

**Analysis of the Economic Structures and Tourism Impacts on
National Park Gateway Communities
A Research Paper**

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April 9, 2012**

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Abstract

This paper will look at the economic structure of gateway communities to national parks through the lens of economic geography or the study of location, distribution and spatial organization of economic activities across an area. Broadly defined, a gateway community is a small community that is close to public lands and acts as a point of entrance or exit to a certain area. My study will focus on the comparison of four gateway communities to national parks in order to determine the similarities and differences in their economies based on tourism and recreation. Travel and tourism are major influences on the communities surrounding national parks, this analysis will seek to determine the economic structure of gateway communities and how much of an influence tourism plays on their respective economies. The results will also be used to identify economic trends associated with gateway communities.

Introduction

Tourism has a noticeable influence on local environments and economies, especially on communities that act as gateways to national parks. Kurtz (2003) defines gateway communities as “towns or villages with a year-round population of less than 10,000 residents ... [that] are distinguished through their rural character, proximity to public lands ... and lack of economic diversification.” These gateway communities are often reliant on tourism as the basis for their economy. It has been shown that regional expenditures in tourism can generate millions of dollars in sales and taxes and can impact public and private sector jobs (Grado et al. 2001). Even though areas heavily dominated by tourism would appear to be well-off, Tooman (1997) explains that those communities can still be classified as depressed areas. These areas become depressed because, like many developing countries, they are reliant on tourism which is not always a broadly sustainable economy.

Tourism can be used to study issues of political economy, social change and development, natural resource management, cultural identity and expression (Stronza 2001). Tourism has also been shown to increase wage labor opportunities in an area while decreasing subsistence activities (Stronza 2001). Therefore, the disruption of subsistence activities is not a large problem, but when combined with a reduced flow of tourists, local people are left with no

economic alternatives from which to sustain themselves (Stronza 2001). An emerging trend is that local people and economies become dependent on tourism, which can be an erratic and unpredictable means of survival.

Since national parks are major tourist attractions, the gateway communities surrounding them are in turn heavily influenced by tourism. These gateway communities have interesting economic and development issues which will be explored. This paper will examine the patterns associated with tourism in gateway communities. This study looks to determine if there is an economic reliance on tourism sectors in the four gateway communities and if so, the shape and form of that reliance.

Purpose and Scope

The purpose of this analysis is to determine the effects of tourism on the economic structures of gateway communities to national parks. Economic geography studies the location, distribution and spatial organization of economic activities across the earth. It is important to determine if a community's economy is sustainable and on what factors it is reliant. Through the comparison of similar gateway communities it is hoped that trends in economic structures will evolve. Sevier County, Tennessee, as the gateway to the most visited national park in the United States – Great Smoky Mountain National Park – is a prime study area to determine how tourism impacts the economy. Other similar gateway communities and their respective national parks that will be used in this comparison are Hancock County, Maine – Acadia National Park; Larimer County, Colorado – Rocky Mountain National Park; and Park County, Wyoming – Yellowstone National Park. The primary question addressed in this research is: To what extent do the gateway communities rely on tourism in their local economies? This will be analyzed through the following questions:

- 1) What is the economic structure of a gateway community to a national park?

- 2) What potential economic trends emerge in the comparison of similar gateway communities?
- 3) What is the primary destination of visitors to gateway communities, is it possible to tell?
- 4) Do the gateway communities offer a sufficient substitute to draw tourists if the NP were to close?

The questions posed are important because there is a gap in the literature with regard to the impact of tourism on gateway communities to national parks in the United States. Specifically there is research on tourism in the National Parks but nothing on how gateway communities exist just outside of the National Park boundaries and what role they play in bringing tourists to the Park.

Background

Travel and Tourism

Travel and tourism represent one of the largest basic sector industries and a large part of the retail sales industry in the United States (Klein 2004). As a basic sector activity tourism brings money into the local economy. Tourism, as an industry, is hard to define because it is not classified as a separate industry in economic data sources (Wilkerson 2003). Discrepancies are seen in the variety of descriptions and definitions of tourism that follow. Tourism spending, as defined by the Bureau of Economic Analysis (BEA), is the spending comprised of all goods and services purchased by tourists, where tourists are defined as people who travel for any reason. Whereas, de Kalt (1979) explains that tourists purchase goods and services from a variety of industries including hotels, restaurants, rental car agencies, retail stores, and airlines as well as influencing secondary impacts such as food production. The World Tourism Organization, at their 1991 Ottawa Conference on Travel and Tourism Statistics, defined tourism as the activities of persons traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business or other purposes (unwto.com 2009). This study uses

the goods and services purchased by tourists in the following NAICS Sectors as a proxy for tourism: 72 – Accommodations and Food Services; 71 – Entertainment and Recreation; and 44-45 – Retail.

Public land, unlike private land, creates greater tourist demands, since it is accessible to all people. The designation as a national park speaks to the significance and uniquely attractive characteristics of the site. As Kariel (1984) has found, famous areas, such as national parks are more heavily visited than areas that are not classified as such.

Gateway Communities

Many times in order to access a national park one must travel through the gateway community that is located outside of the park. Burghardt (1971) defines a gateway city as an “entrance into (and necessarily an exit out of) some area” that controls the flow of goods or people. He goes on to explain how the entrance area tends to be narrow and used by most everyone who is entering or leaving the central area (Burghardt 1971). Examples of this would be a port or harbor which acts as a gateway to the inland or the gateway community that acts as a funnel toward a national park. Many national parks have limited access points to their interiors, therefore, in order to access the park a visitor must travel through the gateway community. An example of this is the Great Smoky Mountains National Park which has only one main road through the park.

Gateway communities have characteristically relied on “relatively few or even a single source to drive the local economy” (Kurtz 2003). The sources are closely linked to the adjacent public lands and usually consist of resource extraction and recreational activities. This is especially true of the gateway communities adjacent to national parks. Before the National Park Service (NPS) was created in 1916, and started the generation of tourism into those areas, the communities relied on resource extraction as their main source of revenue. The loss of extractive

industries in a community has led to the elimination of jobs in both the industry and supporting services, population decline, and a “general loss of vibrancy in the local economy” (Kurtz 2003). Kurtz (2005) explains how many gateway communities have had to turn to recreational tourism to keep their communities alive. This study looks to determine if gateway communities still lack economic diversification.

Economics

Economics can be defined as “a social science that seeks to understand the choices people make in using their scarce resources to meet their wants” (Lundberg 1995). Tourism economics studies why people choose one destination over another or why they chose to remain at home versus traveling abroad.

As Stynes (2005) explains there are two main economic concepts associated with public land management: economic value and economic impact. He describes how economic value is “generally measured in terms of market value or what people are willing to pay for the goods and services produced” and economic impact is measured “in terms of sales, tax revenues, and income that result from activities on public lands” (Stynes 2005). Economic impacts address “distributional issues, identifying gains or losses in economic activity for particular regions or economic sectors” (Stynes 2005).

Changes in a consumer’s disposable income affect his or her demand for goods and services. Lundberg explains how travel is seen as a “preferred superior service” in that more is undertaken as income increases” (Lundberg 1995, 34). As a family’s income increases, both in the United States and abroad, the demand for vacations and travel increase at a faster rate than does income (Lundberg 1995).

All economies are made up of some proportion of basic and non-basic sectors. The basic sector is defined as the local businesses that are dependent upon factors external to the local

economy and whose revenue is derived from export activities (Chapin 2004). The basic sector is also referred to as the businesses that bring money into the local economy. By selling goods and services outside the region in which they are located, export industries then generate income for the local area. The nonbasic sector is composed of firms that rely primarily on local business conditions and produce products that are consumed locally. Service industries, while necessary for the local economy, do not generally bring additional income to the area. Examples of nonbasic businesses or service industries are dry cleaners and grocery stores.

Economic base theory uses the breakdown of businesses into basic and nonbasic sectors to provide a more in depth profile of a local economy. Tourism does not fit nicely into either the basic or non-basic category. Sometimes tourism is considered a basic, or export, industry because depending on the origin of the visitor it generates money from outside the region by bringing money into the area from tourist visitations.

One form of the economic base theory uses a location quotient to determine export and service industries. The purpose of location quotient analysis is to: 1.) Determine a community's degree of self-sufficiency in a particular retail or trade sector; 2.) Determine if a community is losing its local trade dollars to nonlocal markets; and 3.) Determine if a community is producing more than needed for its own use and is selling the excess to nonlocal markets (i.e., identify export industries) (Hustedde 1993).

Effects of Tourism on the Economy

Nationally, travel and tourism play a large role in the United States economy. For the past 50 years the importance of travel and tourism in the United States economy has steadily increased and outpaced United States gross domestic product (GDP) growth in all but four years (Wilkerson 2003). Rising incomes, increased vacation time, flexible work schedules and declining travel prices have all played a part in the growing tourist economy (Wilkerson 2003;

Kariel 1984). As Wilkerson (2003) explains, the travel and tourism industry behaves as a luxury good in the economy. Stynes (2005) reminds us that “most recreation spending does not occur on the public land itself, but instead in nearby communities, therefore the time spent on public lands may be inversely related to spending.”

Tourism is a service industry and creates many jobs in an economy. Beekhuis (1981) points out, tourism is a labor intensive industry because it requires a high level of service and few of the tasks can be automated. Jobs are created in the hospitality and transportation sectors, as well as government jobs which include tourism planning and management, customs, and licensing. Secondary indirect employment can also result from tourism. These jobs are found in construction, agriculture, manufacturing and processing.

Benefits and Tradeoffs

The most obvious benefit of tourism is the creation of jobs and the opportunity for people to increase their income and standard of living (de Kalt 1979). Tourism also has secondary “spillover” effects in other sectors such as food products, souvenirs, and other goods (de Kalt 1979). There are also non-monetary benefits which are accrued by visitors to parks and protected areas (Walpole et al. 2001). These non-monetary benefits include the use of the protected area for activities that would otherwise be impossible to execute and the study and observation of natural settings.

There are both quantifiable and nonquantifiable tradeoffs of tourism development and growth. Quantifiable tradeoffs include seasonal unemployment, dependence on certain kinds of markets, too many low level jobs, pollution, and a lack of infrastructure. One aspect often overlooked is the fact that tourist growth and economic development are not always enough to overcome poverty in poor areas (de Kalt 1997; Tooman 1997). Also, because many tourism jobs are low paying they attract immigrants who in turn “remit much of their revenue to their homes

abroad” instead of reinvesting it in the local economy (Lundberg 1995). Other issues associated with tourism include planning and organization at a local level to accommodate both visitors and local populations and prevent congestion. Seasonal peaks and troughs can also create negative impacts on the economy if not accounted for in community planning. In areas that are highly reliant on tourists, many times the proportion of tourists is greater than that of the local residents (Draper 2000; Kurtz 2003). Local residents are then required to alter their routines to accommodate the tourists who populate the area. Trips to the post office, grocery store and other errands for local residents are no longer easy to perform because of the increase in temporary tourist populations. Seasonal troughs can also lead to high unemployment and poverty rates during the off season.

The implementation of infrastructure services such as roads, airports, water, sewer, electricity and trash collection has both positive and negative side effects. The volume and range of the infrastructure implemented in a highly touristed area is often far greater than that which would be needed for just the resident population (Beekhuis 1981). This also means that the utility and service upgrades are often paid for by the local residents which are then disproportionately used by tourists (Beekhuis 1981).

Other issues associated with gateway towns include uncontrolled growth, especially when the local towns do not have in place suitable zoning, land development ordinances and other measures. This can lead to degradation of air quality, destruction of scenic vistas, overpopulation, traffic congestion, and a lack of public infrastructure. One example of uncontrolled growth, which Freemuth (1989) provides us, can be found in Cody, Wyoming which is the eastern entrance to Yellowstone National Park. The controversy centers on the Fishing Bridge development area. Freemuth (1989) explains how the National Park Service (NPS) planned to relocate its visitor facilities from the area in an attempt to preserve valuable

grizzly bear habitat. The relocation has been stalled and altered because of local pressures from members of Congress and the local gateway community. Both the members of Congress and the local community feared that the relocation would have a very negative impact on the economy in Cody, Wyoming, since the visitor facilities would no longer be close to the town (Freemuth 1989).

Tourism and the Environment

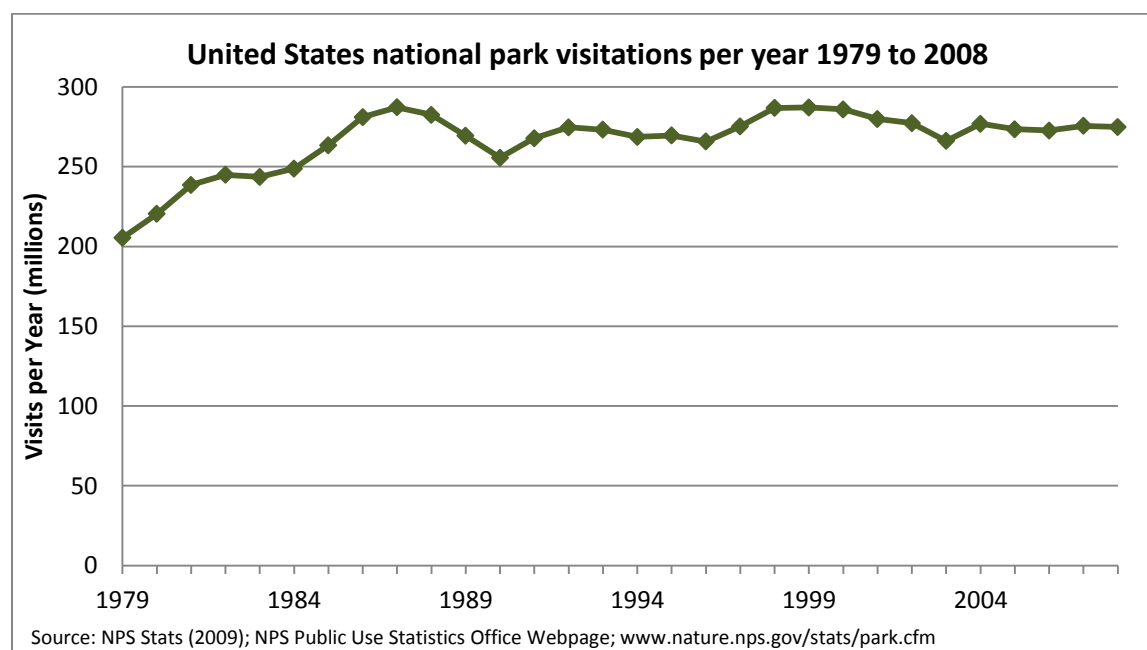
In many economies, alternatives to tourism are limited by distance from markets and by a lack of raw materials and trained labor (Beekhuis 1981). Cater (1994) describes how the relationship between tourism development, socio-economic development and the environment is circular and involves outcomes that affect two of the three segments. The importance of tourism in the economic health of local gateway communities illustrates how the environment, as a resource, needs to be protected for future generations (Cater 1994). The environment is ultimately what attracts tourists to national parks. Tourism associated with national parks is particularly susceptible to self-destructive processes, which occur when the very resource the national park relies on for tourism, the environment, is degraded or destroyed by the tourists who visit the park (Cater 1994). National parks have a fine line on which to balance when preserving the environment and also allowing access to park resources. The degradation and destruction is not only seen in the national parks but also in the areas surrounding them, i.e. gateway communities. The damage to the gateway communities may be more pronounced than damage in national parks since the parks are inherently protected while gateway communities are not.

Public Lands

The national parks and the NPS were created through what is called the National Park Service Organic Act, which was passed in 1916. The Organic Act states that the National Park Service shall promote and regulate federal areas known as national parks through the

conservation of scenery and the natural and historic objects and the wildlife that are located in the parks. The NPS shall also provide for the enjoyment of those same areas – scenery, historic objects and wildlife – in a manner that will leave them unimpaired for the enjoyment of future generations (Freemuth 1989; Shaver 1994). There are 391 national sites in the NPS, which include 122 historical parks or areas, 74 monuments, 58 national parks, 24 battlefields or military parks, 18 preserves, 18 recreation areas, 10 seashores, 4 parkways, 4 lakeshores, and 2 reserves (nps.gov 2009). As Figure 1 shows, the number of visitations to national parks has steadily increased since 1979 except for the years in which there was a significant economic downturns, 1980-1981, 1990-1991, and 2001 showing how tourism closely follows the national economy (nps.gov 2009).

Figure 1 - United States national park visitations per year 1979 to 2008.



In 2007, the NPS received 275.6 million visits and park visitors spent \$11.79 billion in local gateway regions, which are defined as those regions within a 50 mile radius of the park (Stynes 2008). The 50 mile radius is a general average, with parks near urban areas having about a 30 mile radius and some parks in the west have a 100 mile radius for gateway towns (Stynes

2008). The combined local impacts of tourism, both direct and indirect, that the NPS created in 2007 include 209,000 jobs, \$4.5 billion in labor income, and \$11.79 billion spent in local regions surrounding the national park (Stynes 2008). The four economic sectors most directly impacted by visitor spending are lodging, restaurants, retail trade, and amusements and recreation.

Examples of lodging are hotels and resorts, recreational vehicle parks and camps, bed and breakfasts, and rooming and boarding houses. The amusements and recreation sector includes live entertainment and concerts, sports, museums, art galleries, bowling, and outdoor recreation such as rafting, hiking and mountain biking. Retail trade consists of gift, novelty, and souvenir shops, grocery stores, gasoline stations, sporting goods, specialty food stores, pharmacies, clothing and accessory stores, and department stores.

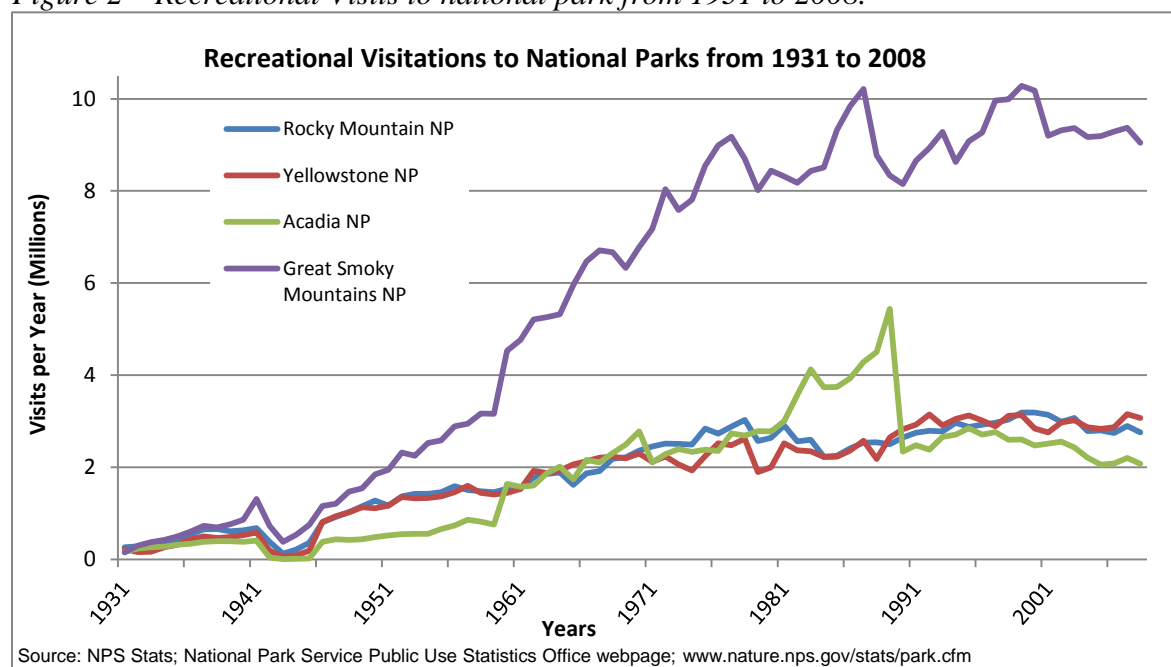
Direct impacts to the physical environment of public lands include: overused campgrounds, damaged plants and trails, erosion, stream pollution, litter, and increased noise levels. Indirect impacts include construction and expansion of tourist related facilities such as hotels and resorts, development of second homes as well as a larger infrastructure consisting of roads, trails, sanitation, electricity and water that is needed to support additional people (Kariel 1984). Richardson et al. (2006) show how the impacts of natural resource changes on a visitor's experience can lead to decisions about the frequency and duration of future visits to an area, which in turn leads to changes in visitor behavior patterns that will affect the local economic activity in a park's gateway community. An example of this is the destruction of hiking trails and the resulting decrease in hikers to an area.

Banff, Canada located in Banff National Park, is one example of the infrastructure needed and costs associated with supporting a large number of tourists. In order to service its millions of visitors the town of Banff requires a physical infrastructure large enough to support 30,000 persons per day even though its permanent population is only about 7,600 (Draper 2000).

Banff has a goal of achieving a balance between tourism development and environmental protection, so that the two can coexist (Draper 2000).

The national parks in the United States have seen a rise in attendance figures since 1931. Figure 2, below, shows the visitations to each of the national parks that will be used in this comparison from 1931 to 2008. As is evident from Figure 2, Great Smoky Mountains National Park is by far the most visited of the four national parks.

Figure 2 – Recreational Visits to national park from 1931 to 2008.



Previous Methods

To compile data for tourism, a number of combinations from the following sectors and industries can be used: hotels, air travel, amusement/recreation, restaurants, car rental agencies, and public transit. An example of a study where these data were used can be seen in Klein et al. (2004) which was focused on coastal counties, beaches and “coastal tourism and recreation.” In the study they chose three sectors as the proxy for the industry as a whole: hotels and lodging, eating and drinking places, and miscellaneous amusement and recreation services. The proxy data exclude certain services and businesses such as: air travel, rental cars, public transit

systems, and property rentals and leases, but it provides a broad data analysis to show how beaches promote tourism and high employment. Another form of data that are useful in determining the effects of tourism on an economy are monthly unemployment data, which can help to determine if employment is based on a cyclical schedule.

Tooman (1997) also explains how the most common approach to the study of tourism is “to consider the overall impact of growth of the sector” through the use of total income generated, total jobs created, and the use of multipliers. An abbreviated multiplier analysis is used most often by tourist boards and government agencies and provides comparison statistics on per capita incomes and total incomes and new jobs created (Tooman 1997). The goal of the multiplier analysis is to determine the “impact generated in a tourist destination for every dollar that is spent on the tourist product itself” (Tooman 1997). The multiplier analysis can be limited by the accuracy of the data that are necessary to create the multiplier and it does not take into account that the benefits and costs associated with tourism are not distributed evenly throughout the local economy (Tooman 1997).

Tooman’s (1997) second approach is the destination life-cycle approach which takes into account the uneven distribution of costs and benefits associated with tourism. He explains that this analysis recognizes that tourism is not a static industry, but one that is constantly changing. The destination life-cycle approach follows the evolutionary nature of the tourist industry and is “marked by distinct stages of development” (Tooman 1997). The stages used are as follows: 1) Exploration; 2) Involvement; 3) Development; 4) Consolidation; 5) Stagnation; 6A) Decline; 6B) Rejuvenation. The main downfall of the life-cycle approach is that not all local economies will fit into the exact stages.

There are many computer models that have also been used to track economic changes based on tourism. The Money Generation Model version 2 (MGM2) was used by Stynes (2008)

in determining visitor spending at national parks. MGM2 is a set of Microsoft Excel workbooks using formula's and macros which are used to estimate the economic impacts of NPS visitor spending on local regions. The estimated impacts include contribution to sales, income and jobs in the area and can be used in planning, concession management, budget justifications, analysis and marketing (Stynes 2008).

Another measurement that is commonly used is the location quotient which, in its simplest form, is a ratio between the local economy and a reference economy. The location quotient illustrates the share of tourism-related employment or income in the local economy relative to its share in the nation as a whole (Klein 2004). A location quotient that is greater than 1 indicates that a region has a relative concentration in a particular sector while a location quotient less than 1 indicates that the region's concentration is less than the national average. The location quotient will be explained further in the Methods section.

“Location quotients can indicate if a community produces more than is needed for its own use and is selling the excess to nonlocal markets. It can also tell us which types of businesses are not accommodating local needs and are a source of consumption leakage” (Hustedde 1993 32). The location quotient assumes that the national economy is self-sufficient and the local economy is then compared to the national to determine if goods and services are being exported or imported into the local economy (Hustedde 1993).

Study Areas

For this study, I will be comparing gateway communities that are similar in basic structure (i.e. size, location, population). The gateway communities and their associated national parks that will be compared in this study are: Sevier County, Tennessee – Great Smoky Mountains National Park; Hancock County, Maine – Acadia National Park; Larimer County, Colorado – Rocky Mountain National Park; and Park County, Wyoming – Yellowstone National

Park. The study sites can be seen in Figure 3. These counties all contain main passageways into or out of their respective national parks, as well as having parts of the national parks within their boundaries. According to the 2000 Census the populations of the counties are: Sevier County – 71,170; Hancock County – 51,791; Larimer County – 251,494; and Park County – 25,786. The populations are relatively similar, with Larimer County being the only outlier. Figure 3, below, maps out the locations of the study areas. The busiest tourist months for all four gateway communities are June, July and August.

Figure 3 – Map of Hancock Co. ME, Sevier Co. TN, Larimer Co. Colorado, and Park Co. WY and their associated national parks

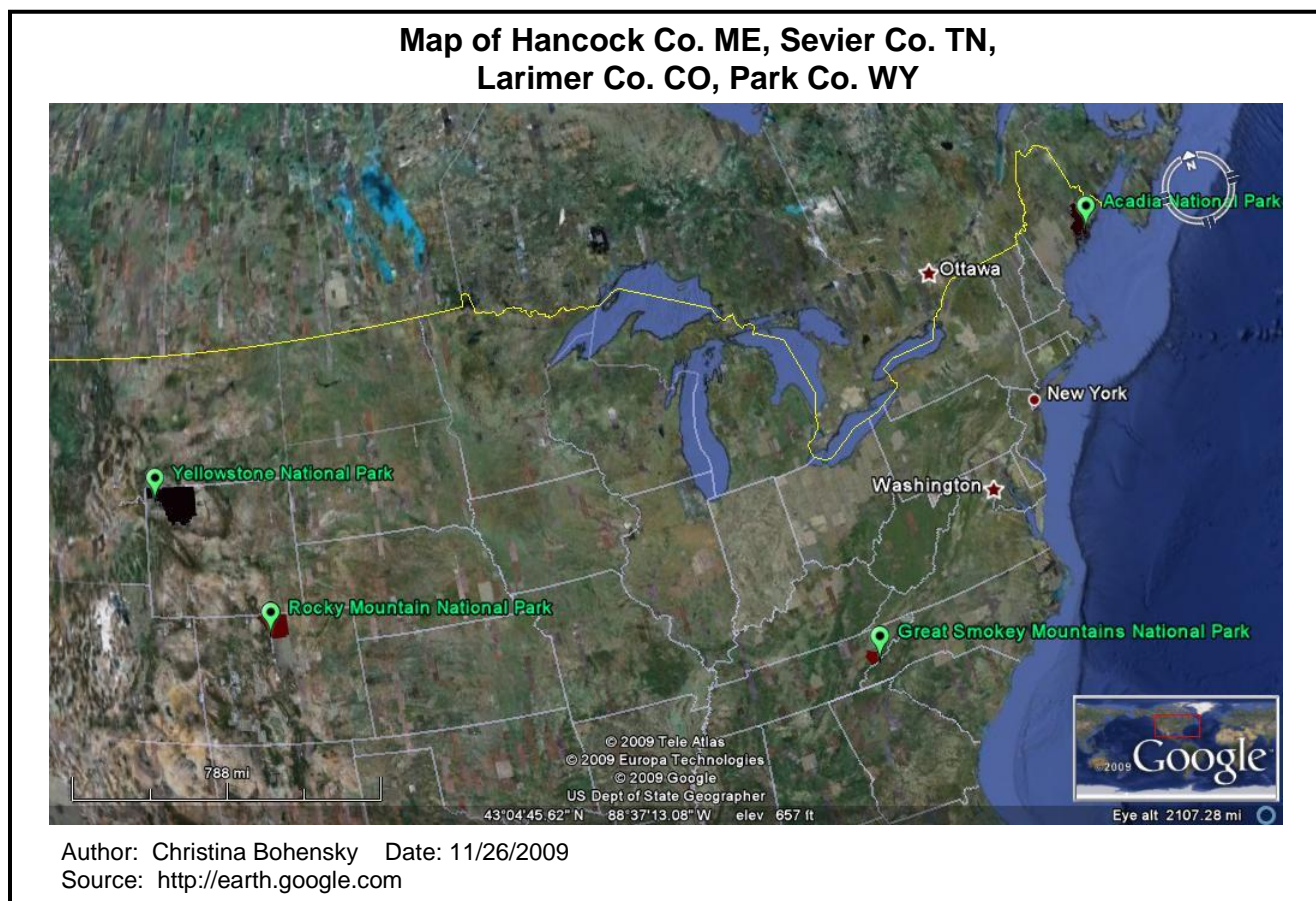
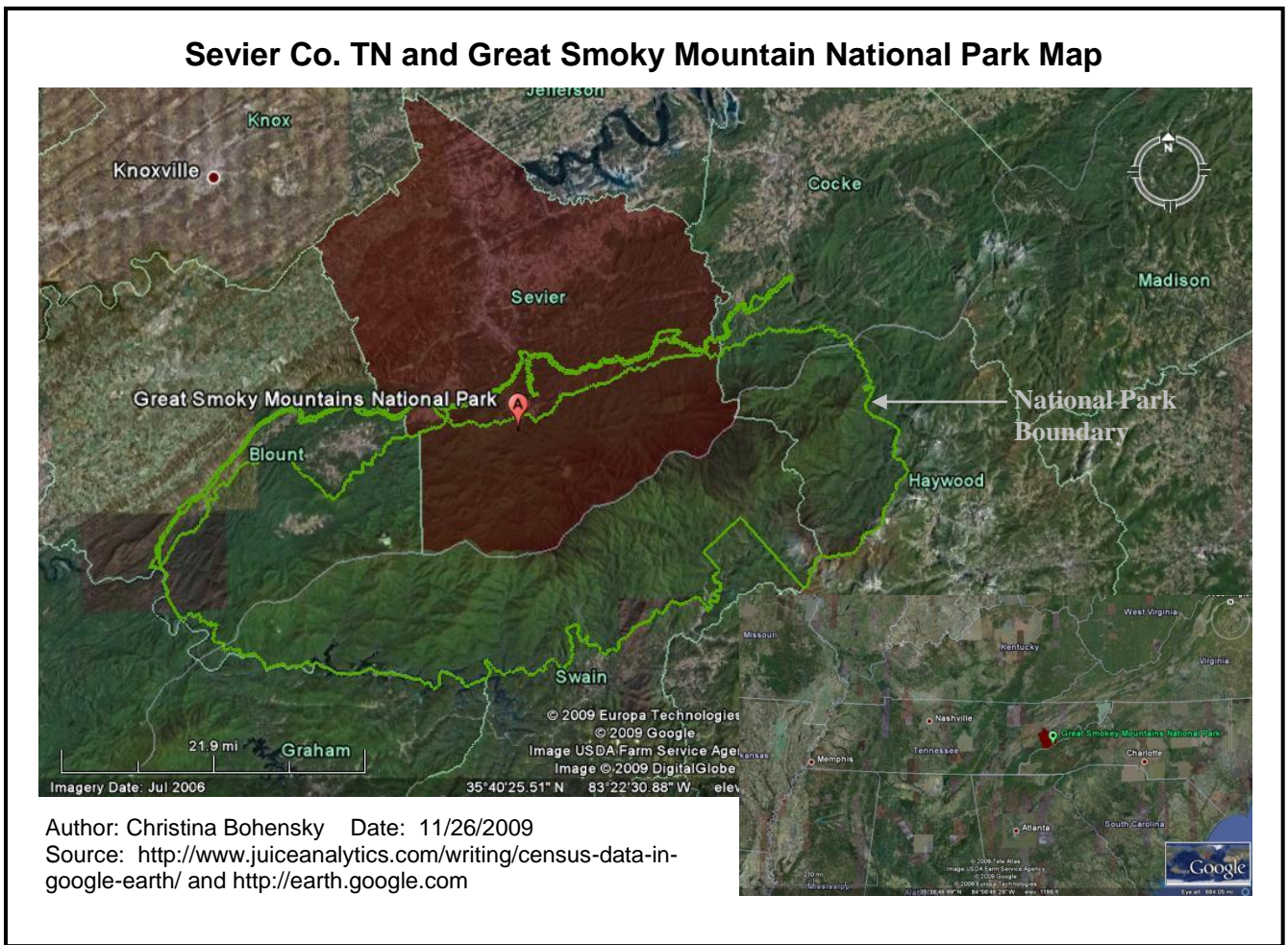


Figure 4 – Map of Sevier Co. TN and Great Smoky Mountain National Park



Sevier County and Great Smoky Mountains National Park

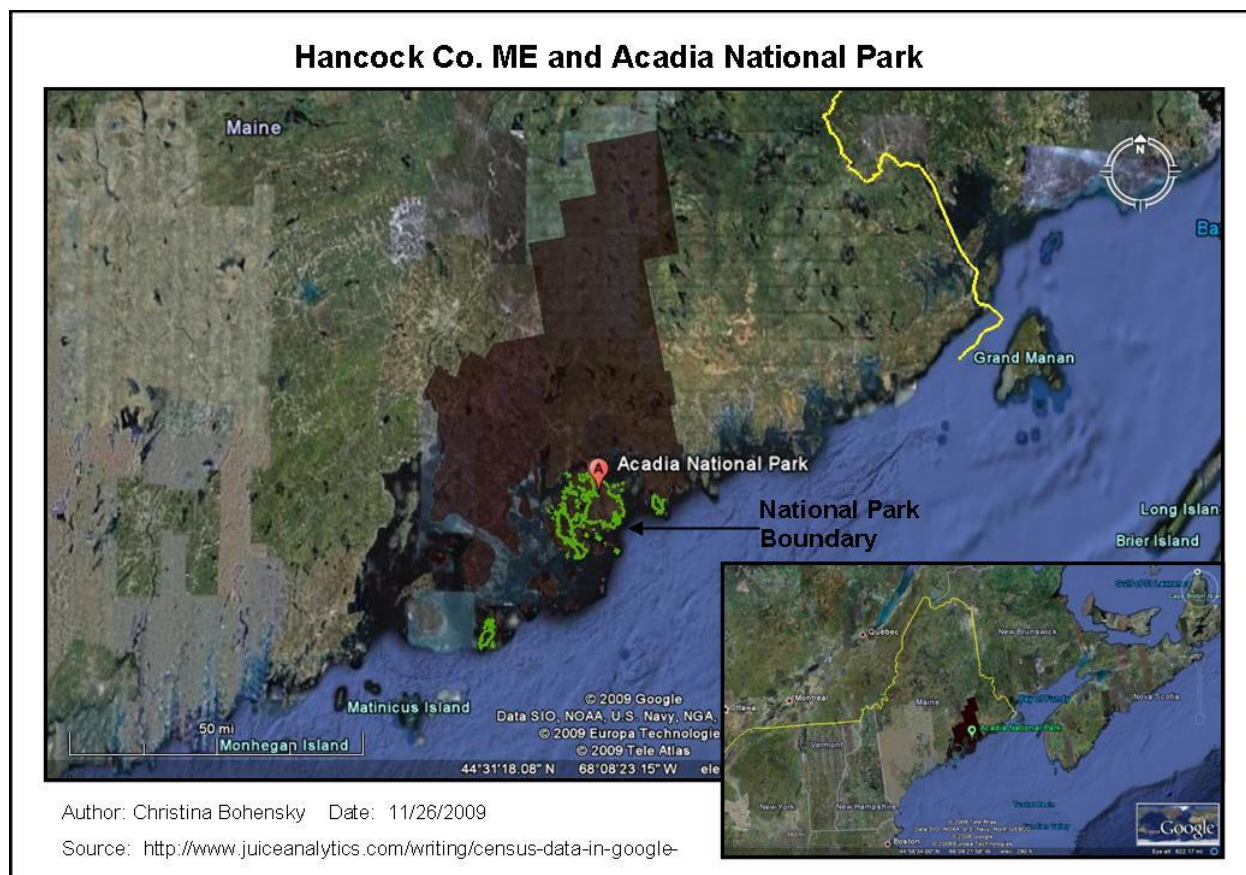
Great Smoky Mountains National Park (GSMNP) was created in 1926 and is composed of about 520,000 acres of mountain ridges and deep-cleft valleys in the states of North Carolina and Tennessee (Shaver 1994). Figure 4 shows the location of GSMNP and Sevier County, Tennessee. GSMNP is highly accessible as it is located within easy driving distance of two-thirds of the United States population (Shaver 1994). The park has also been designated as an International Biosphere Reserve because of its renowned biodiversity and as a World Heritage Site. World Heritage Sites are defined by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as places of outstanding universal value in cultural or natural

significance. GSMNP is a major refuge of temperate flora and fauna and has over 3,500 plant species and the greatest variety of salamanders in the world (whc.unesco.org 2009).

The first settlers came to the Smoky Mountains in the late 1700's and the primary land uses were resource extraction and agriculture. The logging practices consisted of commercial logging where acres of land would be clear cut which created disturbed soils and erosion. After the creation of GSMNP the main economic resource switched to tourism. Tourism has grown to dominate the local economy in Sevier County, and this study will try to determine if tourism has minimized the county's economic diversity. The result of this dominant tourist economy is the lack of full time employment and an overabundance of part-time and seasonal jobs (Tooman 1997).

Sevier County, Tennessee is home to the tourist towns of Gatlinburg, Pigeon Forge, and Sevierville. The three towns act as a gateway community to GSMNP by funneling tourists through the towns, which are all located on the same road, and then to the main park entrance. An example of the amount of tourism this area receives at its peak can be seen in the town of Gatlinburg, which can house over 35,000 people per night but only has a resident population of about 3,900 (gatlinburg.com 2009).

Figure 5 – Map of Hancock Co. ME and Acadia National Park



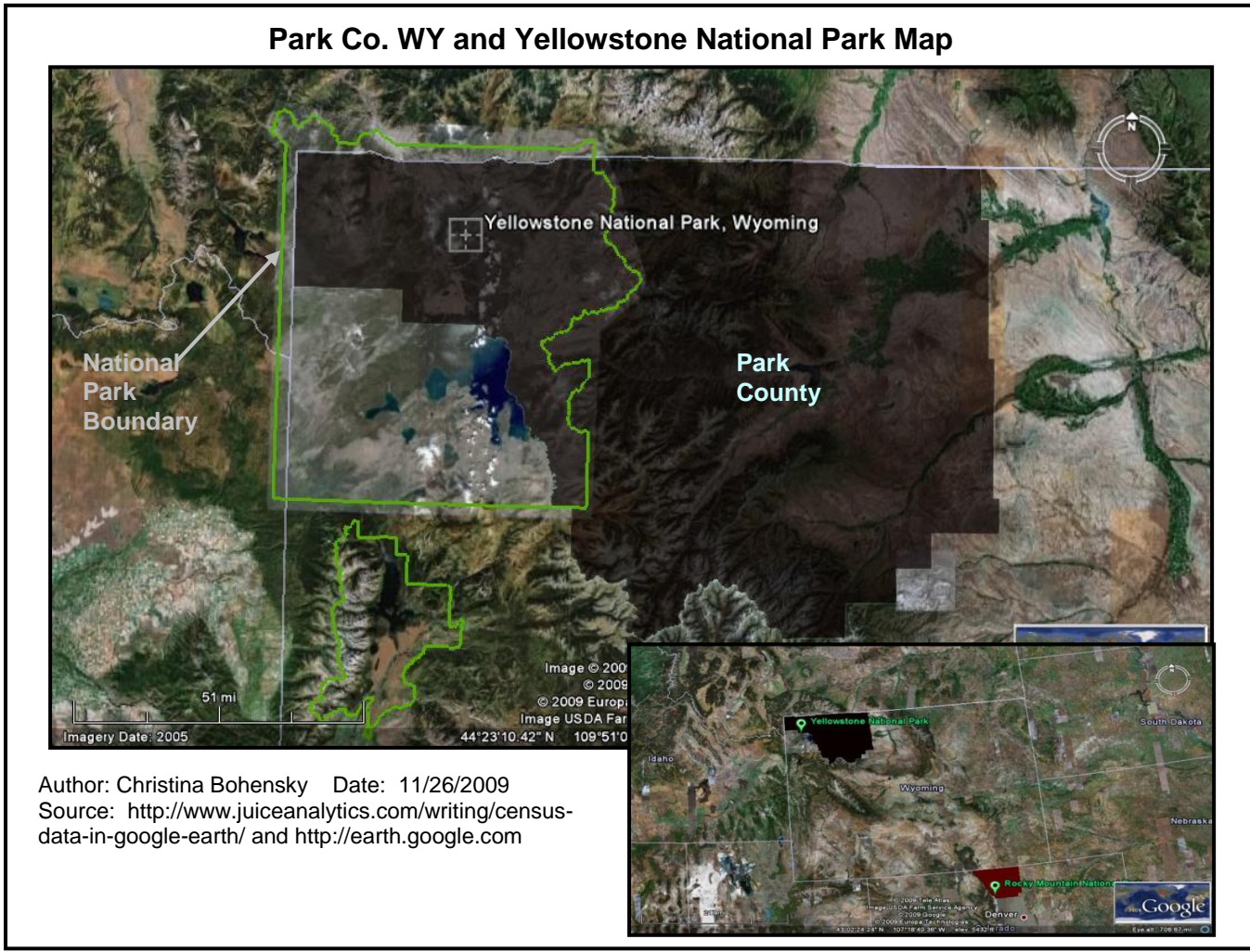
Hancock County and Acadia National Park

Acadia National Park (ANP) was the first designated national park east of the Mississippi River in July of 1916. The park is composed of over 48,000 acres with the majority of the park located on Mt. Desert Island in Maine (nps.gov/acad 2009). The location of the park and Hancock County, Maine is shown in Figure 5. ANP receives more than two million visitors a year and is the fifth smallest park in the park system. Park activities include bicycling, hiking, boating, carriage rides, fishing, museums and nature centers, camping, scenic drives and cross country skiing (nps.gov/acad 2009).

Once you cross the Trenton Bridge you have left the mainland of Maine and entered the town of Bar Harbor which is located in Hancock County. Bar Harbor was settled in 1763 and has been home to lobstermen, shipbuilders, artists, outdoor enthusiast, and wealthy “summer

people” (barharborinfo.com 2009). Bar Harbor has always been a town that catered to tourists. Many large hotels were built in the town in the 1800s, and by 1870 there were sixteen hotels, with reservations for rooms needing to be placed two years in advance (barharborinfo.com 2009). Since that time most of the old hotels burned down in the fire of 1947 or needed to be torn down after it. Bar Harbor has since rebounded from the fire and is once again a tourist destination for people going to Acadia National Park.

Figure 6 - Map of Park Co. WY and Yellowstone National Park

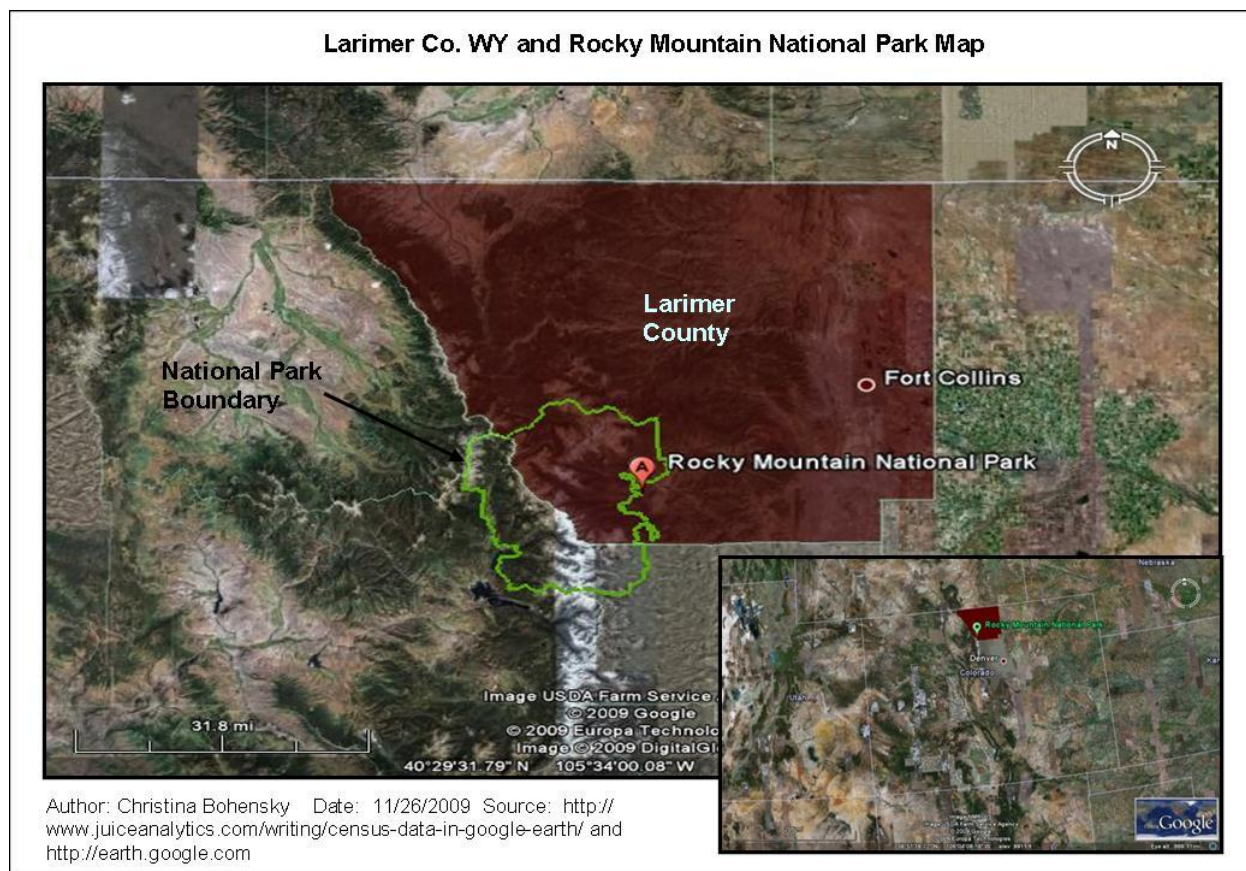


Park County and Yellowstone National Park

In 1872, Yellowstone National Park (YNP), which covers 2 million acres, was the first national park established in the world (nps.gov/yell 2011). Figure 6 shows the park's location in Park County, Wyoming and also Idaho and Montana. YNP is also a UNESCO World Heritage Site and contains half of all the world's known geothermal features and the world's largest concentration of geysers as well as a variety of wildlife (unesco.org 2009). In the early 1800s the YNP area saw trappers move into the region searching for customers and furs (nps.gov/yell 2009). During the late 1800s the economy changed to one of mining and extraction, especially for gold and other precious minerals. It was only after the Civil War that the area was explored for the sole purpose of determining its natural significance. Through the preservation of the unique landscape that makes up YNP the national park idea was established. Yellowstone is considered the driving force behind the inspiration of the national parks because it was based on the idea that wilderness was an inheritance of all people who would gain more from an experience in nature than from private exploitation of the land (nps.gov/yell 2009).

Park County contains the majority of YNP and the county seat is Cody. Cody is recognized as the eastern gateway to YNP. The Cody Chamber of Commerce is Wyoming's oldest chamber of commerce and they pride themselves on nurturing a diversified business community that is focused on energy, tourism, agriculture, manufacturing, retail and the arts (codychamber.org 2008).

Figure 7 – Map of Larimer Co. and Rocky Mountain National Park



Larimer County and Rocky Mountain National Park

Rocky Mountain National Park is located in Colorado (Figure 7) and comprises approximately 265,000 acres in and around the mountains of the Great Divide. The area was dominated by the Ute Indians until the late 1700s at which time the United States government acquired the land through the Louisiana Purchase. Because of the parks rugged wilderness many of the trappers and settlers avoided the area, but that changed in 1859 with the Pikes Peak gold rush. The gold rush saw an influx of miners and speculators to the area, as well as many homesteaders. The miners, loggers, farmers and ranchers were all opposed to the creation of the park, but Rocky Mountain National Park (RMNP) was created in 1915 through the Rocky Mountain National Park Act (nps.gov/romo 2009).

RMNP has primarily been an auto park, which is described as a park that is mainly accessed by car or other vehicle. The park receives over 3 million visitors each year, with Estes Park and Loveland known as the gateways to RMNP (Larimer.org 2009). Estes Park is touted as a “vacation destination that transforms trips to the Colorado Rockies into dream vacations in paradise” (estesparkcvb.com 2009). The area provides hiking, world class skiing and climbing, fishing, golf, sightseeing, wildlife watching, galleries, and unique shops (estesparkcvb.com 2009).

Methods

Data for the analysis was compiled at a county level rather than a town or city level because they are more readily available and consistent. County level employment and unemployment data was used to determine the economic trends within the gateway communities. The Bureau of Economic Analysis (BEA), United States Census, and the United States Bureau of Labor Statistics websites were used to gather employment estimates for the counties in which the gateway communities are located. The timeframe for the analysis are the years 1998 to 2008.

Data for the analysis was compiled from the United States Census Bureau; United States Department of Commerce, BEA; and the United States Department of Labor, Bureau of Labor Statistics (BLS). Since tourism does not always have its own classification I focused on four sectors: lodging, restaurants, amusements, and retail (Stynes 2008). These sectors, as determined by the North American Industry Classification System (NAICS) which classifies business establishments, are 72 – Accommodations and Food Services; 71 – Entertainment and Recreation; and 44-45 Retail. Table 1 contains the complete breakdown of the NAICS Sectors used in the analysis. The NAICS system is the standard used by Federal statistic agencies when classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the United States business economy (census.gov 2009). The Census

Bureau also provided county level data on annual payroll and number of establishments. The BLS provided data for employment and unemployment estimates based on the NAICS Sectors above.

Table 1- NAICS Sectors Used for Comparisons

NAICS Sectors Used for Comparisons
72 Accommodation and Food Services
721 Accommodation
722 Food Services and Drinking Places
71 Arts, Entertainment and Recreation
711 Performing Arts, Spectator Sports and Related Industries
712 Museums, Historical Sites and Similar Institutions
713 Amusement, Gambling and Recreation Industries
44 Retail Trade
445 Food and Beverage Stores
446 Health and Personal Care Stores
447 Gasoline Stations
448 Clothing and Clothing Accessory Stores
451 Sporting Goods, Hobby, Book and Music Stores
452 General Merchandise Stores
453 Miscellaneous Store Retailers
454 Non-store Retailers

Note: Sector details beyond the 3-digit level can be found online at: www.census.gov/eos/www/naics/

Economic Base Analysis

An economic impact analysis “traces the flows of economic activity associated with the park to identify changes in sales, tax revenues, income and jobs in the region that are due to park operations or visitor spending” (Stynes 2005). The analysis assesses the changes in economic activity within a region resulting from an action, such as a recession or the weather (Stynes 2005). The principal methods for this analysis are “visitor spending surveys, analysis of secondary data from government economic statistics, economic base models, input-output models, and multipliers” (Stynes 2005). The economic impacts are “measured in terms of sales, income, jobs, tax receipts, and value added” (Stynes 2005 9).

My research focused on the quantitative analysis of employment data from the local research area. A time series, or “a set of historical data obtained at regular intervals” in years was used to determine local location quotients (LQ) for the gateway communities (Lundberg 1995, 150). Lundberg (1995) explains that an analysis of the time series involves the breakdown of past data into four major components: trend, seasonality, cycles, and random variations. A trend refers to a gradual shift in the data movement either in an upward or downward direction over a period of time (Lundberg 1995). I also analyzed the data to determine if there was a seasonality associated with the employment numbers and unemployment rates of the gateway communities. A seasonal fluctuation would repeat itself during the same timeframe every year for a number of years, such as climate, social customs, or holidays. Cycles are patterns in the data that occur every few years. These are fluctuations caused by conditions outside the control of an individual business. General economic conditions, saving and consumption habits in the society, mutual generation of errors and similar happenings can cause fluctuations in economic activity that in turn affect the tourism business (Lundberg 1995). Random variations, as described by Lundberg (1995), are variations in actual data, such as the tourism revenue, that cannot be tied to the trend or the cyclical components. These variations are caused by unusual events that do not usually repeat themselves, such as a natural disaster.

The location quotient method, a form of economic base analysis, was used to analyze the data. The LQs showed the level of basic sector employment in the gateway communities which in turn identifies the specializations of the local economies. Since tourism is a service industry, the product of the sector is the number of jobs. As explained earlier the location quotient is a ratio between the local economy and the reference economy. For my research the local economy was defined as the county in which the gateway community was located, while the reference

economy was that of the United States. Below is the location quotient equation that I used for the analysis:

$$LQ = \frac{\text{Regional Employment Industry I}}{\text{Total Regional Employment}} / \frac{\text{National Employment Industry I}}{\text{Total National Employment}}$$

For a gateway community that is not reliant upon travel and tourism the location quotient will be less than 1.0; gateway communities that have major travel and tourism economies will have a value greater than 1.0 (Klein 2004). The location quotient will allow for the quantifiable comparison of tourism within each of the gateway communities.

A location quotient less than 1.0 shows that all employment is non-basic. A LQ equal to 1.0 shows that the local employment is non-basic. A LQ greater than 1.0 shows that some of the local employment is basic in nature.

The location quotient technique does not assume that all employment in a sector is either basic or non-basic. Instead it determines whether or not the local economy has a greater share of each industry when compared to a reference economy (Chapin 2004). The additional employment is then assumed to be basic because those jobs are above the level needed to support the local economy (Chapin 2004). For tourism sectors, Chapin explains that they are generally assumed to be basic sector employment, regardless of the calculated LQ because the industry serves a primarily non-local demand (2004).

Using the equation below, I calculated the number of basic sector jobs created by the tourism industry in the local gateway communities.

$$\text{Basic Sector Employment} = \frac{\text{Regional Employment Industry I}}{\text{National Employment Industry I}} - \frac{\text{Total County Employment}}{\text{Total National Employment}} \times \text{National Employment Industry I}$$

The economic base theory is one of the oldest and most widely used techniques for economic analysis (Chapin 2004). The economic base follows the assumption that there are two sectors in a local economy: the basic and non-basic sectors. The basic sector is made up of local businesses that are entirely dependent upon external factors while the non-basic sector is made up of businesses that depend upon local business conditions (Chapin 2004). As Chapin explains the Economic Base Theory hypothesizes that the local economy is strongest when it develops a more basic economy (2004). He further explains that businesses that rely primarily on external markets are better able to insulate the local economy from economic downturns (Chapin 2004).

Telephone Interviews

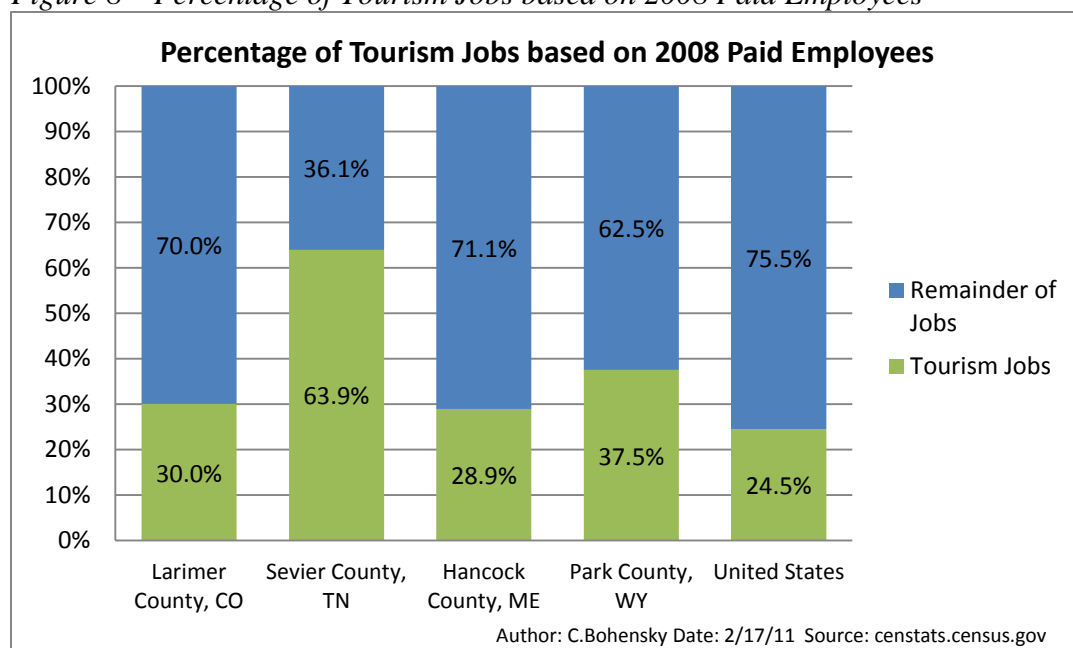
I also conducted telephone interviews of people holding similar positions within three of the four study areas. I was able to talk with Claudia Wade from the Park County Travel Council, Walter Yeldell with the Gatlinburg Department of Tourism and Convention Center, and Chris Fogg of the Bar Harbor Chamber of Commerce. The interviews provided first-hand information on the study areas.

Results

The results section will first discuss overall results and then move into a case by case analysis. Figure 8 shows the percentage of tourist jobs in the gateway communities the United States. Tourism jobs were calculated by adding NAICS Sectors 44-45 – Retail, Sector 71 – Accommodations and Food Services and Sector 72 – Entertainment and Recreation. All other NAICS Sectors were combined to form the “Remainder of Jobs” category. As noted in Figure 8, the majority of jobs in most gateway communities are not related to tourism, with the exception of Sevier County, Tennessee. In Sevier County 63.9% of are related to tourism. With a high percentage of tourism jobs it is expected that the County as a whole will have LQs higher than

1.0 for most of the tourism sectors. The remaining three gateway communities have percentages similar, but still higher than, those of the United States.

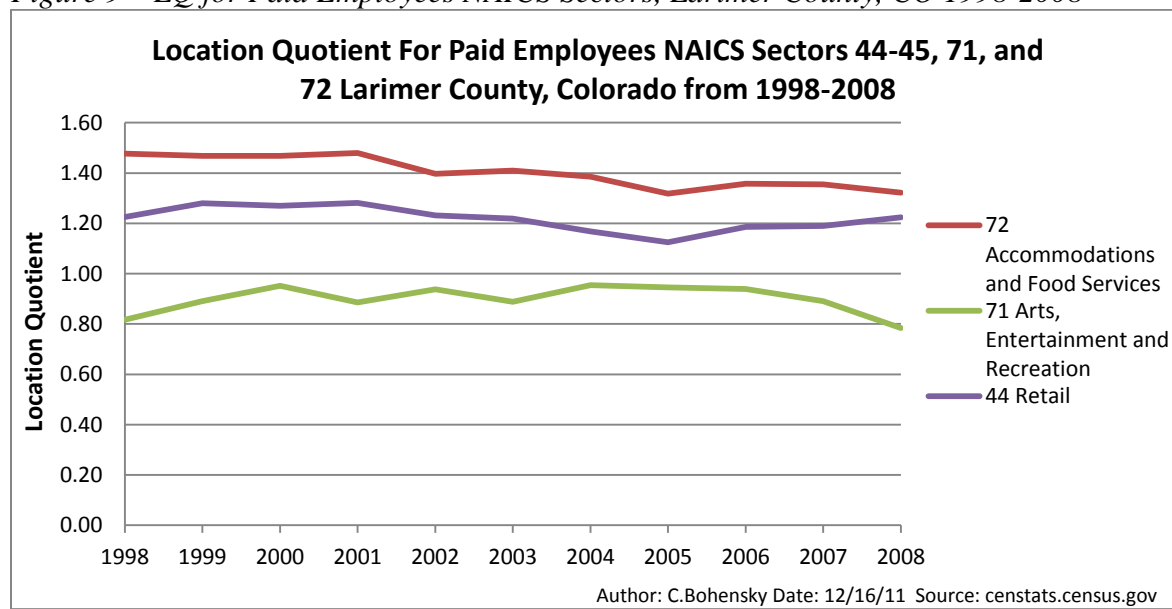
Figure 8 – Percentage of Tourism Jobs based on 2008 Paid Employees



Analysis of Location Quotients

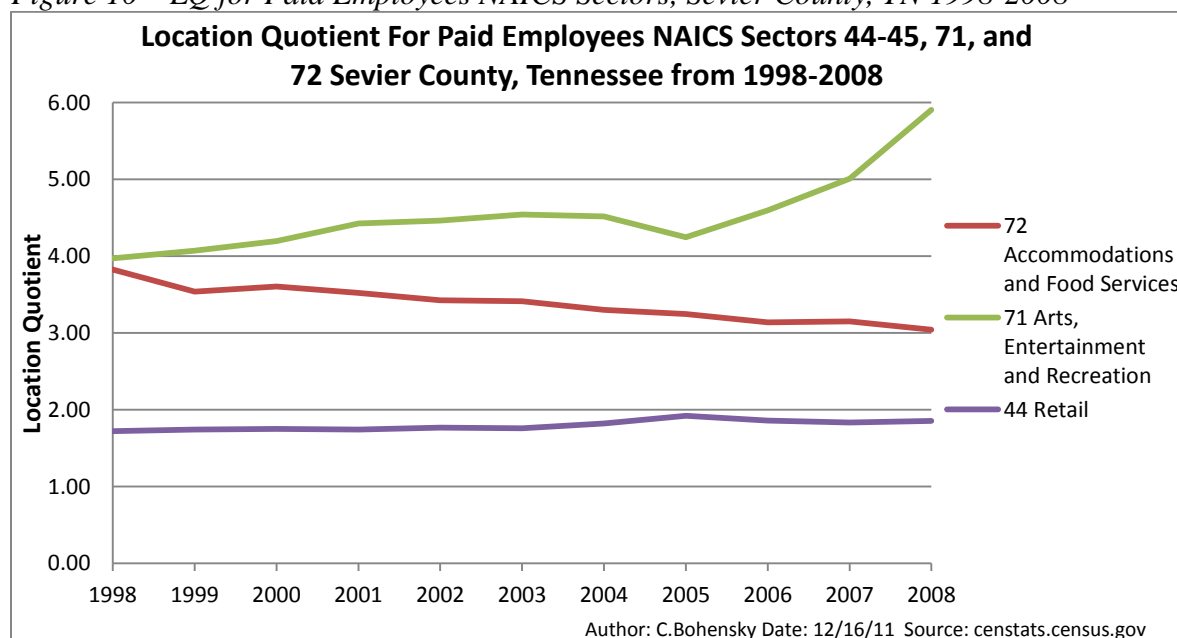
As seen in Figure 9 below the overall location quotients for Larimer County, Colorado remained relatively stable for the period of 1998 to 2007. The LQ for Sector 71 remained stable within a band of 0.8 to 1.0 from 1998 to 2007 where it dipped slightly below 0.8 in 2008. Sector 44 remained stable between 1998 and 2003 within the range of 1.2 to 1.3, where it dipped down to a low of 1.1 in 2005. Since 2005 the LQ has been rising slightly each year to 2008. Sector 72 remained steady at 1.48 from 1998 to 2001, where it began to steadily drop to a low of 1.32 in 2005 and has since remained constant. The relatively low LQs for Larimer County could be due to the location of the city of Fort Collins within the county. Fort Collins is not considered part of the gateway community to Rocky Mountain National Park.

Figure 9 – LQ for Paid Employees NAICS Sectors, Larimer County, CO 1998-2008



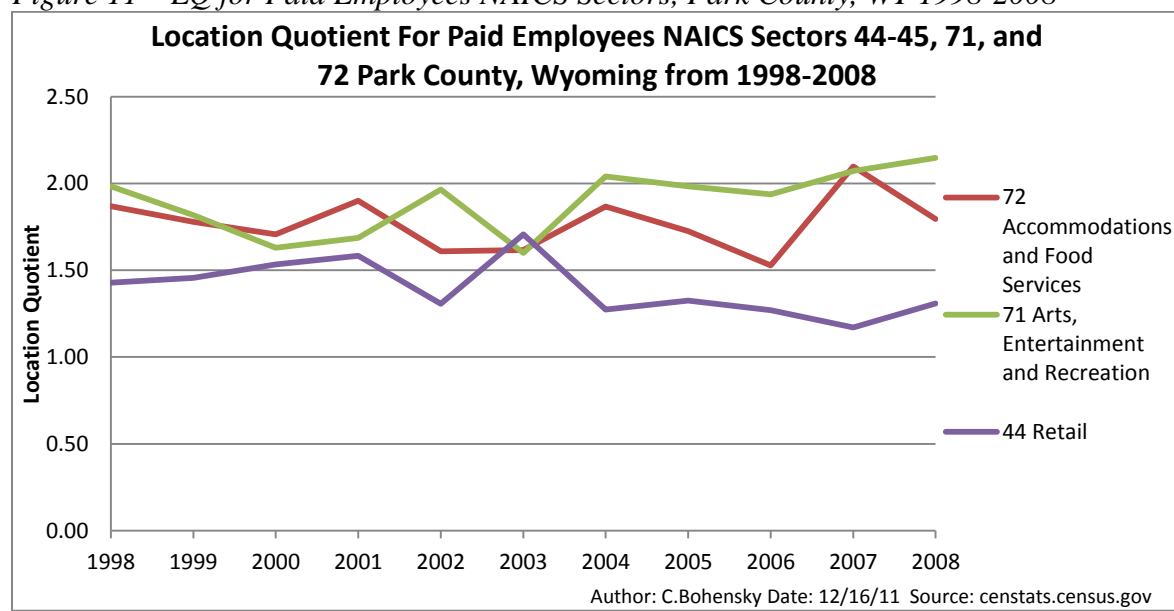
Each of the LQs for Sevier County, Tennessee well are above 1.0 as seen in Figure 10 below. The LQ for Sector 44 in Sevier County has remained consistent within a range of 1.7 to 1.9 from 1998 to 2008. There has been a steady decline of Sector 72 from 1998's value of 3.8 to 2008's value of 3.0. The largest changes can be seen in the LQ for Sector 71 which starts at 4.0 in 1998 and rises to 2004 at 4.5 before dropping in 2005 to 4.25 and then rising sharply to 5.91 in 2008. This increase in LQ for Sector 71 could be from the opening of a new section of Dollywood, Thunderhead Gap, in 2004 and the renovation of the County Fair section of the park in 2005.

Figure 10 – LQ for Paid Employees NAICS Sectors, Sevier County, TN 1998-2008



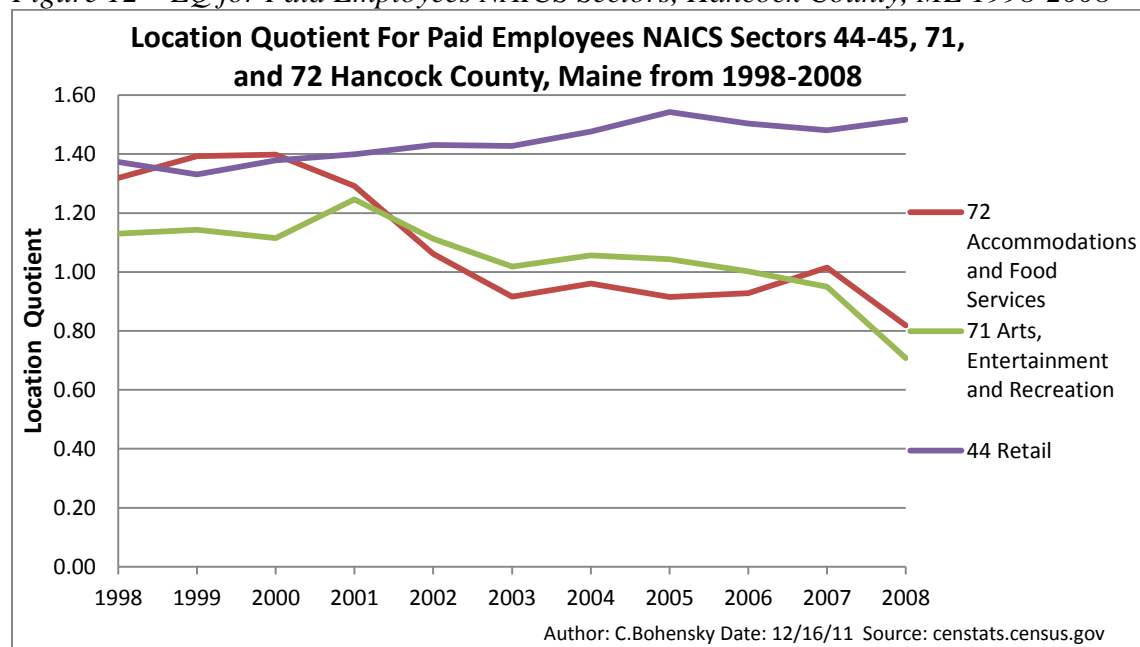
The location quotients for Park County, Wyoming as seen in Figure 11 are volatile on a yearly level. The LQ for Sector 71 stayed between 1.6 and 2.0 from 1998 until 2003 where it dropped to a low of 1.6 and then rebounded in 2004 to 2.04. From 2004 until 2008 the LQ has remained between 1.9 and 2. The LQ for Sector 44 shows the reverse trends of Sector 71, where Sector 71 had highs, Sector 44 has low points. Sector 44 stays stable from 1998 to 2001 where it dips to 1.31 in 2002, rises to 1.71 in 2003 and then steadily decreases to 2008. Sector 72 stays within a half point of change for the study years. The LQ is stable from 1998 to 2002 where it has a slight rise to 1.90 in 2001 and then falls and levels off at 1.61 until 2004. In 2004 the LQ rises again to 1.87 and then decreases for the next two years to a low of 1.53 before rebounding to a high of 2.10 in 2007 and then dropping again in 2008. One reason for the large changes in LQ seen in 2003 could be related to the 77 wildfires in Yellowstone National Park which occurred during the season. Normal tourist patterns would be disrupted with dramatic increase in the number of forest fires, especially by the large fire located at the east gate of Yellowstone National Park which leads into Park County.

Figure 11 – LQ for Paid Employees NAICS Sectors, Park County, WY 1998-2008



Location quotients were calculated for Hancock County, Maine as is seen in Figure 12. Sector 44 has increased over time from 1.37 in 1998 to a high of 1.54 in 2005 and ending at 1.52 in 2008. Sector 71 was stable between 1998 and 2000 where it increased to a high of 1.25 before steadily decreasing to a low of .71 in 2008. Sector 72 has also steadily decreased from 1.32 in 2000 to .92 in 2003. From 2003 to 2006 Sector 72 remained stable within a band of 3.1 to 3.4, before rising again in 2007 to 1.02 and decreasing greatly to .82 in 2008. Of the four gateway communities, Hancock County temporal trends most closely reflect recessions in the United States Economy. Noted recessions have occurred from March 2001 to November 2001 and again in December 2007 to June 2009; these recessions are visible in the LQ downturns for Sectors 71 and 72 in the corresponding years.

Figure 12 – LQ for Paid Employees NAICS Sectors, Hancock County, ME 1998-2008



Analysis of Basic Sector Employment

Figure 13 reveals the lack of basic sector employees for Sector 72 – Arts, Entertainment, and Recreation in Larimer County, Colorado. There are large amounts of basic employees for Sectors 44 and 72, which could be due to the location of Fort Collins in Larimer County. For the parameters of this study, Fort Collins is not technically part of the Rocky Mountain National Park gateway community but is, however, still located within Larimer County.

Figure 13 – Basic and Non-basic Employees Larimer County, CO 1998-2008

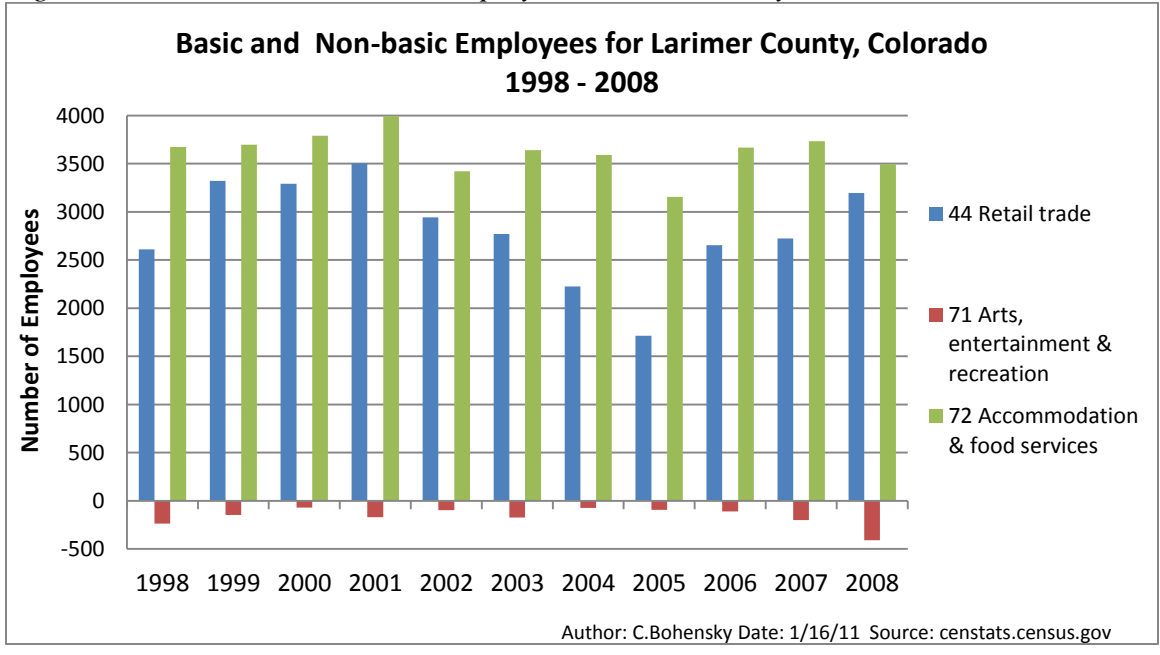


Figure 14 shows that each of the sectors in Sevier County provides a consistent number of basic employees. The number of basic employees in Sevier County has grown steadily over time for Sectors 44 and 71. The large quantity of basic sector employees in Sevier County verifies that tourism plays a large role in generating income for the local economy.

Figure 14 – Basic and Non-basic Employees Sevier County, TN 1998-2008

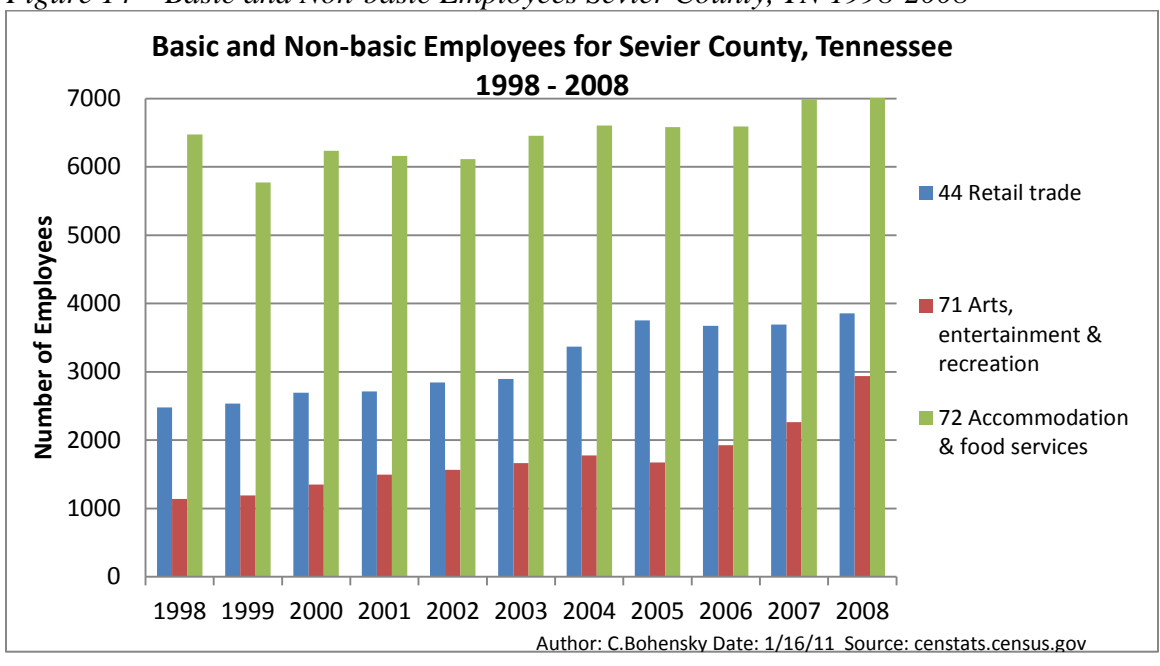


Figure 15 displays the basic employees in Park County. Data for Sector 71 in 2005, 2007 and 2008 was unavailable. While there are basic sector employees for Sectors 44 and 72, Sector 71 has relatively low number of basic employees. The graph also shows how the area number of basic employees from 1998 to 2001 was consistent and then fluctuate from 2003 to 2008.

Figure 15 – Basic and Non-basic Employees Park County, WY 1998-2008

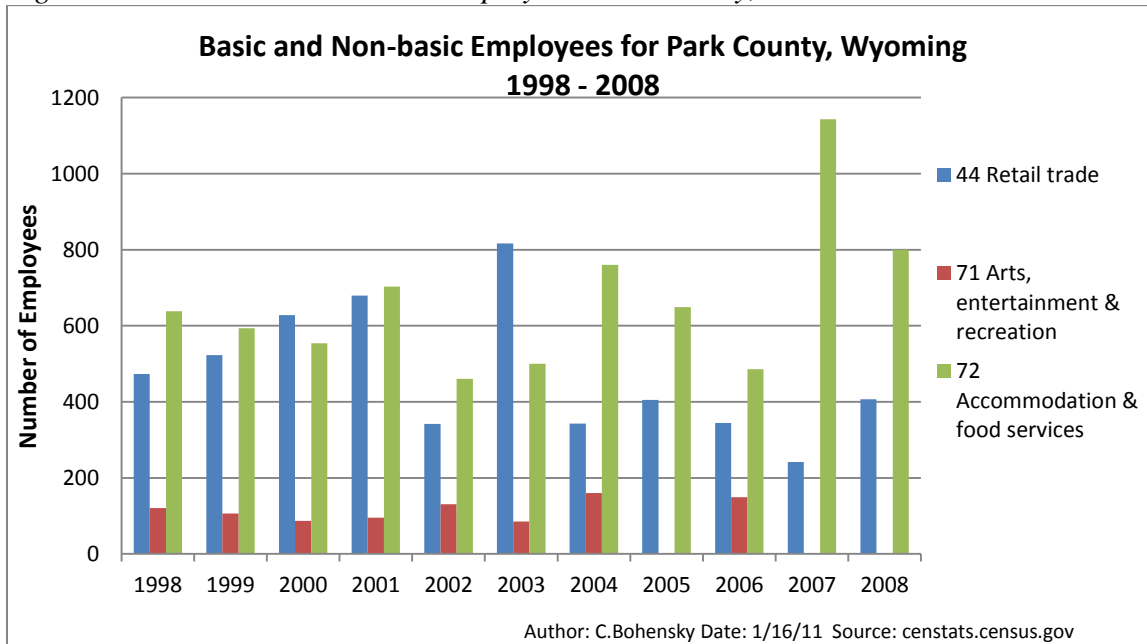
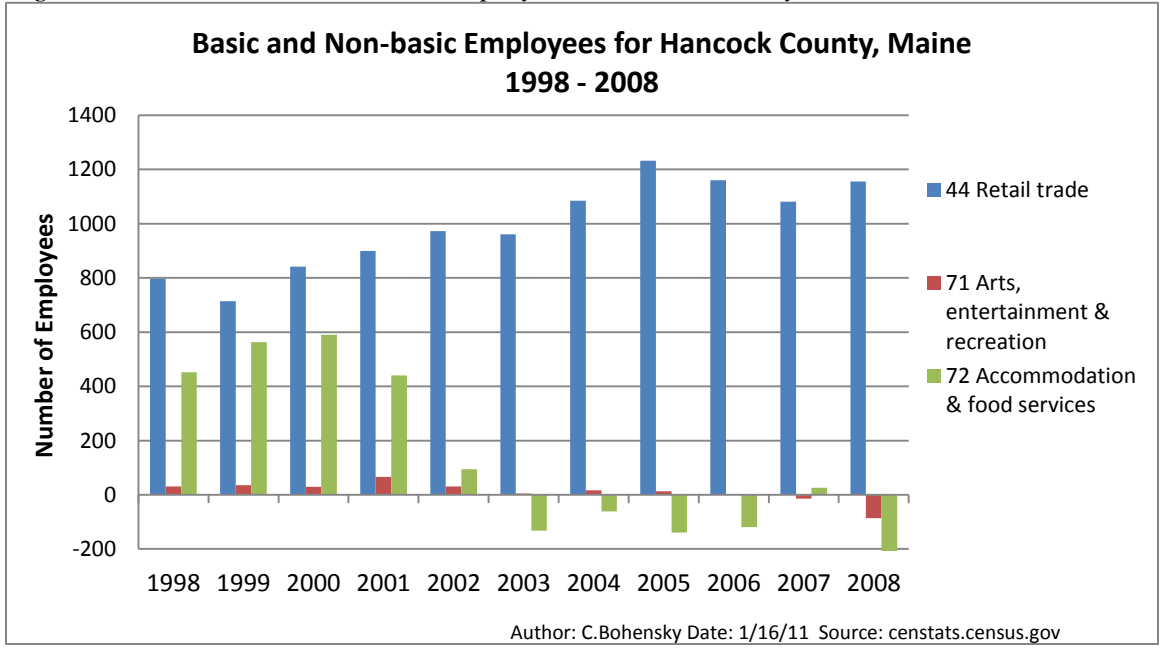


Figure 16 shows that Sector 72 in Hancock County has not had basic employees since 2002. Sector 71 also has relatively few basic employees. These low numbers of basic employees correspond to the LQs calculated for Hancock County. The LQs for Sectors 71 and 72 fell below 1.0 starting in 2007.

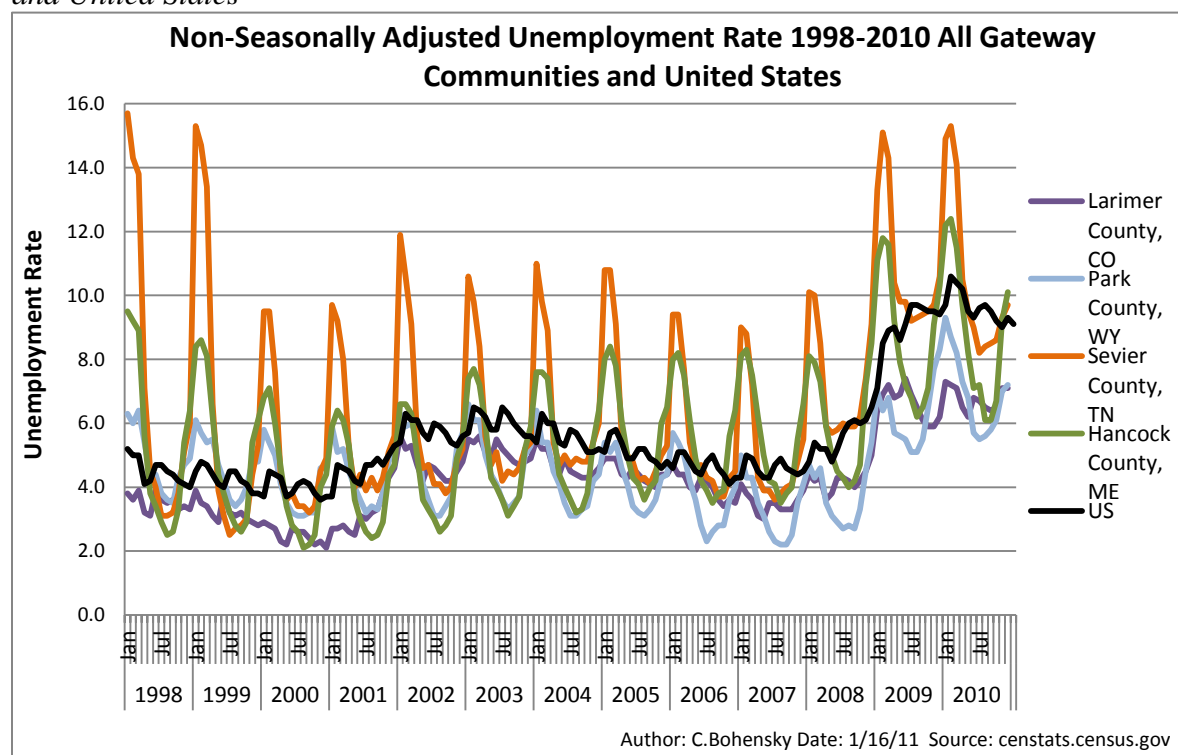
Figure 16 – Basic and Non-basic Employees Hancock County, ME 1998-2008



Unemployment Data

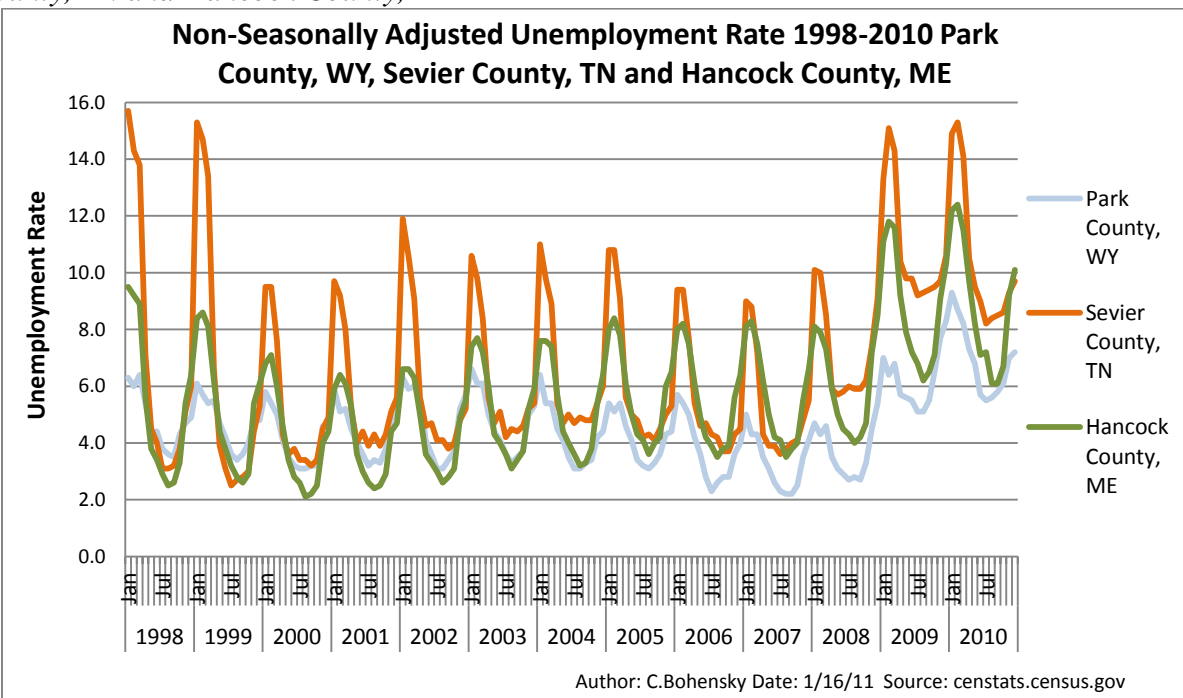
Unemployment rates vary dramatically between study areas, as is seen in Figure 17. By separating the unemployment rates by similarities it is easier to analyze the trends that emerge from the data. The breakdowns are shown in Figures 18 and 19 below. Overall the unemployment rates of the gateway communities studied have a seasonal trend which mirrors the trend of the United States unemployment rate.

Figure 17 – Nonseasonally Adjusted Unemployment Rate 1998-2010 All Gateway Communities and United States



Sevier, Park, and Hancock Counties all have seasonal spikes in unemployment rates in what is considered the off-season, January to March. The lowest unemployment rates are during the peak tourist season months of June, July and August. The unemployment rates for the three counties create trends that are almost mirror images of each other. The unemployment trends closely follow the seasons of good weather that would be important for tourists when visiting the gateway communities and parks.

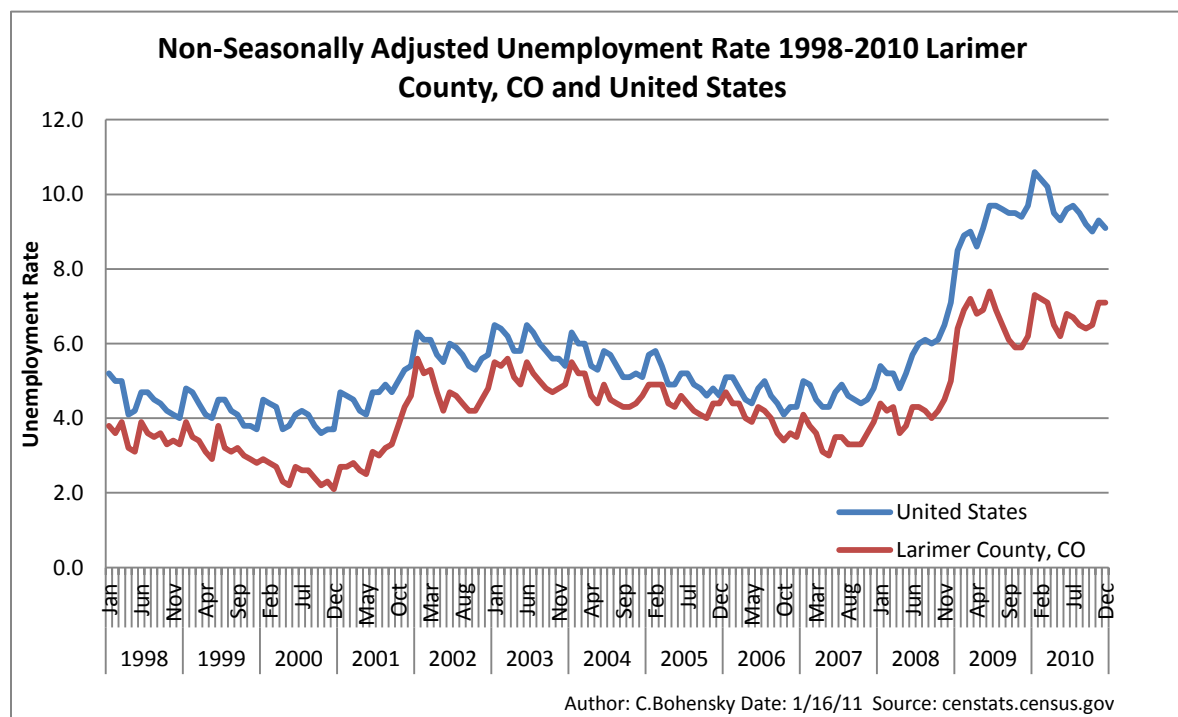
Figure 18 – Non-Seasonally Adjusted Unemployment Rate 1998-2010 Park County, WY, Sevier County, TN and Hancock County, ME



Author: C.Bohensky Date: 1/16/11 Source: censtats.census.gov

Figure 19 shows the corresponding trends of Larimer County, Colorado and the United States in regard to unemployment rates. The similarity of the trends could be because of the location of Fort Collins in the larger reference community of Larimer County. This large community, which is not part of the actual gateway community to Rocky Mountain Nation Park would cause the trend to more closely follow that of the United States than the trends of the other gateway communities.

Figure 19 – Non-Seasonally Adjusted Unemployment Rate 1998-2010 Larimer County, CO and United States



Conclusions and Further Research

1.) What is the economic structure of a gateway community to a national park?

The economic structure of a gateway community is largely service based with a focus on the tourists visiting the area. Therefore, the NAICS Sectors used as a proxy for this research were rational and valid in determining if the economies of gateway communities are reliant on tourism. Of the three sectors used, Sector 72 – Accommodations and Food Services is the best indicator of a tourism based economy as it consistently has a LQ greater than 1.0 for all of the study areas. Also through the use unemployment rates and the determination of basic employment it was shown that gateway communities that rely on tourism have patterns that follow the peaks and troughs of their busiest seasons. From the data it can be concluded that the economies of Sevier County, Tennessee and Park County, Wyoming are comprised mostly of tourism industries. The counties respective LQs were generally above 1.0 and both counties have

basic sector employees in all of the NAICS sectors studied, which shows that they are meeting and exceeding the local demand for tourist services. Even though Hancock County, Maine's economy is not obviously based on tourism from the LQs and basic sector employment, through the comparison of unemployment rates to those of the other gateway communities it was found that the rates follow the same seasonality as the other counties influenced by tourism.

From the data studied it is hard to determine the economic structure of gateway communities that are located within a larger reference community, such as in the case of Larimer County, Colorado. The location of metropolitan areas within a gateway community study area affects the results used to determine the economic structure of a gateway community. An example of this would be the relatively low LQs for each of the NAICS sectors. The LQs could be diluted because results included the city of Fort Collins information as well as that of the actual gateway community of Estes Park. In order to determine the economic structure of these types of gateway communities the larger metropolitan areas would need to be removed from the calculations, in many cases though, this might not be feasible as there might not be enough data to calculate results.

The data I collected was enhanced by the information I gathered through telephone interviews. Walter Yeldell confirmed that the main industry in Sevier County, TN was tourism. Specifically he explained that the town of Gatlinburg, in particular, had no other industries other than tourism. With the exception of basic community services, Gatlinburg is fully reliant on tourism, evidenced by the town's ability to accommodate 40,000 per night in a town of 3,900 residents. Both Claudia Wade (Park County, WY) and Chris Fogg (Hancock County, ME) provided examples of other industries or major businesses that the communities relied on in addition to tourism. Tourism is one of three major economies in Park County along with farming and ranching and mineral extraction. Bar Harbor, ME is home not only to Acadia

National Park, but also to Jackson Laboratory, the Mount Desert Island Biological Laboratory and the Mount Desert Island Hospital which are all major providers of employment in the area.

A further method of research would be to break down the NAICS levels into three or four digits instead of using the two digit method. Although the ideal standard is to use three- or four-digit NAICS codes for calculating location quotients, it is not always feasible (Hustedde 1993). Most employment data for communities, especially smaller communities, is only available at the two-digit level, so finding more precise data is not always possible. Another way to mitigate problems with data levels could be to use a more regional level than a county level. For example, if data for all counties surrounding the National Park were used, it might provide a better comparison.

As discussed above, the data I collected can be used to determine what portion of the employees are basic and non-basic in a certain sector. In addition to basic and non-basic employees and unemployment rates, through the telephone interviews I was able to ascertain if the employment base is local or transient. According to Claudia Wade, most of the employees in Cody, WY are local residents, as are the business owners. She continued to explain that some businesses do bring in international workers for the lower paying service jobs, but the majority of employees are locally based.

As is evidenced in Figure 14, Sevier County, TN has a large number of basic sector employees, which indicates the county's reliance on tourism. Mr. Yeldell, with the Gatlinburg Department of Tourism and Convention, explained that since the 1940s the town's labor force has been very seasonal, with the main season being from Memorial Day to Labor Day. More recently though, Mr. Yeldell said that the labor rates are still seasonal but the season now extends from April until November. The seasonality associated with tourism makes it hard to keep a stable local labor force. Most workers, Mr. Yeldell explained, commute to Gatlinburg from

within a 40-60 mile radius. There are also a large number of international workers that come to the area on work programs and stay as long as possible.

One trend that became evident from the telephone interviews is that the more reliant an area is on tourism the more transient the work force becomes. I believe that this is a result of the quality and seasonality of jobs typically associated with a tourist economy. Most jobs in a tourist economy are low-paying services positions, such as those in Sevier County, TN, whereas Hancock County, ME has many other industries providing stable year-round employment and income.

2.) *What potential economic trends emerge in the comparison of similar gateway communities?*

I will break this part of the analysis down into the components that Lundberg (1995) set forth in his analysis: trends, cycles, seasonality and random variations.

Trends & Cycles

Overall, from the telephone interviews I conducted, there has been a trend towards shorter vacation stays in each of the gateway communities. According to Chris Fogg, Executive Director of the Bar Harbor Chamber of Commerce, they have seen the average stay drop to 3.5 days. This was also mentioned by Claudia Wade, of the Park County Travel Council, where she has seen people taking shorter more frequent trips closer to home. Ms. Wade also explained that they have noticed trips not being planned as far in advance. So where, tourists in the past might have stayed for a week in Cody, WY they are now seeing visitors making two trips consisting of long weekends. These trends have occurred as people try to stay closer to home in order to save money.

All three counties have also seen an increase in regional travelers. Acadia National Park is within a day's drive of 25 million people, while Smoky Mountain National Park is a day's

drive for two-thirds of the United States. The convenience of being able to drive to a vacation destination is very appealing to tourists, especially those trying to save money.

A local trend in Sevier County, TN has been the increase in the time-share industry. Mr. Yeldell believes that the increase in time-shares has led to an increase in the length of stay for some visitors to the area.

Seasonality

The seasonal component of gateway communities closely follows the seasonal usage of the national parks. Peak season for national parks is during June, July and August, while the off-season is comprised of January, February and March. The seasonal component is most clearly seen in the unemployment rates of the gateway communities. Figure 18 shows the clear peaks and troughs of the unemployment rate following the national park tourist season.

Random variations

Economic downturns can be seen in the LQ figures and are examples of random variations. In years where there was an economic downturn the location quotients dip in response to a lessening in tourist spending. Specifically these downturns can be seen in Figures 11 and 12 during 2001 and 2007 and not all of the sectors are affected equally by an economic downturn. Each of the telephone interviewees claimed that their areas were not quite as affected by a downturn in the economy as other types of vacation areas, i.e. resorts, and destinations such as Disneyland, etc. Despite the claims of the interviewees, the LQ results depict a different picture and it is obvious from the sharp changes in LQ that Hancock County, ME and Park County, WY are affected more dramatically by changes in the national economy.

According to the interviews I conducted, rising gas prices do not seem to dramatically affect the gateway communities. Ms. Wade said that people will still travel to Cody, WY when gas prices rise, the result is that visitors tend to spend less in restaurants and gift shops. Mr.

Yelldell also reiterated that as gas prices increase they see an increase in visitors to the Smoky Mountains. He believes that this stems from the availability of low cost vacation options and free things to do in the area.

Weather and weather related events are another type of random variation can be seen in the location quotient data for Park County, Wyoming. The 2003 season was unusually dry and as a result there were 77 forest fires in or near Yellowstone National Park. These fires had a direct result on the number of tourists visiting the park and therefore travelling through the gateway community. Claudia Wade of the Park County Travel Council, confirmed that wildfires, may not affect the town of Cody, Wyoming, but they do have an impact on the tourists visiting the area. Wildfires usually make news headlines and can cause road closures. Ms. Wade explained that people who have upcoming trips and see that a road is closed because of a wildfire will often times cancel their vacation, even if the road re-opens the next day.

The opening of a new section of the Dollywood theme park in Sevier County, Tennessee also acted as a random variation. The variation can be clearly seen in Figure 10, where the LQ for 72 – Arts, Entertainment and Recreation rises after the section opened in 2004.

3.) *What is the primary destination of visitors to gateway communities, is it possible to tell?*

From the LQ, basic sector, and unemployment data I collected I was unable to tell if tourists were primarily visiting the national park or the gateway community. After conducting interviews of people who work in the tourism industry in each of the gateway communities I was able to gain a better understanding of what draws visitors to those places. When the national parks were first established, tourists were primarily drawn to the national parks and not the gateway communities. Over time, as the gateway communities developed their own brand, visitors are now choosing the gateway communities as their primary destination. As Claudia Wade explained, Buffalo Bill Cody built Cody, Wyoming on the east side of the park because, at

the time, there were no hospitality services at that entrance. Since that time, Ms. Wade said that the town of Cody has itself become a destination for tourists. These sentiments were reiterated by Mr. Fogg who said that Bar Harbor, ME has benefitted from brand marketing and that many tourists are now coming to check out the fishing village of Bar Harbor. In contrast to Park County, WY and Hancock County, ME, Mr. Yeldell, believed that Gatlinburg, TN would cease to exist if the national park was not adjacent to it. He estimates that one in three visitors to the area visit the park while they are there.

The destination of tourists also depends on the demographics of the tourist to an area. The telephone interviews I conducted proved to be the best way to identify the demographics of tourists visiting gateway communities. The typical visitors to Park County, WY; Sevier County, TN; and Hancock County, ME were families with one to two children. Characteristic visitors to Bar Harbor, ME as described by Chris Fogg, are families with children from the Boston area who are looking for a relatively affordable vacation.

Specifically in Park County, WY, families tended to be from the Midwest and were mostly people who still drove. Ms. Wade said that they had seen an increase in air traffic travelers from California, making it the state with the single most visitor originations. The Midwest is still the region where most of the travelers come from when visiting Park County. From a marketing perspective, Ms. Wade, explained that the top three markets are the: 1) family; 2) couples into recreation; and 3) high end couples with an appreciation of art and galleries. Ms. Wade described the tourists to Park County as spending less than the average tourist. She explained that, for example, it is free to visit Yellowstone National Park so visitors would not have to purchase a pass to amusement park such as Disneyland.

The typical tourist, as described by Walter Yeldell, are families with children, who tend to be more blue collar and have an average household income of \$70,000. People choose to

come to the Sevier County, TN because they want to visit the mountains not the beach. Most visitors to Sevier County are within an eight-hour drive and there are many visitors from the western states who come for the biological diversity the national park offers.

4.) *Do the gateway communities offer a sufficient substitute to draw tourists if the national park was to close?*

Sevier County, TN is a good example of a gateway community with other substitutes that could possibly take the place of the national park, such as, Dollywood, outlet shopping, and golfing. Mr. Yeldell stated that Dollywood is the number one paid attraction in the state of Tennessee, but he also said that many more people go to the national park than Dollywood.

Further research from what I have conducted is needed to determine the effect of large tourist attractions that are in close proximity to national parks, i.e. ski resorts, theme parks, etc. For example, Stynes (2002) explains that visitors to GSNP spent \$618 million in the local region in 2000, but, due to the other attractions outside the park, as much as half of this spending might still occur if the park were closed (Stynes 2005). This makes it hard to determine if the community is a gateway to the national park or the other local attractions. Stynes (2005) explains that if a perfect substitute to the park exists with capacity to accommodate additional use, visitors would simply switch to this substitute if the park were closed, effectively allowing the gateway community to survive.

Summary

Tourism is noticeably concentrated in some locations because of the presence of natural amenities, such as national parks, which is why it is important to address the economic structure of the gateway communities which surround the national parks (Wilkerson 2003). Gateway communities are where the positive and negative effects of tourism are most readily seen and most easily quantified. The national parks themselves are the attraction, but it is the gateway

communities that act as the funnel through which the tourists pass into the parks; therefore they endure the brunt of the impacts and consequences associated with tourism. This can be seen in the seasonality of jobs, increased development, local congestion, upgrades to infrastructure and also the degradation of certain environmental qualities. As Tooman (1997) explains tourism is a multifaceted industry with a diversity of long-term consequences. There is no finite definition of tourism which makes it hard to determine the exact effects it has on an area's economy. The research I conducted indicates that gateway communities are highly reliant on tourism as one of their main sources of economic activity.

References

- Bar Harbor & Acadia National Park: The Official Website of the Bar Harbor Chamber of Commerce. Bar Harbor Chamber of Commerce 2009. [Accessed: November 26, 2009] Available from: <http://www.barharborinfo.com/>
- Beekhuis, Jeanne. Tourism in the Caribbean: Impacts on the Economic, Social and Natural Environments. *Ambio*. 1981;10(6):325-331. Available from: <http://www.jstor.org/stable/4312729>
- Burghardt, AF. A Hypothesis about Gateway Cities. *Annals of the Association of American Geographers*. 1971;61(2):269-285. Available from: <http://www.jstor.org/stable/2562445>
- Cater, Erlet. Environmental Contradictions in Sustainable Tourism. *The Geographical Journal*. 1994;161(1):21-28. Available from: <http://www.jstor.org/stable/3059924>
- Chapin Tim. Florida State University Department of Urban and Regional Planning Methods III: Forecasting. Revised: January 2004. [Accessed: November 23, 2010]. Available from: <http://mailer.fsu.edu/~tchapin/garnet-tchapin/urp5261/topics/econbase.htm>
- Cody Country Chamber of Commerce. 2008 Cody Country Chamber of Commerce. Powered By: Richbank-Studios. [Accessed: November 26, 2009]. Available from: <http://www.codychamber.org/>
- de Kalt, Emanuel. *Tourism-Passport to Development?* New York: Oxford University Press; 1979.
- Draper, Dianne. Toward Sustainable Mountain Communities: Balancing Tourism Development and Environmental Protection in Banff and Banff National Park, Canada. *Ambio*. 2000;29(7) Research for Mountain Area Development: The Americas. 408-415. Available from: <http://www.jstor.org/stable/4315066>
- Estes Park Colorado: Convention and Visitors Bureau. Home page. [Accessed: November 26, 2009]. Available from: <http://www.estesparkcvb.com/>
- Freemuth, John. The National Parks: Political versus Professional Determinants of Policy. *Public Administration Review*. 1989;49(3):278-286. Available at: www.jstor.org/stable/977010
- Gatlinburg Tennessee [Internet]. The official website of the Gatlinburg Visitors and Convention Bureau. C.2009. (cited 10/9/09). Available at: www.gatlinburg.com
- Grado SC, Kaminski RM, Munn IA, Tullos TA. Economic impacts of waterfowl hunting on public lands and at private lodges in the Mississippi Delta. *Wildlife Society Bulletin*. 2001;29(3):846-855. Available from: <http://www.jstor.org/stable/3784411>

- Hustedde RJ, Shaffer R, Pulver G. Community Economic Analysis: A How to Manual. December 1993. [Accessed: December 1, 2010]. Available from: <http://epa.gov/greenkit/pdfs/howto.pdf>.
- Kariel, Herbert G. Tourism in the Canadian Cordillera: A Synthesis of visitor characteristics and areal use patterns. *Mountain Research and Development*. 1984(4(3):213-228.
- Klein YL, Osleeb JP, Viola MR. Tourism Generated Earnings in the Coastal Zone: A Regional Analysis. *Journal of Coastal Research*. 2004;20(4):1080-1088.
- Kurtz, Rick. Gateway Communities and Economic Development Vision Formulation. Conference Papers – Western Political Science Association 2003 Annual Meeting; 2003, Portland, OR, p1-18, 18p, 1 chart.
- Kurtz, Rick. Public Lands Policy & Economic Trends in Gateway Communities. In: Conference Papers – Western Political Science Association 2005 Annual Meeting; 2005, Austin, TX, p1, 22p, 4 diagrams, 2 graphs.
- Mansperger, Mark C. Tourism and Cultural Change in Small-Scale Societies. *Human Organization*. 1995;54(1):87-94.
- Larimer County: The Official Website of Larimer County, Colorado. About Larimer County. 1995-2009, Larimer County. [Accessed: November 26, 2009]. Available from: <http://www.larimer.org/about/about.htm>
- Lundberg DE, Krishnamoorthy M, Stavenga MH. *Tourism Economics*. New York: John Wiley & Sons, Inc.; 1995.
- National Park Service Department of the Interior: National Park Service Overview 2009 [Accessed: October 12, 2009]. Available from: http://www.nps.gov/pub_aff/refdesk/NPS_Overview.pdf
- National Park Service Department of the Interior: Acadia National Park Home. Last updated: October 15, 2009. [Accessed: November 27, 2009]. Available from: <http://www.nps.gov/acad/index.htm>
- National Park Service Department of the Interior: Great Smoky Mountains National Park Home. Last updated: November 18, 2009. [Accessed: November 26, 2009]. Available from: <http://www.nps.gov/grsm/index.htm>
- National Park Service Department of the Interior: Rocky Mountain National Park Home. Last updated: June 20, 2009. [Accessed: November 26, 2009]. Available from: <http://www.nps.gov/romo/historyculture/index.htm>
- National Park Service Department of the Interior: Yellowstone National Park Home. Last updated: October 12, 2011. [Accessed: March 24, 2012]. Available from: <http://www.nps.gov/yell/index.htm>

- Oliver-Smith A, Arrones FJ, Arcal JL. Tourist Development and the Struggle for Local Resource Control. *Human Organization*. 1989;48(4):345-351.
- Richardson RB, Loomis J, Weiler S. Recreation as a Spatial Good: Distance Effects on Changes in Recreation Visitation and Benefits. *The Review of Regional Studies*. 2006;36(3):362-380.
- Shaver CL, Tonnessen KA, Maniero TG. Clearing the Air at Great Smoky Mountains National Park. *Ecological Applications*. 1994;4(4):690-701. Available from: <http://www.jstor.org/stable/1942000>
- Stronza, Amanda. Anthropology of Tourism: Forging New Ground for Ecotourism and Other Alternatives. *Annual Review of Anthropology*. 2001;30:261-283. Available from: <http://www.jstor.org/stable/3069217>
- Stynes, Daniel J. National Park Visitor Spending and Payroll Impacts, 2007. Department of Community, Agriculture, Recreation and Resource Studies Michigan State University, East Lansing, MI. Sept. 2008. Available from: <http://web4.canr.msu.edu/mgm2/>
- Stynes, Daniel J. Economic Significance of Recreational Uses of National Parks and Other Public Lands. *National Park Service Social Science Research Review*. Winter 2005;5(1):1-35. Available from: <http://digitalcommons.usu.edu/govdocs/423/>
- Tooman, Alex L. Multipliers and Life Cycles: A Comparison of Methods for Evaluating Tourism and Its Impacts. *Journal of Economic Issues*. 1997;31(4):917-932. Available from: <http://www.orgs.bucknell.edu/afee/jei>
- United Nations Educational, Scientific and Cultural Organization: World Heritage. Copyright: 1992-2009 UNESCO World Heritage Centre. Last updated: November 27, 2009. [Accessed November 27, 2009] Available from: <http://whc.unesco.org>
- United States Census Bureau. Last updated: September 14, 2009. [Accessed: November 27, 2009]. www.census.gov.
- Walpole MJ, Goodwin HJ, Ward KGR. Pricing Policy for Tourism in Protected Areas: Lessons from Komodo National Park, Indonesia. *Conservation Biology*. 2001;15(1):218-227.
- Wilkerson, Chad. Travel and Tourism: An Overlooked Industry in the U.S. and Tenth District. *Economic Review*. 2003;88(3):45-71.
- World Tourism Organization [internet]. Copyright 2009. [Accessed: October 10, 2009]. Available from: www.unwto.com/index.php.
- Wade, Claudia. Telephone interview. March 29, 2012.
- Yeldell, Walter. Telephone interview. March 30, 2012.
- Fogg, Chris. Telephone interview. April 3, 2012.

Appendix A

Table of Calculated Location Quotients

NAICS Code	Description	Year	Year										
			1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
72	Accommodations & Food Services	CO	1.48	1.47	1.47	1.48	1.40	1.41	1.39	1.32	1.36	1.35	1.32
		ME	1.32	1.39	1.40	1.29	1.06	0.92	0.96	0.91	0.93	1.02	0.82
		TN	3.83	3.54	3.60	3.52	3.43	3.41	3.30	3.25	3.14	3.15	3.04
		WY	1.87	1.78	1.71	1.90	1.61	1.62	1.87	1.73	1.53	2.10	1.79
721	Accommodation	CO	1.10	1.47	1.11	1.48	1.11	1.09	1.01	0.89	0.96	0.90	0.95
		ME	2.93	2.23	2.40	2.18	1.40	1.50	1.69	1.64	1.59	1.61	1.20
		TN	8.45	7.90	7.83	8.06	7.23	6.97	6.87	7.16	6.82	6.92	6.01
		WY	4.86	4.59	4.42	5.36	3.38	3.47	4.06	3.07	2.79	2.23	4.50
722	Food Services & Drinking Places	CO	1.56	1.55	1.54	1.55	1.46	1.48	1.46	1.41	1.44	1.45	1.40
		ME	1.51	1.21	1.18	1.10	0.99	0.79	0.81	0.77	0.80	0.90	0.74
		TN	2.81	2.58	2.68	2.55	2.65	2.67	2.56	2.46	2.41	2.41	2.45
		WY	1.21	1.16	1.11	1.16	1.25	1.23	1.41	1.45	1.28	1.35	1.02
71	Arts, Entertainment & Recreation	CO	0.82	0.89	0.95	0.89	0.94	0.89	0.95	0.95	0.94	0.89	0.78
		ME	1.13	1.14	1.11	1.25	1.11	1.02	1.06	1.04	1.00	0.95	0.71
711	Performing Arts, Spectator Sports & Related Industries	TN	3.97	4.07	4.19	4.43	4.46	4.54	4.52	4.25	4.60	5.01	5.91
		WY	1.98	1.82	1.63	1.69	1.97	1.60	2.04	1.98	1.94	2.07	2.15
		CO	1.16	1.05	1.29	1.06	0.96	1.01	1.16	1.14	1.10	0.88	0.77
		ME	0.21	1.22	0.72	0.60	0.50	0.48	0.49	0.46	0.43	0.47	0.52
712	Museums, Historical Sites & Similar Institutions	TN	5.62	6.61	5.28	5.69	5.27	5.52	6.05	6.35	8.10	6.70	5.34
		WY	0.41	0.38	0.36	0.35	2.15	1.96	1.85	1.80	1.75	1.53	1.57
		CO	0.66	0.53	0.62	0.60	0.62	0.60	0.51	0.59	0.55	0.49	0.39
		ME	4.15	3.85	1.63	2.24	2.83	2.46	2.21	2.43	2.67	2.07	2.46
713	Amusement, Gambling & Recreation Industries	TN	5.70	4.29	4.71	12.94	8.11	8.78	8.41	7.91	8.41	7.90	7.59
		WY	23.34	21.13	20.00	19.70	19.98	18.75	18.07	17.85	17.57	15.11	15.54
		CO	0.74	0.88	0.89	0.86	0.96	0.88	0.93	0.92	0.92	0.93	0.82
		ME	1.29	1.22	1.18	1.40	1.13	1.14	1.12	1.11	1.03	1.00	0.77
44	Retail Trade	TN	3.39	3.36	3.85	3.34	3.91	3.87	3.74	3.31	3.23	4.24	5.93
		WY	1.25	1.00	0.86	0.81	0.90	1.02	1.08	1.54	1.52	1.35	0.76
		CO	1.23	1.28	1.27	1.28	1.23	1.22	1.17	1.12	1.19	1.19	1.22
		ME	1.37	1.33	1.38	1.40	1.43	1.43	1.48	1.54	1.50	1.48	1.52
445	Food & Beverage Stores	TN	1.72	1.74	1.75	1.74	1.77	1.76	1.82	1.92	1.86	1.83	1.85
		WY	1.43	1.46	1.53	1.58	1.31	1.71	1.27	1.33	1.27	1.17	1.31
		CO	1.14	1.17	1.19	1.25	1.00	0.97	0.94	0.87	1.03	1.00	0.98
		ME	1.79	1.48	1.76	1.92	1.94	1.83	1.82	2.17	2.17	2.15	2.16
446	Health & Personal Care	TN	1.46	1.42	1.44	1.39	1.28	1.19	1.66	1.76	1.56	1.47	1.63
		WY	1.19	1.49	1.79	1.70	1.22	1.21	1.16	1.21	1.07	1.04	1.06
		CO	0.62	0.73	0.72	0.66	0.70	0.72	0.75	0.75	0.88	0.86	0.93
		ME	0.89	0.90	0.82	0.89	1.00	1.03	1.00	1.08	0.92	1.15	1.19
447	Gasoline Stations	TN	1.03	1.02	0.96	0.97	1.07	1.26	1.40	1.28	1.29	1.22	1.21
		WY	0.57	0.38	0.47	0.65	0.87	0.91	0.39	0.38	0.34	0.62	0.69
		CO	0.98	1.03	1.01	1.08	0.89	1.17	1.11	1.08	1.15	1.26	1.07
		ME	1.94	2.12	2.19	2.21	2.43	2.20	2.31	2.17	2.20	2.34	1.84
448	Clothing & Clothing Accessory Stores	TN	1.66	1.80	1.70	1.84	1.68	1.85	1.69	1.79	1.98	2.02	2.01
		WY	1.86	2.00	2.19	2.26	1.72	1.30	0.96	1.55	1.65	1.79	1.76
		CO	1.30	1.29	1.29	1.27	1.11	1.08	0.98	0.98	1.17	1.20	1.23
		ME	0.86	0.81	0.83	0.69	0.72	0.60	0.64	0.62	0.51	0.39	0.45
451	Sporting Goods, Hobby, Book & Music Stores	TN	4.06	4.36	4.59	4.42	4.58	4.44	4.33	4.46	4.12	4.18	4.02
		WY	0.78	0.65	0.87	1.20	0.69	1.24	1.20	1.25	1.23	0.57	0.97
		CO	1.99	1.96	1.92	1.94	2.05	2.01	1.98	1.94	1.96	1.98	2.65
		ME	1.34	1.43	1.36	1.50	1.54	1.90	1.90	1.80	1.77	1.68	1.37
452	General Merchandise	TN	1.25	1.36	1.57	1.45	2.06	1.74	1.72	1.66	2.99	2.83	2.79
		WY	1.84	2.63	1.88	1.87	0.94	1.45	1.48	0.82	1.14	0.92	0.90
		CO	1.16	1.25	1.18	1.19	1.37	1.41	1.32	1.26	1.12	1.16	1.15
		ME	0.98	1.03	1.02	0.93	0.93	0.87	0.97	1.02	0.98	0.91	0.94
453	Misc. Store Retailers	TN	0.93	0.89	0.88	0.90	0.89	0.89	0.83	0.99	0.94	0.92	0.87
		WY	1.64	1.55	1.72	2.40	1.79	1.83	1.74	1.75	1.74	1.44	1.49
		CO	1.66	1.81	1.91	1.84	1.86	1.74	1.60	1.57	1.51	1.63	1.66
		ME	1.01	1.17	1.06	1.31	1.23	1.26	1.70	1.51	1.52	1.54	1.46
454	Non-store Retailers	TN	4.38	4.65	3.85	3.67	4.46	3.91	3.99	4.32	3.76	4.51	4.68
		WY	1.39	1.33	1.44	1.05	1.01	2.23	1.76	1.99	1.63	1.81	1.37
		CO	No Data	0.71	0.75	0.79	0.59	0.67	0.59	0.63	0.64	0.67	0.70
		ME	1.96	2.16	1.93	1.94	1.94	2.23	2.69	2.91	2.85	2.72	2.43
		TN	3.09	2.12	2.62	2.88	2.20	2.45	2.43	2.74	2.71	2.37	2.16
		WY	1.35	1.10	1.31	0.84	1.32	1.51	1.72	1.70	1.52	1.28	1.20

Note – LQs in red are lacking data for that year. LQs were determined using an average of the previous and subsequent years.

