal Parks were all defined at the national level in the same manner.

The Spearman's correlation coefficient was 0.31 (at the 1% level of significance) for accommodation establishment LQs and remoteness for the 410 ARC counties, suggesting a moderate and positive correlation existed between those variables. It should be noted that NF and NP data was not available for the seven independent cities in Virginia. The scatter diagram indicated that as the amount of land allocated for uses such as National Forest or Parks increased, accommodation establishment LQs increased in an exponential fashion (Figure 17).

Counties that seem to best fit this model were McCreary, KY, Rabun, GA, and Graham, NC. All of these counties had both more than 60 percent of the county land area classified as either NP or NF and somewhat elevated accommodation establishment LQs. For example, McCreary County had an accommodation establishment LQ of 3.17 while 63 percent of all land in the county was either in the Daniel Boone National Forest or the Big South Fork

National River and Recreation Area. McCreary is a very small county located along the Kentucky-Tennessee border in southeastern Kentucky with

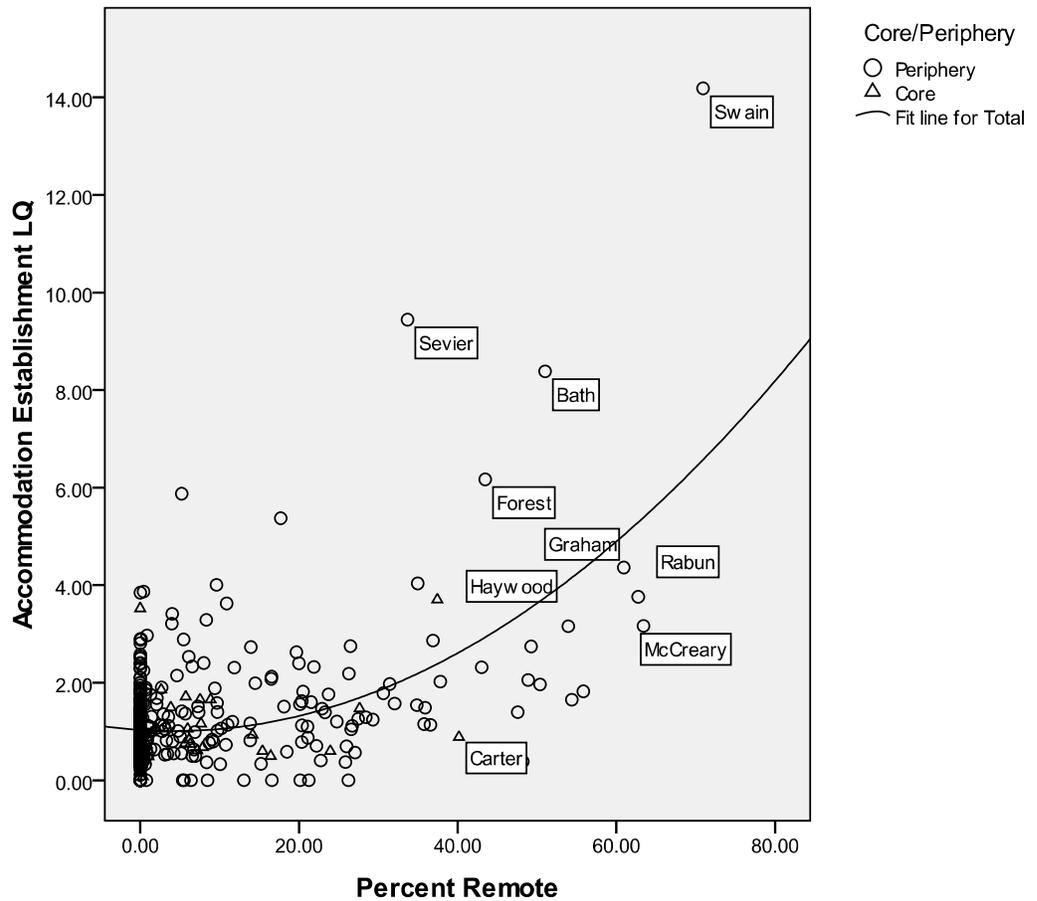


Figure 17. Scatter Plot of Accommodation Establishment LQs vs. Percent Remote Land for All ARC Counties, 2005

a population of just over 17,000 in 2007. It is the only county in Kentucky without a single incorporated city, emphasizing the county's rural and remote character. The somewhat elevated LQs are likely an indication to the size of the county, since there were only five accommodation establishments in McCreary. Typically

such a low number of accommodation establishments would not translate to an elevated LQ, but as McCreary only had 167 total establishments, those five accommodation establishments become more significant. The implication is that tourism specialization in conjunction with remoteness does not necessarily equate to a large tourism industry in absolute terms. Tourism in McCreary is centered on the landscape which offers waterfalls, cliffs and gorges, as well as outdoor activities, such as whitewater rafting, canoeing and kayaking created by the Cumberland River.

There were some counties that appeared as anomalies to the line of fit, including Swain, NC, and Bath, VA. These counties were anomalous in that despite their large amount of National Forest and National Park land their accommodation establishment LQs were still well above the level expected. For example, Swain County had 73 percent of its area as either National Forest or National Park land with the majority of that land associated with the Great Smoky Mountains National Park and the rest was attributed to the Nantahala National Forest. Not only was Swain high on the remoteness variable, it also had an accommodation establishment LQ of 14.18, with 57 such establishments. Similarly, Bath County, VA, which lies along the Virginia/West Virginia border, had an accommodation establishment LQ of 8.38, with 13 establishments and over 51 percent of its area lying within the George Washington National Forest. Bath County is well known for the Homestead Resort and numerous hot springs. Furthermore, both of these counties were very small with populations of 13,643

in Swain and 4,635 for Bath, VA in 2007. Such small populations, remarkably high accommodation establishment LQs and the very high levels of “remoteness” likely indicate that a tourism mono-culture exists in these counties, meaning that these counties are indeed specializing in natural amenity tourism to an even greater extent than would be indicated by the line of fit. Supporting such theories, the Bath County Chamber of Commerce notes the large portion of its area that is forested and markets itself as “a seclusion lover’s paradise.”

Accommodation Employment LQs and Remoteness

Similar trends were found for accommodation employment LQs and remoteness by county but to a lesser degree. The correlation coefficient for accommodation employment LQs and remoteness was 0.22 (at the 1% level of significance). It is likely that the correlation coefficient is lower because of the remarkably high accommodation employment LQ of 46.25 found in Pocahontas County, WV. Accommodation employment in Pocahontas is spread across only 10 establishments but makes up nearly half of the county’s 3,535 jobs. Most of the accommodation employment is concentrated in the Snowshoe Ski Resort’s numerous lodging options.

4.3.2 Specialized Periphery Correlation Analysis

A Spearman’s rank-order correlation coefficient matrix was calculated for the specialized peripheral counties of the ARC. Peripheral counties were

considered to be specialized if they met any of the following conditions: accommodation establishment LQ greater than 2.0, accommodation employment LQ greater than 2.0 or average accommodation wages higher than the ARC average of \$16,207. Those conditions resulted in 87 specialized peripheral counties, but because of disclosure problems with the wage data only 60 counties were included in the correlation analysis. A separate correlation matrix was calculated for specialized counties because the prior analysis seemed to indicate a greater dependence on tourism in some peripheral counties than was found in the core counties.

Accommodation Establishment LQs and Accommodation Average Wage

Agglomeration theories, especially those associated with micro-clusters in peripheral areas suggest that tourism industry clustering can occur in the specialized periphery. Clustering in the periphery would likely create economies of scope within accommodation, although economies of scale are not necessarily present due to the very definition of the periphery. Theoretically, such clustering should provide economic gains to skilled tourism workers in those specialized counties even though those gains may not transfer over to the county economy as a whole.

When calculated for only specialized peripheral counties, the Spearman's rank-order correlation coefficient test for accommodation establishment LQs and accommodation average wages was -0.27 (at the 5% level of significance)

suggesting a weak to moderately negative correlation. The line of best fit seen on the scatter diagram (Figure 18) indicates that as accommodation LQs increase

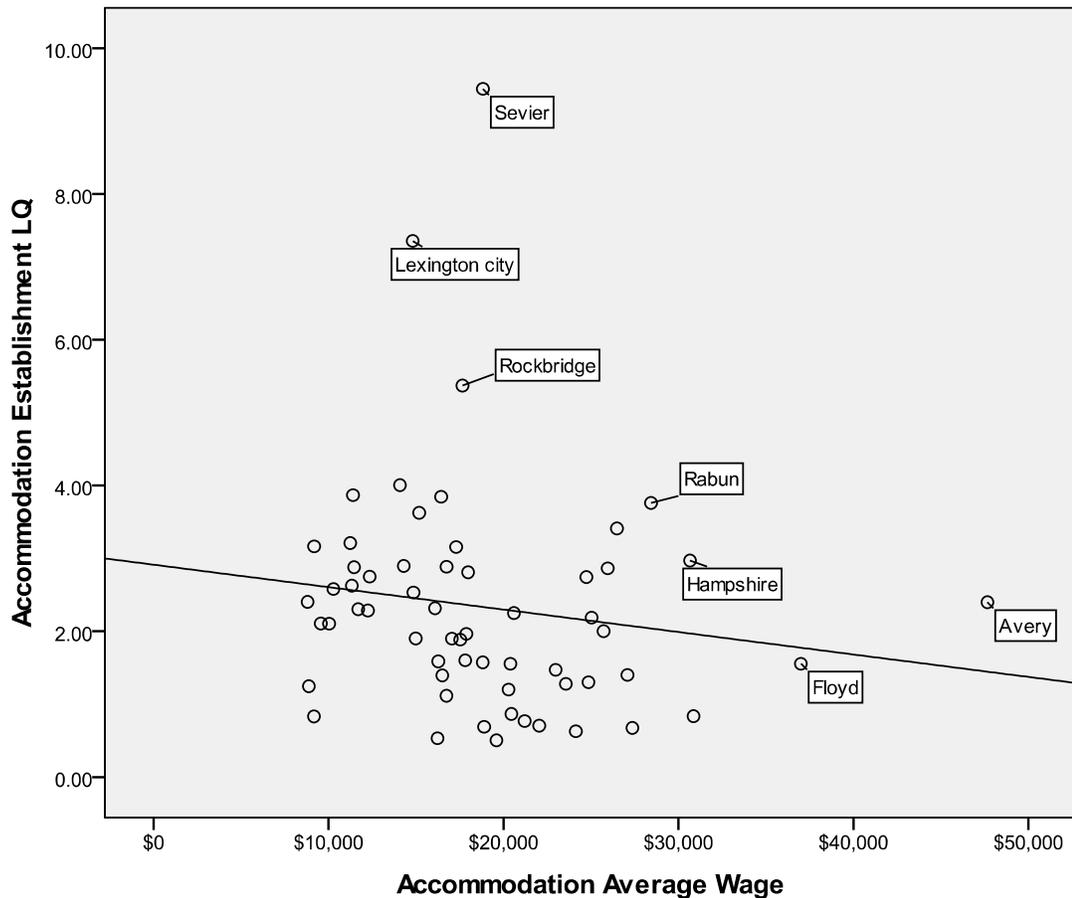


Figure 18. Scatter Plot of Accommodation Establishment LQs versus Accommodation Average Wage for Specialized Peripheral Counties, 2005

average accommodation wages decrease in the specialized periphery. The implication here is that while tourism specialization may benefit workers in the ARC as a whole (Figure 15) regarding average wages, this is not the case for most of the specialized periphery counties. Quite the contrary, over-specialization

in accommodation in the specialized periphery can actually drive down average accommodation wages. Part of the logic for this inverse relationship may be that the most specialized peripheral counties are very small accommodation industries in absolute terms that offer limited opportunities for economic advancement. By contrast, the few specialized peripheral counties that experienced higher accommodation wages had somewhat lower LQs and more diverse economies, however even these counties were only classified as “transitional” and not “competitive” or “attainment.”

Counties which seemed to best match the line of fit were Avery, NC, Floyd, VA and Hampshire, VA. For example, Floyd County had an average accommodation wage of \$37,000 and an accommodation establishment LQ of 1.56, indicating only a slight degree of tourism specialization but wages much higher than the ARC average of just over \$16,000. All three of these counties had moderately high accommodation establishment LQs but significantly higher than average accommodation wages. Furthermore, these counties had a small number of accommodation establishments. Despite the relatively small number of establishments, these counties were able to offer high-end lodging options, requiring skilled workers and above average wages and tended not to feature value-priced chain hotels. For example, Floyd County, which is found in southwest Virginia about 40 miles southwest of Roanoke, is known for its cultural and natural attractions such as the Blue Ridge Parkway and the annual Floydfest music and arts festival. Supplying accommodations to the visitors of these

attractions are establishments such as the 100 acre Inn at Hope Springs Farm located near the Blue Ridge Parkway. The Inn is an upscale bed and breakfast featuring six rooms ranging from \$195 to \$275. The rate includes a full breakfast, quality furnishings, access to the grounds and farm along with a complimentary bottle of local wine. Other establishments had rates ranging from \$109 to around \$159 and most catered to adult visitors traveling without children. The Eseeola Lodge in Avery County was also an upscale establishment, although larger than the establishments found in Floyd. The average size differential between these high-performing counties seems to indicate that it is not the size of the establishment that is critical to the average wage for workers, but rather the quality of the services provided. The upscale establishments in these small counties offer quality personalized service to their patrons, enabling them to charge more and also pay higher wages to their employees.

Conversely, there were several counties such as Sevier, TN, Rockbridge, VA and the independent city of Lexington, VA that seemed to over-specialize in tourism as their LQs were significantly elevated, but without higher average wages to match. For example, Sevier County had an extremely high accommodation establishment LQ at 9.44 and average accommodation wages of \$18,827. Although the average accommodation wage was higher than the ARC average it was not as high as the \$23,725 overall average wage for the county, indicating accommodation employment in Sevier County is likely not providing an adequate living wage to workers in the industry. Despite the proliferation of

accommodation establishments in Sevier County, most of these are value-priced establishments offering few amenities or personal services and therefore unable to pay high wages.

Still other counties had accommodation clusters but did not have average accommodation wages that seemed to benefit from the specialization. This seemed to be particularly evident in the group of 16 counties that have accommodation establishment LQs greater than 2.0, but average accommodation wages of around \$12,000 for the group. Most of these counties were very small when compared to the ARC, but exhibited numbers of accommodation establishments similar to the ARC average. For example, Cocke County, TN, which shares a border with North Carolina, had a population of 35,337. Cocke County had 13 accommodation establishments, nearly matching the ARC average, but only 500 total establishments compared to the ARC average of 1,285. Furthermore, Cocke County had accommodation average wages of only \$12,353, much lower than the ARC average of about \$16,000. However, this wage differential was in keeping with the significant difference between the overall average wage of the county and ARC as a whole. The recurrent trend in all of these specialized peripheral counties with low-performing average wages is two fold: there is a dependence on these establishments, but most establishments offer lodging at budget prices and many are seasonal. The implication is that a specialization in such accommodation types may not bring an economic boost to these communities.

Accommodation Employment LQs and Accommodation Average Wage

Accommodation employment LQs were examined against the average accommodation wage for the specialized periphery because it is important to determine how accommodation employment clusters impacted the average accommodation wage. More specifically, the specialized periphery has a variety of accommodation types with varying employment levels including counties with only small-scale inns or bed and breakfasts, counties with numerous mid-sized chain and budget hotels, as well as counties with large-scale resorts and a substantive employment base. For this reason, it was important to determine how average wages are associated with relative employment in the accommodation industry throughout the counties in the specialized periphery.

The Spearman's rank-order correlation coefficient for accommodation employment LQs and accommodation average wages for the specialized peripheral counties was -0.28 (at the 5% level of significance). The implication of the test is that a weak to moderate negative correlation exists between those variables. A visual examination of the scatter plot (Figure 19) suggests that as accommodation employment LQs increase, accommodation average wages tend to decrease. One possible implication of this is that while accommodation industry clusters in the ARC created a level of competition that worked to elevate skill and average wage levels, in the specialized periphery over-specialization in some counties may have led to a proliferation of budget or value-focused establishments that drive down average wages in the accommodation industry.

Also, the seasonality of tourism in many of these counties limits year-round wage earning while still needing a relatively large employment base during the tourist season.

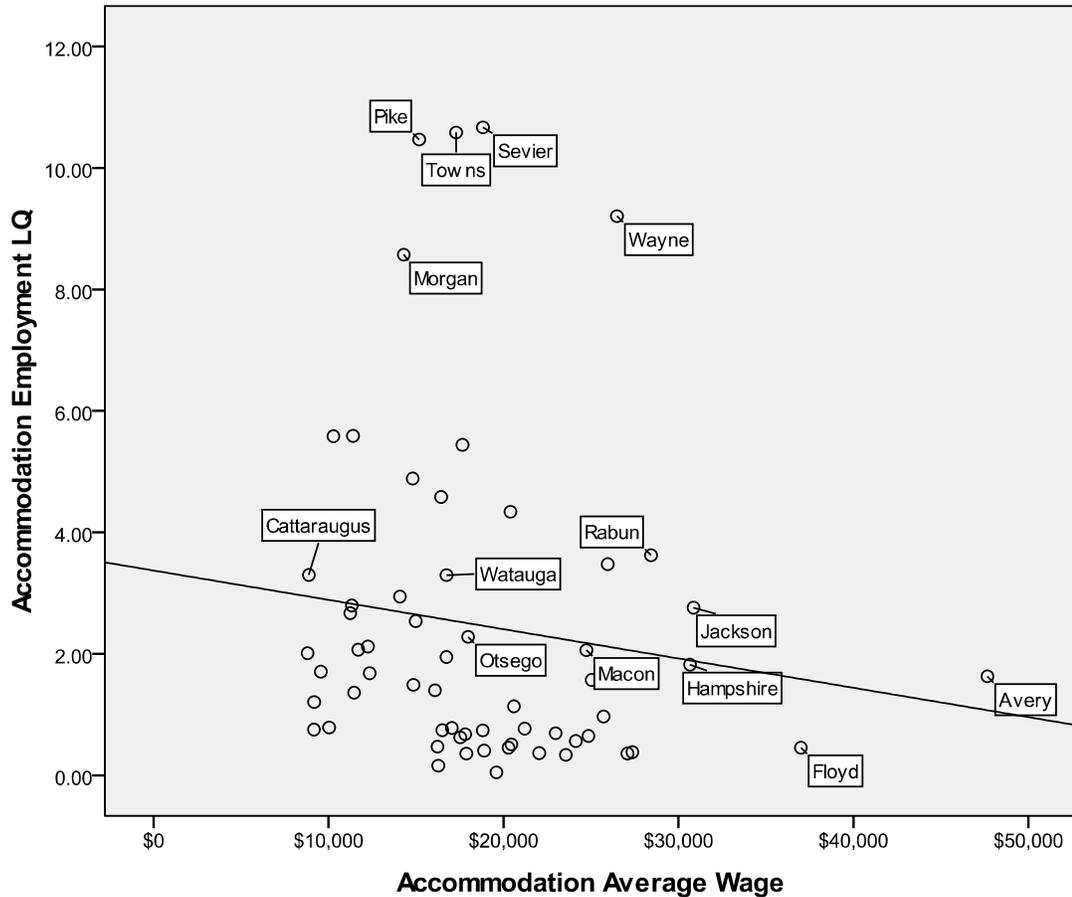


Figure 19. Scatter Plot of Accommodation Employment LQs vs. Accommodation Average Wage for Specialized Peripheral Counties, 2005

There were numerous counties found to closely follow the line of best fit at every range of the average wage, including Cattaraugus, NY, Macon, NC and Avery, NY. Cattaraugus County, NY had a very low average accommodation

wage of under \$9,000 despite a moderately high location quotient of 3.30.

Cattaraugus County, NY is located in western New York along the Pennsylvania-New York border, about 50 miles south of Buffalo. While there are some moderately priced chain hotels and inns, there is a proliferation of campgrounds in Cattaraugus County, which typically have very low nightly rates and tend to be a more seasonal lodging option than hotels, bed and breakfasts or resorts. Therefore, it is likely that the seasonal campground wages in conjunction with a preponderance of value-priced establishments significantly depress the average accommodation wage for Cattaraugus County. Macon, NC represented the middle of the line of fit with an average accommodation wage near the ARC average at \$24,740 and an LQ of 2.06. Although Macon County had an average accommodation wage higher than the ARC average, it was not as high as the overall average county wage. Macon County is in southwestern North Carolina and contains the towns of Highlands and Franklin. Avery County represented the high wage end of the line at \$47,000.

There were also counties with very elevated accommodation employment LQs but more moderate average accommodation wage levels that exceeded the ARC average, such as Wayne PA, Sevier, TN and Towns, GA. These counties all had numerous medium-sized establishments, the majority of which were moderately priced, but with at least one larger establishment featuring elevated rates and services. Furthermore, all of these counties had a year-round draw rather than having only one tourist season. For example, Wayne County is

located in the Poconos, which is widely known as a honeymoon destination. In addition to catering to newlyweds and Valentine's Day travelers, they also have downhill skiing in the winter and family resorts which are open year round. Similarly, Sevier County, features the Great Smoky Mountains National Park and draws warm weather, autumn leaf visitors, as well as numerous Christmas-themed activities throughout the winter. It is possible that while these counties do not specialize in high-end accommodations, they maintain moderate wage levels because of their broad year-round appeal.

Accommodation Establishment LQs and Percent Remoteness

For the ARC as a whole, tourism accommodation development appears to be correlated with the percentage of land cover in National Forest or National Park. It is, therefore, likely that in the less well developed parts of the ARC (i.e., the specialized periphery) the relationship between tourism development and remoteness might be more substantive. Unlike the wage data, complete establishment and remoteness data was available for all the specialized peripheral counties (although it did not include the independent city of Lexington, VA). The correlation coefficient for accommodation establishment LQs and percent remoteness was 0.48 (at the 1% level of significance) suggesting a positive and moderate to strong correlation. A visual examination of the scatter diagram (Figure 20) indicates that as accommodation establishment LQs

increase the percent of land designated as National Forest and National Park increases in an exponential manner.

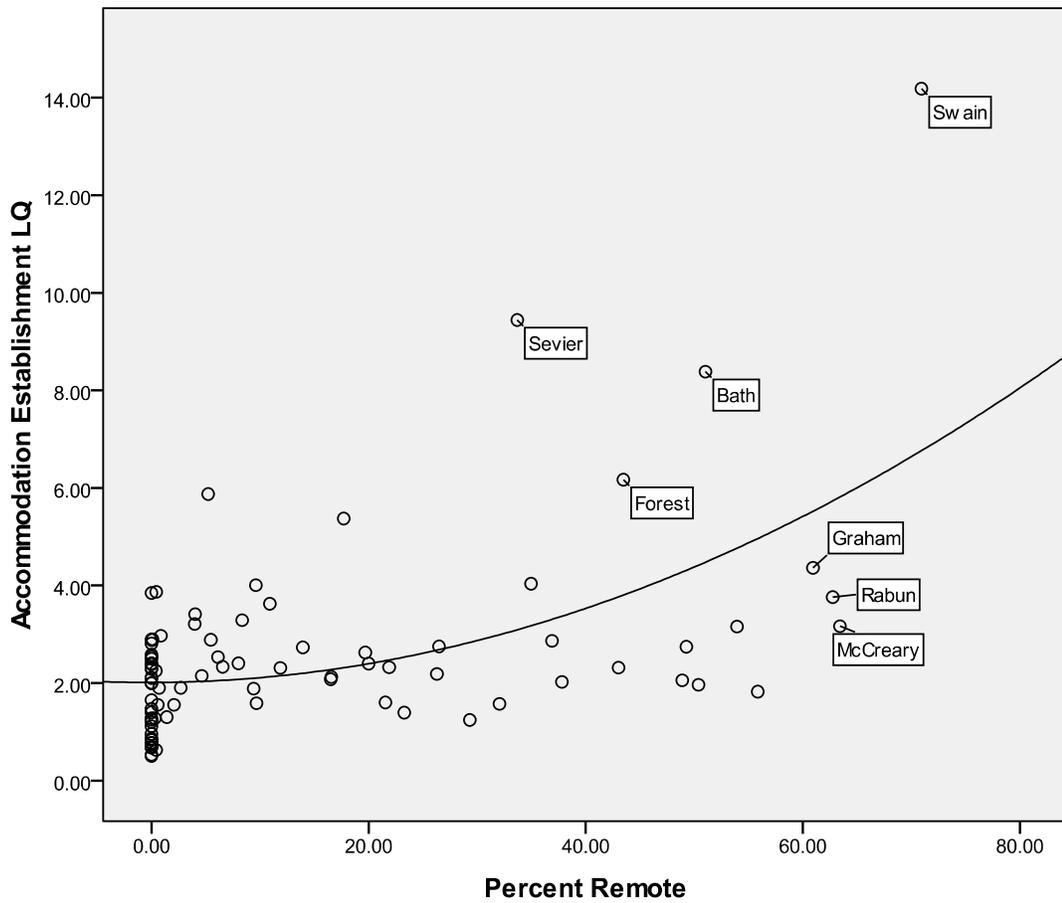


Figure 20. Scatter Plot of Accommodation Establishment LQs vs. Percent Remote Land for Specialized Peripheral Counties, 2005

The correlation for accommodation establishment LQs and remoteness in the specialized periphery are somewhat higher than for the ARC as a whole. This is likely the result of geography. The ARC as a whole includes 87 core counties, which tend to have less NF and NP land as they are more urban communities.

Conversely, the specialized periphery counties are only peripheral and, therefore, are more likely to have a greater degree of remoteness.

4.3.3 Summary of Correlation Analyses

The correlation analyses in this dissertation brought several key findings regarding tourism in the ARC to the forefront. First, there was a statistically significant relationship found between accommodation establishment LQs and accommodation employment LQs to accommodation average wages in the ARC as a whole. This finding suggests that tourism clustering can act to create the competition and opportunities necessary to raise average wages in the industry. Conversely, there was a negative and significant correlation between accommodation establishment LQs and accommodation average wages for the specialized periphery. Such a reversal in relationship indicates the core-periphery differences found in the ARC and is expected given core-periphery theory.

Secondly, there was a positive correlation found between accommodation establishment LQs and accommodation employment LQs to percent remoteness for both the ARC as a whole and also for the specialized periphery. Such findings support the notion that tourism in peripheral areas such as the ARC would be largely based upon natural amenities and less on business-type tourism. Tourism in the ARC is indeed greatly associated with its image as a pleasure periphery. Analyzing the correlations holistically it seems that while tourism is more strongly correlated to remoteness in the specialized periphery, this type of tourism does

not typically equate to higher wages for those counties. In contrast, higher tourism wages were found more often in conjunction with more upscale establishments requiring higher skill-sets. Such establishments were occasionally found in peripheral counties, but by and large higher accommodation wages were more often associated with more economically diverse counties. As such, tourism as an economic development policy in struggling economies is by no means a sure thing. While agglomeration in the accommodation industry may have the potential to elevate wages, this is the exception rather than the rule for most peripheral counties.

CHAPTER V

CONCLUSIONS

Economic development policy has long been driven by theories such as core-periphery and agglomeration theory. Many communities have focused on building industrial clusters to promote economic growth. Urban communities have focused on manufacturing and high-tech, knowledge industries while many peripheral communities have been left behind. In the past few decades, tourism development has been increasingly focused on as a way to potentially bolster the economies of those rural communities.

This dissertation examined the 410 counties and seven independent cities in the Appalachian Regional Commission area and offered a spatial and quantitative analysis of the economies and tourism industry in the region. Specifically this dissertation sought to identify geographic differences in economic characteristics and tourism development between the core and periphery. ARC economic classifications revealed that there was a clear divide between core and periphery for the economic conditions across the ARC with the core faring much better. Additionally, the spatial distribution of tourism in the ARC was revealed through an analysis of accommodation and tourism supporting services and there were definitive and complex differences between the core and

periphery with regards to tourism development. More specifically, this research found that while absolute numbers of tourism supply were greater in urban areas, some rural peripheral areas had a degree of tourism dependence not found in the more diversified urban cores. The planning implications here are that tourism development is not a guaranteed investment for rural communities. It seems that high-end, locally owned, small and medium sized establishments contribute the highest wage levels to communities with natural amenity attractions. However, there are serious questions about the scale and viability of such a tourism development strategy that were not within the scope of this dissertation.

Secondly, this dissertation revealed that within the periphery, there were clear geographic clusters of elevated tourism activity in places like the Smoky Mountains, the Poconos, and along the Virginia/West Virginia border counties to a lesser extent. These mostly peripheral counties had disproportionate levels of tourism establishments and employment, measured by location quotients likely due to the sense of remoteness they provide in addition to their proximity to major metropolitan areas such as Atlanta, New York, and Washington, D.C. These peripheral tourism clusters also tended to have a lot of land area designated as National Forest or National Park, as well as high levels of ridgeline topography. Conversely, in absolute terms the highest performing counties were core counties within the ARC which contained cities such as Pittsburgh, Birmingham and Knoxville.

This dissertation also demonstrated that there were unique differences in the types of tourism clusters found across the region by examining tourism supporting services. Tourism supporting services in core counties were primarily restaurants and bars, followed by real estate not associated with vacation homes and grocery stores. Meanwhile, peripheral counties had much greater percentages of gift shops, real estate associated with vacation homes, rental and leasing, more arts, entertainment and recreation but somewhat fewer restaurants and bars. Tourism supporting services in peripheral counties was geared more towards the pleasure traveler while core tourism seemed to be based upon the needs of the business traveler.

Finally, this dissertation uncovered statistically significant core-periphery discrepancies in the geography of the accommodation industry. Accommodation average wages in core counties were positively correlated with accommodation clustering while peripheral counties actually experienced a decrease in average accommodation wages when accommodation clustering occurred. However, there were some clear exceptions found in places like Avery County, NC, Floyd County, VA and Jackson County, GA, all of which had average accommodation wages much higher than the overall county average wage. Still other peripheral counties like Sevier, TN and Wayne, PA had average accommodation wages higher than the ARC average, although not higher than the overall county wage. However, the preponderance of peripheral counties had abysmally low average wages in accommodation. The implication here is that while tourism clusters can

provide employment opportunities, these jobs often do not provide an adequate living wage. Tourism development in the ARC periphery seems to require a careful mix of high quality tourism services and high-end accommodation establishments in order to provide higher average wages.

This dissertation seemed to confirm that there were indeed strong core-periphery differences for the tourism industry across the ARC. These differences were complex and based on geography and natural or cultural amenities as well as more intricate intra-industry variations. Furthermore, some of the key findings from this dissertation seem to indicate that scholars expressing concern over tourism as an economic development tool are correct in their caution. While tourism can rarely act as a propulsive industry, such results are the exception rather than the rule.

The paucity of supply-side quantitative research of the tourism industry is likely due to the complexity of the subject, but the lack of existing research also affords vast opportunities in the field. This dissertation offers a look at both the geographic distribution of tourism in a core-periphery region, as well as an explicit and quantitative analysis of the tourism industry's direct economic impacts for both core and peripheral areas of the ARC. Future research could include a more detailed examination of the tourism clusters found in the Smoky Mountains, Poconos and also the D.C. hinterland to determine more specifically which supporting services have the greatest economic impact and whether those industries have the potential to bolster the overall economies of their locales and

whether specific types of lodging alter the economic impacts (i.e. chain hotels versus resorts or locally owned establishments).

Another potential research topic would be to more closely examine the staging of tourism accommodation jobs in the periphery. More specifically, it is evident that there are definitive skill level differences found among workers at various accommodation establishments depending on the level of amenities and services offered. It is important to know how workers in peripheral locations become upwardly mobile. As workers improve their skill-sets do they leave the industry in search of higher wages or do they remain in the industry and leave the county, creating a 'brain drain' for the local economy? If they leave the county is it for another peripheral location or do they leave for the core. Finally, another potential topic of research could be to more closely examine the vacation home market and how the strength of such development may impact other non-tourism industries such as construction and health care.

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