

June 2011



ASSESSING THE ECONOMIC AND NON-ECONOMIC IMPACTS OF
HARRAH'S CHEROKEE CASINO, NORTH CAROLINA

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INTRODUCTION

The Eastern Band of Cherokee Indians (EBCI), mainly descendants of those who managed to avoid being forced on the Trail of Tears evacuation to Oklahoma in the 1830s, is based within the 56,000 acre Qualla Boundary, located in Jackson, Swain, and Haywood Counties. According to tribal estimates, the EBCI has approximately 14,500 members. Approximately 60 percent of those live within the Boundary. Directly and indirectly, the EBCI is dependent upon Harrah's Cherokee Casino, located in Jackson County near Cherokee, for much of its income. The casino has an important economic impact upon the region which extends beyond the Qualla Boundary and beyond the enrolled members of the tribe. This report describes the impact of the casino on the region and analyzes the routes of its economic impact.

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EXECUTIVE SUMMARY

Signed into law by President Reagan on 17 October 1988, the Indian Gaming Regulatory Act paved the way for the Eastern Band of Cherokee Indians (EBCI) to leverage gambling for tribal and regional economic development. Following the passage of the federal law, the EBCI entered into a compact with the State of North Carolina and, on 13 November 1997, opened Harrah's Cherokee Casino.

In less than two decades, the casino, which is managed by Harrah's and owned by the EBCI, has evolved from a simple bingo operation to a large, complex resort which reportedly is the largest private tourist attraction in North Carolina. Today, Harrah's Cherokee Casino includes 120,000 square feet of gaming space, retail shops, restaurants, three hotel towers, a 15,000 square foot conference center, a 3,000 seat event center, and three hotel towers. Additional facilities will be completed by late 2012.

As a regional export industry, casino revenues are cycled through the regional economy in the form of employee compensation, local supplier purchases, and transfers of several types. Each generates a demand for additional goods and services as households purchase consumer goods and the tribe and the Cherokee Preservation Foundation make investments in the region. Casino capital investment also supports the regional economy.

This study assesses both the economic and non-economic impacts of Harrah's Cherokee Casino on the EBCI, Western North Carolina, and the state more generally.

Among the study's key findings:

Harrah's Cherokee Casino has had a clear positive impact on the economy of Western North Carolina. Without the casino, the region and the state would not have attracted equivalent revenue.

- Approximately 3.6 million people visit the casino each year.
- Visitor-generated revenue totaled \$386 million in 2010 after temporarily peaking at \$449 million in 2007.
- Over two-thirds of gaming revenues come from

out-of-state visitors.

- In 2009, the economic impact on Jackson and Swain counties was estimated to be approximately \$300 million. Capital investments added another estimated \$82 million.
 - A large portion of the gaming revenue, the tourist spending accompanying it, and the follow-on economic impacts would likely be lost to the state in the absence of the casino.
- In order to generate these revenues, the casino hires employees and contracts with vendors. In 2009:
 - The casino was directly responsible for five percent of employment (1674 employees—80 percent of whom were not enrolled members of the EBCI) and approximately eight percent of all wages and salary disbursements (\$74.8 million) in Jackson and Swain counties.
 - An estimated \$52.4 million wage and salary income was fed into the local economy. Household spending generated an additional \$8.3 million in economic output for a total employee compensation impact of \$60.7 million in Jackson and Swain counties.
 - Casino-purchased goods and services from local vendors in Jackson and Swain counties totaled \$4.4 million—\$3.8 million in direct and \$557,000 in indirect economic impact.
 - Casino operational spending—the combined effect of employment and local business impacts—produced an estimated \$65.1 million impact on the economies of Jackson and Swain counties.
 - In order to maximize long-term revenues, the casino has undertaken a large capital investment program. In 2009:
 - One fourth of operating revenues were dedicated to new capital investments in land and improvements, equipment, and construction.
 - \$76.9 million was paid to local construction contractors and subcontractors which translated into an \$82.5 million impact on the local economy.
 - Above and beyond its own spending, Harrah's Cherokee Casino injects three additional sources of

funds into the regional economy.

- \$67 million provided to the Cherokee Preservation Foundation by the end of the 2009 fiscal year.
- \$1.8 million transferred to the EBCI as a Tribal Levy collected directly from casino guests in lieu of sales tax in 2009.
- \$226.3 million of its operating surplus (56 percent of operating revenue) transferred to the EBCI in 2009.
- Using resources stemming directly from the casino, the Cherokee Preservation Foundation has made 661 grants totaling nearly \$51 million to further strengthen and diversify the regional economy.
 - Each dollar of Cherokee Preservation Foundation funding has been matched by an average of \$1.64 in support from other non-profit or government sources.
 - In addition to the direct benefits of the work completed with foundation resources, the annual average Cherokee Preservation Foundation distribution (approximately \$5 million) has an estimated total economic impact of \$5.6 million on the local economy of Jackson and Swain counties.
- Half of the casino's \$226.3 million Tribal Distribution was distributed directly to enrolled members and half was devoted to local government-type expenditures.
 - Representing the equivalent of eight percent of all personal income in Jackson and Swain counties, the household distribution generated an additional \$12.6 million in indirect local economic impact.
 - Government-type expenditures generated an additional \$24 million in multiplier spending for a total regional economic impact of \$229.4 million.
 - The impacts of the casino are reflected in the economic trends for the region as a whole.
 - Stagnate until the late 1990s, per capita income has grown coincident with the timing and growth of casino revenues, moving from approximately 70% to over 80% of the statewide average.
 - Directly and indirectly, casino operation have reduced the historically high unemployment rate in Jackson and Swain counties which was 1.87 times the state average through 1997.
- The casino also appears to have attenuated previously high seasonal fluctuations in unemployment in the Cherokee region which had sometimes peaked at 17 percent or more.
- Substantially below the statewide average prior to the casino, the employment rate in Jackson and Swain Counties is now above the state level.
- While the region's population held steady as a proportion of the state total, employment accelerated after 1997 and with it wages and salaries, earnings, and, to a somewhat lesser degree, regional income as a proportion of the state total.
- Much of the employment in the public sector and with the tribe is supported by casino-generated funds.
- The Qualla Boundary accounts for 13 percent of the establishments, 26 percent of the employment, and 29 percent of the wages and salaries in Jackson and Swain counties.
- The social impacts of the casino are reflected in the trends for the region as a whole.
 - Life expectancy in the Cherokee region is approximately on par with the state level.
 - Revenue sharing arrangements between the casino and the tribe appear to have improved parent-child interactions by lifting families out of poverty, with the attendant benefits of reduced behavioral problems and improvements in educational performance among children and adolescents.
 - Cherokee students are enrolling in community colleges at above average rates but continue to graduate from high school and enroll in UNC system schools at lower rates than other students.

ASSESSING IMPACT

ASSESSING THE ECONOMIC AND NON-ECONOMIC IMPACT

A Short History of Harrah's Cherokee Casino

The Indian Gaming Regulatory Act, signed into law by President Reagan on 17 October 1988, paved the way for the Eastern Band of Cherokee Indians (EBCI) to leverage gambling for tribal and regional economic development. The Indian Gaming Regulatory Act was an outcome of a number of U.S. Supreme Court cases clarifying the role of states in regulating activities on sovereign Indian lands and of a growing political ideology of economic self-sufficiency championed by Senator Daniel Inouye of Hawaii, Senator John McCain of Arizona, and Representative Morris Udall of Arizona. A decade after the original act passed, the federal government gained the power to tax tribal casinos in order to finance a regulatory agency, the National Indian Gaming Commission.

While the Indian Gaming Regulatory Act allowed a good deal of tribal autonomy for some types of gaming, it also required federal or state regulation in some cases. The Indian Gaming Regulatory Act classified gaming into three categories. Class I games were defined as “social games solely for prizes of minimal value or traditional forms of Indian gaming engaged in by individuals as a part of, or in connection with, tribal ceremonies or celebrations.” Class II games included bingo and card games (other than banking card games) operated in accordance with state law regarding the amount of wagers and hours of operation. Class III games were “all forms of gaming that are not Class I gaming or Class II gaming,” including slot machines, casino-style games, banking card games, video games, and lotteries. Class III gaming (casino gambling) was to be overseen by state gambling commissions formed by “compact” (agreement) between tribes and individual state governments.

Following the passage of the federal law, the EBCI opened a small Class II operation in 1990. In 1992, the tribe initiated a process of negotiations with the State of North Carolina to allow Class III gaming on its land. In August 1994, the Tribe entered into a compact with the State of North Carolina, signed by Governor Hunt, that permitted the Tribe to conduct “raffles,” “video games,” and “other Class III gaming which may be authorized” in writing by the Governor. The compact requires an element of skill in each game played, however. The tribe opened a temporary casino in 1995 which was subsequently closed when Harrah's Cherokee Casino opened 13 November 1997. The compact was amended in May 1996 and November 2000, allowing for expanded operations and extending the compact until 2030. As part of

a January 2001 amendment to the Compact, the Tribe agreed to fund a non-profit foundation that focuses on environmental enhancement, economic and workforce development and cultural preservation. A further minor amendment was agreed to in 2002.

Expansions have followed the 1997 opening in rapid succession with a 10,000 square foot casino addition in June 1998, a further 20,000 square foot extension in May 2002, and hotel towers opening in May 2002 and June 2005. The EBCI approved a \$650 million expansion program in January 2007 which is scheduled for completion in late 2012. The casino previously included 576 hotel rooms and suites, a 15,000 square foot conference center, and several restaurants. The expansion program includes two parking garages with 3,500 spaces, a third hotel tower with a total of 534 rooms and suites, a 3,000 seat event center, a spa, additional restaurants and shops, and renovated or expanded gaming space, amenities and support facilities. As of December 2010, the parking garages, event center, and third hotel tower had been substantially completed. The casino began serving alcohol late 2009.

Harrah's Cherokee Casino has evolved in the short time of barely two decades from a simple bingo operation to a large, complex, multi-product firm which is said to be the largest private tourist attraction in North Carolina. Data provided by the casino (summarized in Table 1) indicate that approximately 3.6 million people visit each year.

In the sections which follow, we assess the economic and social impacts of casino operation on western North Carolina and on the State as a whole. We do so in two stages using

Table 1
Harrah' Cherokee Casino & Hotel Total Visitors, 1997-2010
Casino Admissions

1998	3,107,197
2000	3,491,093
2002	3,344,314
2004	3,498,146
2006	3,599,428
2008	3,543,915
2010	3,605,000

Note: Fiscal Year October - September

complementary methodologies to examine different aspects of the casino's impact. In the first stage, we measure the economic and social impact of the casino on regional income, employment and well-being. In the second stage, we "follow the money" as it enters and circulates through the regional and state economy, documenting the direct and indirect impacts as it flows.

Harrah's Cherokee Casino in Context

The western portion of the state has always lagged economically. It was the last settled, the last to receive transportation infrastructure, and the last to develop administratively (as evidenced by the dates of county incorporation). It is perhaps also the least urbanized. The topography, difficult access, and lack of urbanism meant that western North Carolina was not well suited for commercial farming, most manufacturing, and even less so for much of the emerging service economy. The region has long been the target of poverty alleviation programs. It was not until Piedmont prosperity gave the regional tourist industry a boost several decades ago that the western portion of the state began to find a viable economic niche.

In examining economic trends, we examined four geographic regions in addition to the state of North Carolina

as a whole. (See Figure 1.) These are the Qualla Boundary territory, the Cherokee Seven region, the Mountain North region, and the Cherokee Two region. The Qualla Boundary territory straddles two counties, Jackson and Swain, which comprise the Cherokee Two region. The addition of Cherokee, Clay, Graham, Haywood, and Macon Counties completes the Cherokee Seven region. The Mountain North region, consisting of Alleghany, Ashe, Avery, McDowell, Mitchell, Watauga, and Yancey Counties – all north of Buncombe County and the City of Asheville, provides a basis of comparison for the economic and social health of the Cherokee region as affected by the operation of Harrah's Cherokee Casino.

Income and Earnings

Trends in income and income per capita provide a direct measure of aggregate improvements in regional welfare. Over the last several decades, North Carolina economic growth has been concentrated mainly in the Piedmont. Charlotte has long been a banking center and more recently a favored location for advanced manufacturing and distribution. The Triangle is home to the state capitol and the three research universities which have helped fuel regional growth for the last half century. By contrast, the eastern and western portions of the state have largely been left behind economically.

Figure 1
North Carolina Regions Examined in the Study

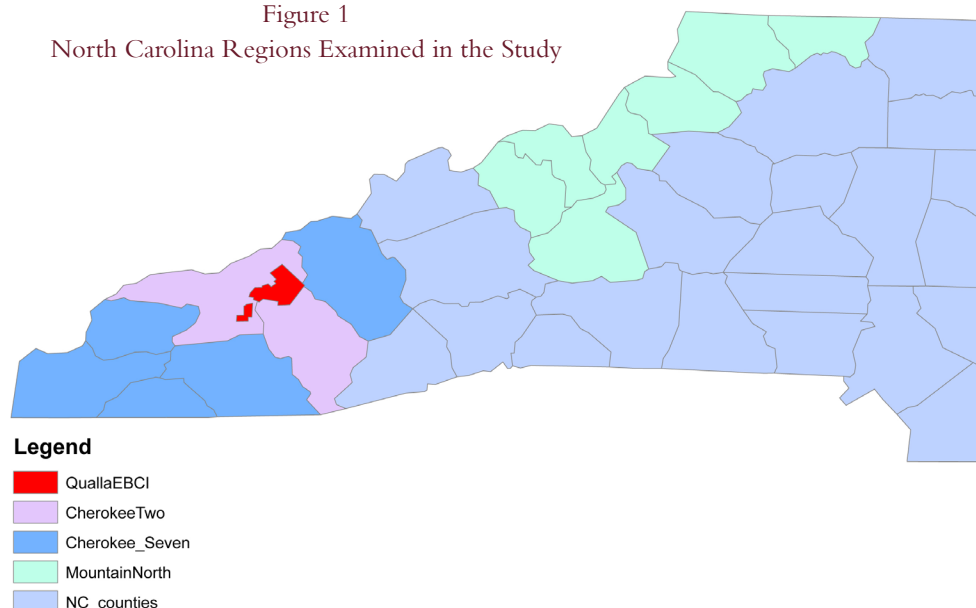


Figure 2 charts the change in per capita income for the State of North Carolina and the selected regions – the “Cherokee Seven” region, the “Mountain North” comparison region, and the “Cherokee Two” region consisting of Jackson and Swain Counties – which surround Harrah's Cherokee Casino and the EBCI Qualla Boundary lands. Income data are available for a four-decade, 1969–2008, period from the U.S. Bureau of Economic Analysis, allowing the effects of the Harrah Cherokee Casino on the regional economy to be placed in historical and geographic context. The estimates have been adjusted to constant 2005 dollars, mitigating the effect of inflation on this measure of prosperity.

Income per capita in North Carolina has risen from approximately \$13,000 (2005 dollars) in 1969 to nearly \$32,500 in 2008. Western North Carolina has largely followed the same upward trend. Income per capita was \$10,400 in the Cherokee Seven region in 1969 and rose to \$26,750 in 2008, remaining at approximately 80 percent of the state average level throughout the entire period. The Mountain North region began at \$9,600 and ended at \$25,575, increasing from approximately 73 percent of the state level in 1969 to 80 percent in the early 1990s, remaining close to that level since. In the Cherokee Two region, income per capita began at less than \$9,500, grew to \$26,500, and increasing from approximately 70 percent of the state level to over 80 percent. As seen in Figure 3, after an early increase in the late 1970s and early 1980s, per capita income stagnated in the Cherokee Two region only to rise in the late 1990s and over the course

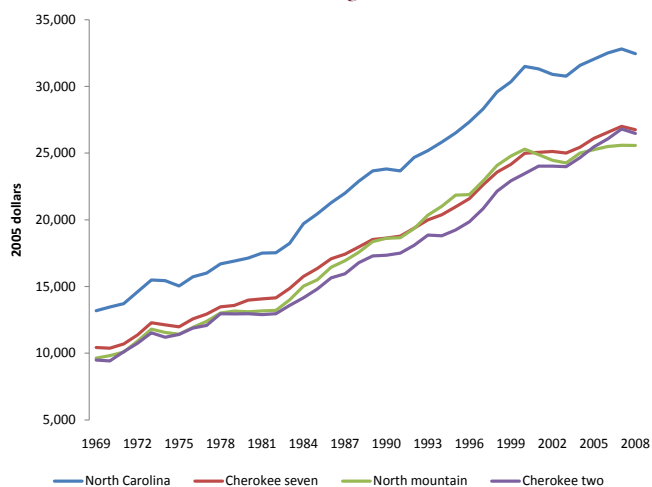
of the last decade, corresponding closely with the timing of the growth in casino revenues.

The resilience of the Cherokee region economy during difficult times can be seen at the right in Figure 2. The Cherokee Seven region has surpassed the Mountain North region in income per capita since the beginning of the decade. The Cherokee Two region began to perform better in the second half of the decade after lagging behind for much of the 1990s.

Figures 4 and 5 trace the trends in earnings per employee and wages and salary per employee over the same time period. These trends are also generally upward throughout the state with a more pronounced softening over the last decade. During the 1970s and early 1980s, Cherokee region earnings and wages appeared to be in a free fall compared to state trends but began to turn around by the mid-1980s. The gap between the western regions and the state as a whole has widened over time as the Piedmont region in particular prospered for much of the period under consideration.

The situation in the Cherokee region has improved, however; it began to perform better than the Mountain North region after 2001 with the Cherokee Two region doing especially well. The relative level of wages and salaries in the Cherokee Region began to improve during the late 1990s as casino operations got underway. Figure 6 illustrates the development of relative wages and salary levels in the West.

Figure 2
Trends in per capita income in selected
North Carolina regions, 1969–2008



Employment

The level of participation in the money economy is an important indicator of social integration and economic participation. Figure 7 charts monthly unemployment rates in North Carolina and the set of western Carolina regions analyzed above from 1990 to mid-2010, based on North Carolina Employment Security Commission data. Three points stand out in the figure. First, the seasonal fluctuations in unemployment in the Cherokee region have historically been high – higher than in the state as a whole and higher than in the comparison, “Mountain North,” region. In the Cherokee Two region, the seasonal unemployment variations were especially severe, sometimes peaking at 17 percent or more.

Second, the unemployment rates in the Cherokee region have historically been high. In the Cherokee Seven region monthly unemployment rates averaged over one and a half

times as high as the statewide level. In the Cherokee Two region, they were 1.87 times the state average through 1997.

Third, those historical patterns changed dramatically during the late 1990s as the casino opened. Seasonal fluctuations in unemployment have attenuated and, although the region has not escaped the impacts of the recession and the ongoing difficulties in the labor market, the region's labor market now performs as well as the state as a whole.

Unemployment rates are based on the number of people who are either working or actively seeking work. Therefore, unemployment data often under-estimate the degree of labor market stress because discouraged workers (those who have given up actively searching for employment) are not included. In order to corroborate the findings with respect to unemployment, we examined regional employment rates. These are available for a longer time period but only on an annual basis. As seen in Figure 8, employment

Figure 3
Relative level of per capita income for
the western regions, 1969-2008

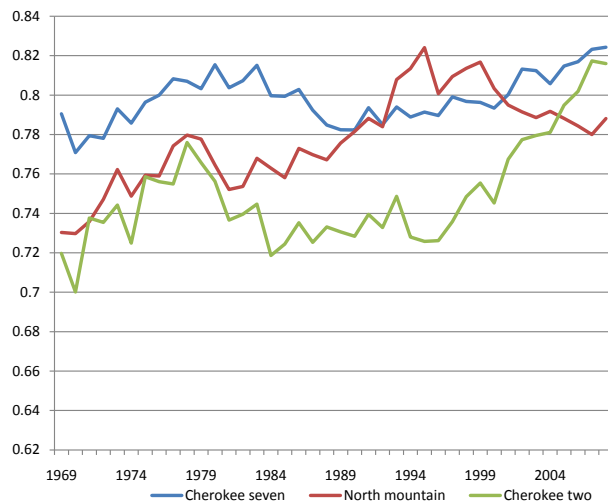


Figure 4
Trends in earnings per employee in
selected North Carolina regions, 1969-2008

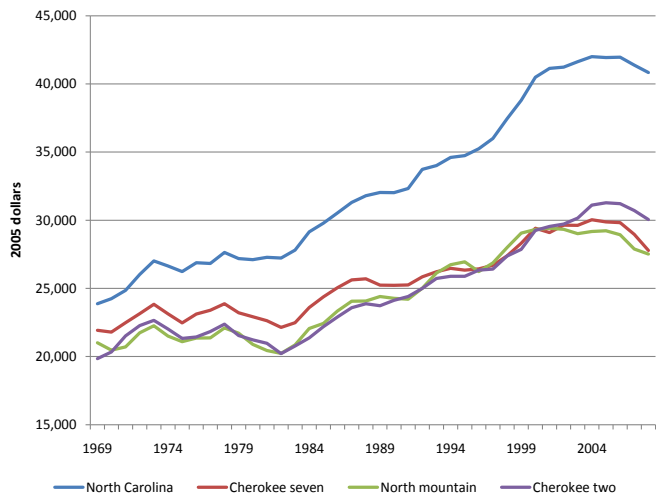


Figure 5
Trends in wages per employee in
selected North Carolina regions, 1969-2008

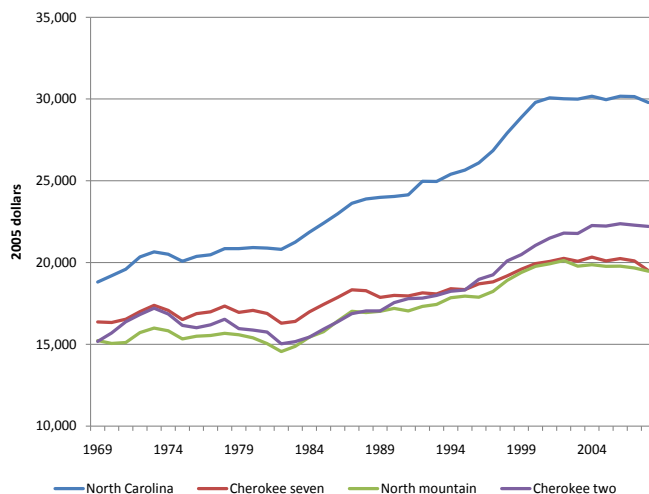
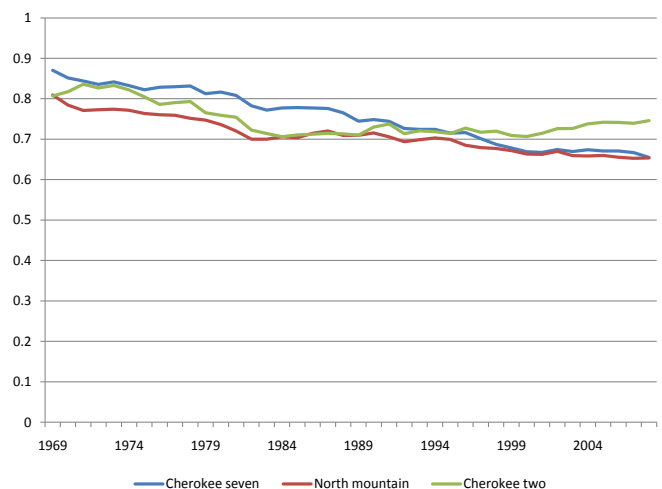


Figure 6
Relative level of per employee wages for
the western regions, 1969-2008



rates have grown throughout the state over the 1969–2008 period, with fluctuations tied to the business cycle and other shocks. Employment rates in the western portions of the state have grown faster than average, indicating a growing integration of the labor force into the commercial economy. The employment rate in Jackson and Swain Counties (the Cherokee Two region) began, like the rest of the west, substantially below the state average but is now somewhat above the state's level.

Figures 9 and 10 summarize the trends in income, earnings, wages and salaries, employment, and population as proportions of the state total for the Cherokee Seven and the Cherokee Two regions, respectively, from 1969 to 2008. A constant share of each would be indicated by a flat horizontal line. A positive slope to the line indicates relative growth and a negative slope, relative decline.

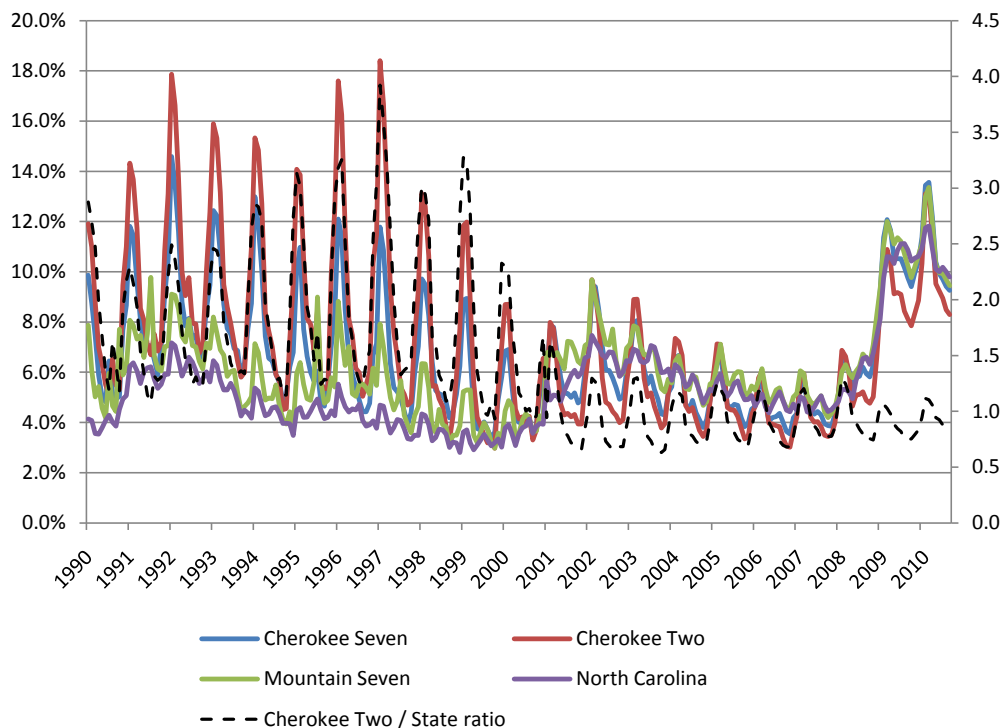
In the Cherokee Seven region, after the 1970s, four of the five trends moved generally downward in approximate parallel but, after 1997, the decline in income and earnings

began to decrease and employment began to rise even though relative population continued its downward trend. The picture is slightly different in the Cherokee Two region. While population held steady as a proportion of the state total, employment took off after 1997 and with it wages and salaries, earnings, and, to a somewhat lesser degree, regional income as a proportion of the state total, suggesting that the casino has had a region-wide impact.

Regional Employment Composition

What a region and its people do for a living has an impact on how they live now and the prospects for growth in the future. Many North Carolina regions have economies based on stagnant or declining sectors. As implied above, western North Carolina has been in that situation for much of its history. Information on the sectoral composition of employment is available on a consistent basis for the 1990–2009 period from the U.S. Bureau of Labor Statistics' Quarterly Census of Employment and Wages program. We focus here on a comparison of the Cherokee Two region – the immediate surroundings of the casino – with a state-wide

Figure 7
Unemployment rate in selected North Carolina Regions, 1990–2010



baseline. Figures 11 and 12 chart the trends in employment composition for the state as a whole and for the Cherokee Two region, respectively. The figures show the proportion of employment in each broad sector. As noted above, employment grew significantly over the time period.

Figure 11 shows that the continuing decline of manufacturing employment and its partial replacement by the

expansion of education and health employment throughout the state stands out as the dominant ongoing employment trend. As seen in Figure 12, that shift came more quickly to the Cherokee Two region with the manufacturing employment largely gone before the recession at the beginning of the decade. The decline in manufacturing helped bring about an early boost to the relative importance of education and health employment in the two-county region. In the

Figure 8
Trends in employment in selected
North Carolina regions, 1969-2008

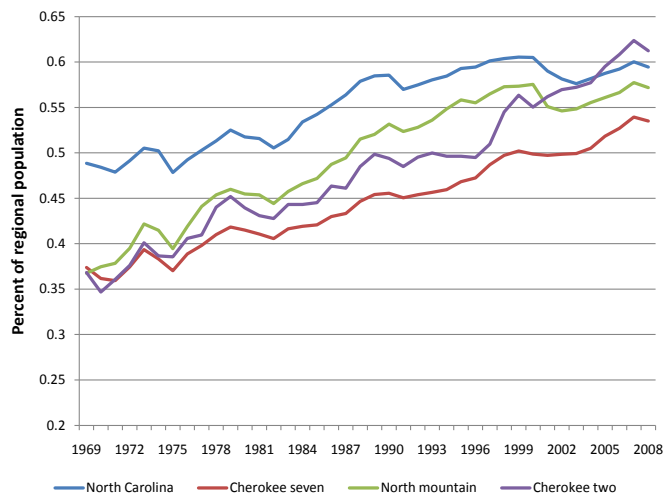


Figure 10
The Cherokee Two region as a proportion of
the North Carolina economy, 1969-2008

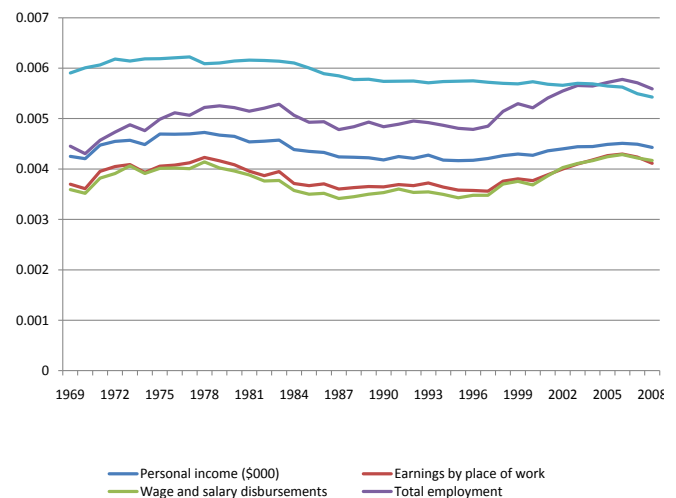


Figure 9
The Cherokee Seven region as a proportion of
the North Carolina economy, 1969-2008

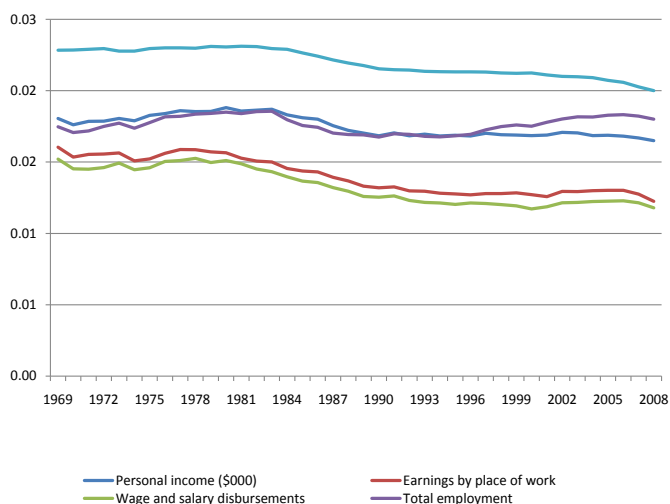
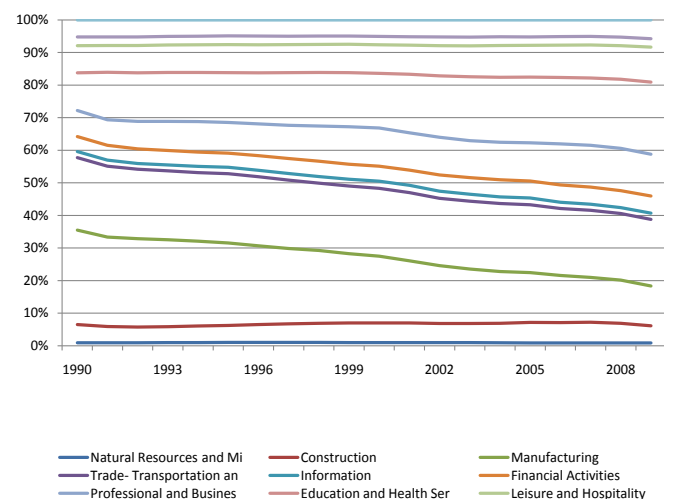


Figure 11
North Carolina employment composition,
1990-2009



Mountain North region, manufacturing employment was more important in the early 1990s (approximately 35 percent of total employment) and declined to approximately 15 percent of regional employment by 2009 (not shown).

The state's economy has long been in transition. The evolution of employment mix in the Cherokee Two region, compared to a state baseline, is seen in Figure 13. If the employment composition of the Cherokee Two region matched that of the state, all trend lines would be horizontal

Figure 12
Employment in the Cherokee Two region,
1990-2009

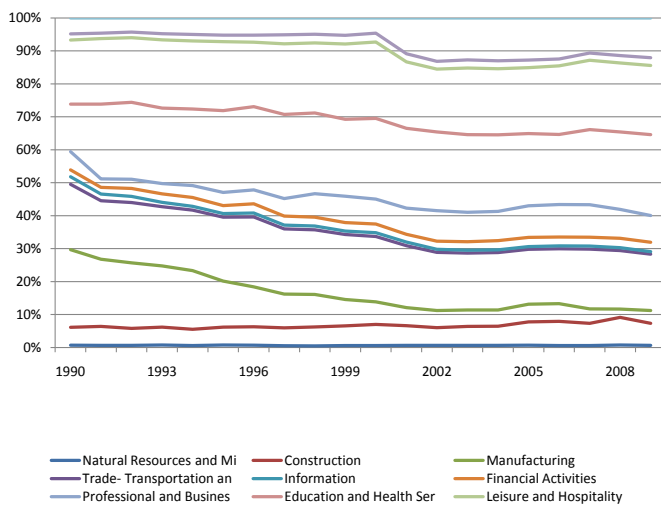
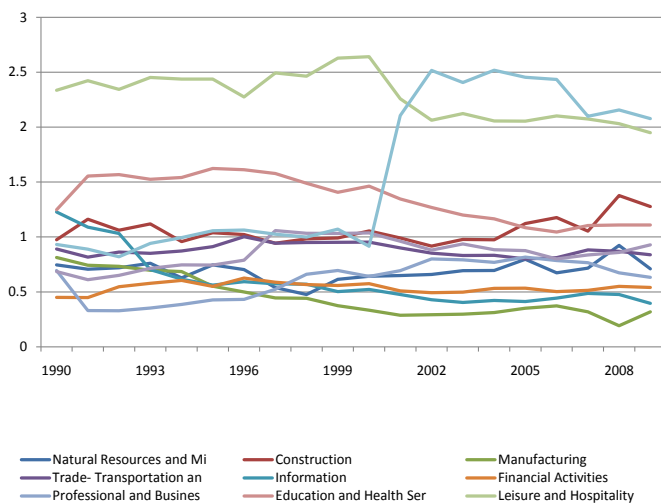


Figure 13

Employment composition in the Cherokee Two region
compared to a Statewide baseline, 1990-2009



at "1" on the vertical scale. A higher value for the trend line implies that that sector is more important to the region than it is to the state as a whole.

The importance of most sectors – natural resources, manufacturing, information, finance and accounting, professional services, and other services, some of which are small, others large – to regional employment have remained under the state-wide level in the Cherokee Two region for most of the last two decades. The proportion of employment

Figure 14
Employment in the Cherokee Two region,
1990-2009

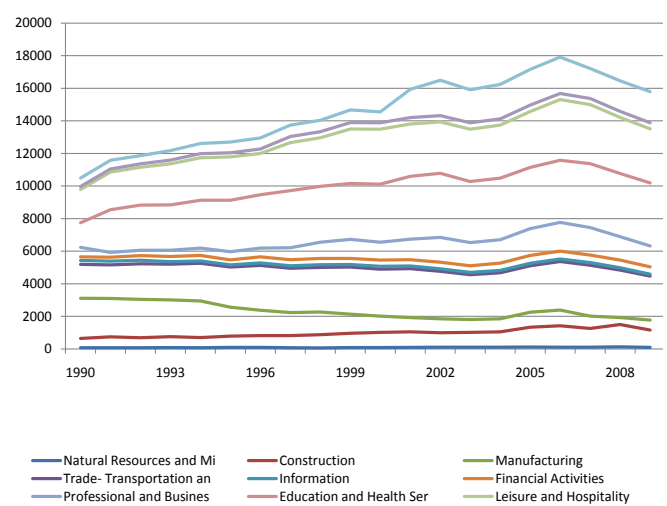
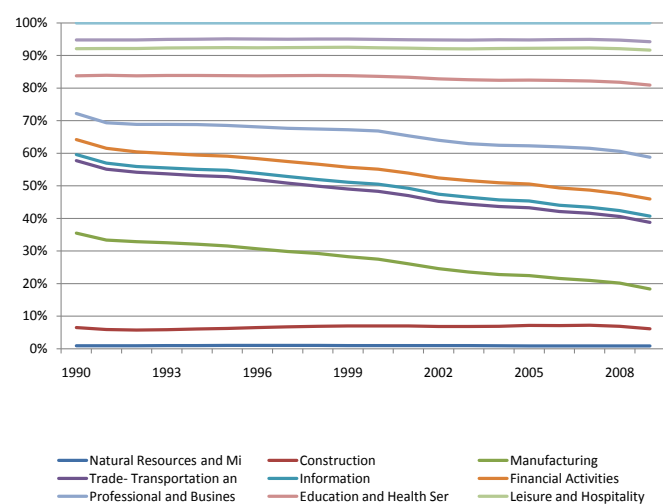


Figure 15

North Carolina employment composition,
1990-2009



accounted for by construction has risen somewhat to be over-represented somewhat in recent years.

The education and health sector has been over-represented, although in recent years, its relative size has decreased. Interestingly, the relative size of the hospitality sector, by far the most over-represented sector in the 1990s, although also still over-represented has also decreased despite the significant employment growth. Public administration grew over three and a half-fold over the past two decades. Total two-county employment peaked in 2006, as seen in Figure 14, but the change seen in Figure 12 is not due to disproportionate shrinkage in those two sectors. Rather, they have been eclipsed by the rapid growth in public administration employment in the region over the past decade.

Public employment makes up an even larger share of earnings in the Cherokee Two region, now accounting for some 40 percent of the total. This is roughly twice the statewide level of approximately 20 percent of the total, which has remained roughly constant for the last four decades. Many of the jobs in education and health are not well paid,

so that the sector generates more employment than income. Finally, the under-representation of producer services which has helped generate a lot of the wealth enjoyed by North Carolina's major metropolitan areas reduces the effectiveness of that sector as a regional income producer.

The Cherokee region has become more prosperous over the last decade or so. In contrast to Charlotte and the Triangle, the Cherokee region has prospered on the basis of a sector, tourism, which has not been the primary growth sector for the state and the nation.

Qualla Boundary employment compared to the Cherokee Two region

Our analysis has so far centered on relatively large geographic units built up of multiple counties. We have done so for two reasons. First, we wanted to document the broader impacts of the casino. Second most economic information is available at no more detail than the county level. The Qualla Boundary spans the Jackson-Swain county border but does not encompass the whole of either county (see Figure 1). In order to place Qualla Boundary employment in the context of the Cherokee Two region, we examined establishment-level data for a recent year.

The results of our analysis are summarized in Table 2. The Qualla Boundary accounts for 13 percent of the establishments in the Cherokee Two region, 26 percent of the employment, and 29 percent of the wages and salaries in the two-county area. That is, the establishments within the Qualla Boundary are larger and they pay somewhat higher wages than those in the surrounding area.

Table 3 provides further detail on employment within the Qualla Boundary. Differences in definitions and measurement methods mean that the figures in this table are not fully compatible with those discussed above. We focus our discussion on seven sectors, comparing the number of establishments, employment, and wages and salaries inside and outside the Qualla Boundary in the two-county region.

As could be expected, the arts, entertainment, and recreation sector is over-represented within the Qualla Boundary in terms of the number of establishments, employment, and wages paid. The accommodation and food service sector inside the Qualla Boundary has more establishments than might be expected but less employment

Table 2
Distribution of establishments, employment, and wages within Jackson and Swain County employers

		Value	Percent
Establishments	Qualla	158	13.1%
	non-Qualla	1,049	86.9%
	Jackson-Swain County Total	1,207	100.0%
Employment	Qualla	4,456	25.7%
	non-Qualla	12,890	74.3%
	Jackson-Swain County Total	17,346	100.0%
Wages and salaries	Qualla	\$34,138,084	28.9%
	non-Qualla	\$84,172,196	71.1%
	Jackson-Swain County Total	\$118,310,280	100.0%

and wages. On average, the accommodation and food service establishments are smaller and pay less than those outside the boundary in the two-county region. The retail sector follows a similar pattern. Construction is also less prominent within the Qualla Boundary than our baseline model predicts. Health care and social assistance and educational services also follow that pattern. In contrast, public administration employment within the Qualla Boundary is nearly three times the expected level. Total wages and salaries are two and one half times as high as expected.

The aggregate economic indicators suggest that increased income and well-being has come to Western Carolina coincident with the establishment of Harrah's Cherokee Casino which is reflected in increased income, earnings, and employment within the Qualla Boundary, the Cherokee Two Region and the Cherokee Seven Region. That increased prosperity is seen in long-term trends and in comparisons with other regions. Economic improvement should be visible in enhanced social welfare.

Social Indicators

The broadest impact of economic growth may be in social advancement – the improvement in the amount and quality of life available to regional residents. In measuring the social development of the Cherokee region we followed the broad lead of Nobel-prize winning economist Amartya Sen. Sen was among the creators of a simple, yet powerful, measure of human well-being which combined indicators of health and

access to knowledge with income. A recent effort has adapted the measure to U.S. data availability and calculated the scores for areas of the U.S.

Figure 16 shows the levels of the American Human Development Index for North Carolina Congressional Districts, the smallest geographic units for which the measure is available. Table 4 provides the scores and sub-scores for The United States, North Carolina, and Congressional District 11 in the western portion of the state. Among all states, North Carolina ranks thirty-fourth, at 4.61. At 4.45, Congressional District 11 in western North Carolina ranks 309th out of the 435 districts in the U.S. Closer examination reveals that the health sub-index for the region is higher than that of the state as a whole and that the education sub-index for the region approaches the national level. Income scored lower.

Because the boundaries of the congressional district do not coincide with the Cherokee region, because the index has been calculated for only one point in time, and because consistent data are not available for smaller areas, we examined three indicators of social health in addition to the income information discussed above. The first of these is life expectancy at birth. Life expectancy at birth is regarded as perhaps the best all round indicator of human welfare.

Table 5 displays life expectancy data for the State as a whole, each of the seven Cherokee region counties in far western North Carolina along with average values for the

Table 3:
Composition of establishments, employment, and Wages and salary within the Cherokee Two region

	Qualla over (under)- representation	Qualla over (under)- representation	Qualla over (under)- representation	Jackson-Swain County Total
Utilities	1.5278	0.1024	0.0523	\$17,212.95
Construction	0.1698	0.0914	0.0928	\$7,712.19
Retail Trade	1.8519	0.3361	0.1999	\$5,109.15
Transportation and Warehousing	0.4244	0.0683	0.0403	\$5,575.31
Educational Services	0.6366	0.2149	0.2027	\$7,130.11
Health Care and Social Assistance	0.8127	0.7295	0.6032	\$8,327.89
Arts, Entertainment, and Recreation	2.3342	3.1566	2.9719	\$8,152.01
Accommodation and Food Services	2.4965	0.8462	0.7021	\$2,819.04
Public Administration	1.0913	2.7717	2.5314	\$8,572.17
(baseline)	1.000	1.000	1.000	\$6,820.61

Figure 16
American Human Development Index,
North Carolina Congressional Districts

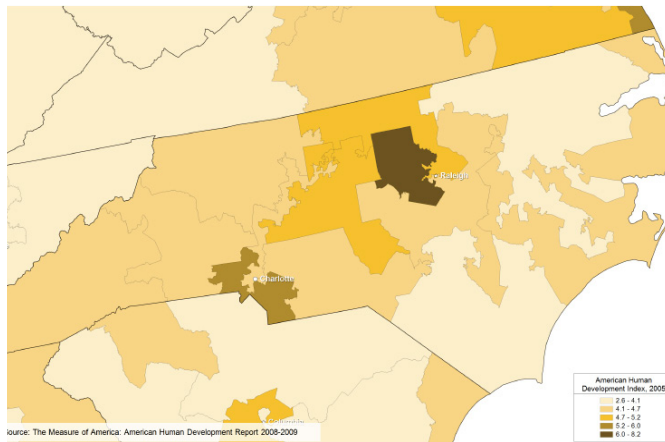


Table 4: American Human Development Scores for
Selected Regions, 2005

	United States	North Carolina	North Carolina CD 11
Rank		34 of 51	309 of 435
HD Index	5.06	4.61	4.45
Life Expectancy at birth (years)	78.0	76.6	76.8
Less than High School (%)	15.8	17.7	16.2
At least High School (%)	84.2	82.3	83.9
At Least Bachelors Degree	27.2	25.1	24.0
Graduate degree (%)	10.0	8.0	8.4
Educational Attainment Score	1.214	1.155	1.161
School enrollment (%)	86.8	87.5	88.4
Median Earnings (2005 dollars)	27,299	25,111	22,673
Health Index	5.00	4.43	4.51
Education Index	5.04	4.85	4.99
Income index	5.14	4.56	3.86

Source: The Measure of America

Table 5: Life expectancy at birth for selected North Carolina regions

	Life expectancy at birth, 1990-1992			Life expectancy at birth, 2006-2008			Change in life expectancy		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
North Carolina	75.0	71.0	78.9	77.3	74.5	80.0	2.3	3.5	1.1
Cherokee region									
Seven counties	77.0	73.2	81.1	76.6	74.0	79.2	-0.5	0.7	-2.0
Two counties	74.8	71.2	78.3	74.8	71.8	77.8	0.0	0.5	-0.5
Cherokee County	77.2	72.9	81.8	76.6	73.4	79.8	-0.6	0.5	-2.0
Clay County	79.6	75.4	84.4	79.2	77.9	80.7	-0.4	2.5	-3.7
Graham County	76.9	73.9	81.2	75.1	72.0	78.3	-1.8	-1.9	-2.9
Haywood County	76.7	73.0	80.3	77.3	74.8	79.6	0.6	1.8	-0.7
Jackson County	77.0	73.7	80.2	76.9	74.4	79.4	-0.1	0.7	-0.8
Macon County	79.3	75.1	83.6	78.2	76.2	80.0	-1.1	1.1	-3.6
Swain County	72.5	68.7	76.5	72.6	69.1	76.3	0.1	0.4	-0.2
Mountain north region									
Seven counties	76.8	72.3	81.5	77.9	75.2	80.7	1.1	2.9	-0.8
Alleghany County	75.5	69.8	81.9	77.8	74.9	80.8	2.3	5.1	-1.1
Ashe County	77.1	72.7	81.5	78.1	74.4	82.0	1.0	1.7	0.5
Avery County	76.6	72.5	81.1	78.6	75.9	81.6	2.0	3.4	0.5
McDowell County	75.9	71.9	80.0	76.4	74.1	78.8	0.5	2.2	-1.2
Mitchell County	76.3	71.1	82.0	76.3	73.8	78.7	0.0	2.7	-3.3
Watauga County	78.8	74.6	83.1	79.6	77.6	81.7	0.8	3.0	-1.4
Yancey County	77.3	73.8	80.9	78.6	75.9	81.3	1.3	2.1	0.4

region as a whole and for the two counties which contain the central portion of the EBCI lands. Similar information is also presented for the Mountain North comparison region to the north of Asheville and its surrounding county, Buncombe. Data for males, females, and both combined are shown for two time points (1990–1992 and 2006–2008) straddling the casino opening.

Table 5 shows a state-wide gain in life expectancy of 2.3 years between the early 1990s and the latter portion of the first decade of the new millennium. Males benefitted from the increase more than females. The Mountain North region also benefitted from health status improvements during this period. The Cherokee region, having started at a higher level, showed no improvement over the period and is now approximately on par with the state level.

Changes in infant mortality rates constitute yet another indicator of improvements in health status and reflect improvements in both the quality of health care and changes in parental behavior, especially with respect to pre-natal care. Data for selected North Carolina regions are shown in

Table 6. North Carolina's infant mortality rate declined from 9.8 infant (less than one year of age) deaths per 1,000 live births in the early 1990s to 8.5 at the beginning of the decade to 8.3 in the second half of this decade. Although much improved, the mortality rate is still substantially higher than the overall U.S. rate (6.7) and much higher than that found in multi-racial Singapore (2.3) which has the world's lowest recorded infant mortality rate.

The Cherokee Seven region is at approximate parity with the state but it should be noted that Swain County, in particular, reduced its infant mortality rate dramatically over the course of the 1990s. The last decade has been one of much less rapid improvement. Infant mortality rates in the Mountain North Counties are generally below the state average. While the casino has positively affected regional employment and income, the gain in employment and income have not yet translated into measurable impacts on these key health indicators.

Besides health and income, access to knowledge is the other key dimension of social development. Educational

Table 6: Infant Mortality Rates for selected North Carolina Regions, 1990s to the present

County	1992-1996	1999-2003	2005-2009	90s	00s
North Carolina	9.8	8.5	8.3	-1.3	-0.2
Cherokee region					
Seven counties	9.0	6.7	8.1	-2.3	1.4
Two counties	11.7	7.1	7.4	-4.7	0.3
Cherokee County	9.1	9.1	9.1	0.0	0.0
Clay County	3.1	5.1	11.7	2.0	6.6
Graham County	6.5	3.9	8.1	-2.6	4.2
Haywood County	7.9	5.7	6.8	-2.2	1.1
Jackson County	9.1	8.3	8.2	-0.8	-0.1
Macon County	13.0	9.0	6.4	-4.0	-2.6
Swain County	14.3	5.8	6.5	-8.5	0.7
Mountain north region					
Seven counties	8.2	6.8	6.6	-1.3	-0.2
Alleghany County	0.0	5.9	9.4	5.9	3.5
Ashe County	10.3	12.2	4.3	1.9	-7.9
Avery County	14.8	2.3	6.9	-12.5	4.6
McDowell County	7.8	8.3	6.5	0.5	-1.8
Mitchell County	8.8	9.6	6.2	0.8	-3.4
Watauga County	8.9	6.4	6.3	-2.5	-0.1

attainment provides a high-level indicator of such access. Educational attainment is also an important contributor to individual and regional earning power as well as a measure of the cultural achievement and exposure of a region. Because the educational levels of all adults reflect achievements over many decades, we examined high school retention rates in the recent past. The data are summarized in Table 7. Between the late 1990s and 2007–2008 (the latest data available), the statewide dropout rate remained roughly constant. During the period, the dropout rates in the two seven-county regions also remained roughly constant but Jackson County's dropout rate rose.

In Jackson and Swain Counties, American Indian students have graduated from high school at rates lower than other students. American Indian graduates have enrolled in UNC system schools at rates lower than those of other regional

graduates but recently they have been enrolling in community colleges at above average rates. These trends are consistent with American Indian educational performance throughout the state.

Graduation and dropout information for Cherokee Central Schools is presented in Table 8. The available data cover a shorter time period than those in the previous table. Moreover, they are reported to a different agency than the preceding schools, so the definitions may not be fully comparable. The dropout rates are high at Cherokee Central Schools and show no sign of decreasing. We caution, however, that the number of enrolled member students is low and that small annual variations can result in large shifts in rates. The generally low graduation rates are a puzzle because tribal members are entitled to access their accumulated personal share of casino earnings when they are 18 years old if they

Table 7: Public School dropout rates for selected North Carolina regions, 1997–1998 and 2007–2008

	1997–1998				2007–2008		
	Grade 9 Estimated Enrollment base	Grades 7–12 Reported Dropouts	Dropout Rate		Grade 9 Estimated Enrollment base	Grades 7–12 Reported Dropouts	Dropout Rate
North Carolina	99,195	18,501	3.43	North Carolina	109,163	23,078	3.4
Cherokee region				Cherokee region			
Seven counties	269	51	3.5	Seven counties	264	62	3.6
Two counties	223	53	4.6	Two counties	227	68	5.1
Cherokee County	338	51	3.15	Cherokee County	285	49	2.8
Clay County	106	13	2.03	Clay County	102	16	2.5
Graham County	111	17	3.22	Graham County	101	13	2.5
Haywood County	532	103	3.05	Haywood County	601	159	4.2
Jackson County	305	60	3.52	Jackson County	311	87	5.1
Macon County	347	68	3.62	Macon County	309	59	2.9
Swain County	141	45	5.61	Swain County	142	49	5.1
Mountain north region							
Seven counties	285	52	3.4	North mountains	266	61	3.8
Alleghany County	127	28	3.89	Alleghany County	136	21	2.9
Ashe County	343	65	4.02	Ashe County	236	63	4.2
Avery County	201	40	3.61	Avery County	156	26	2.5
McDowell County	465	98	3.49	McDowell County	535	126	4.1
Mitchell County	213	16	1.48	Mitchell County	200	51	4.8
Watauga County	426	78	3.26	Watauga County	400	78	3.4
Yancey County	223	42	3.77	Yancey County	201	62	4.9

graduate high school. Those who do not graduate high school must wait until they are 21 to gain access to their accumulated funds but do begin receiving their annual share of earnings at age 18.

Table 8: Cherokee Central Schools
High School Graduation and Dropout Rates

Year	Graduation rate	Dropout rate
2004–2005	66.2	6.8
2005–2006	67.8	8.4
2006–2007	50.0	4.6
2007–2008	65.5	12.5
2008–2009	57.1	12.8

Source: Bureau of Indian Education, School Report Cards, available years; www.bie.edu/HowAreWeDoing/Scorecards/index.htm

The Great Smoky Mountain Study of Youth has been following several cohorts of people, tribal members and not, who were aged 9, 11, and 13 in 1993. The study continues today with interviews and tests administered to the sampled research subjects continuing into early adulthood. The study was not designed to evaluate the social effects of the casino but it does provide positive evidence for the impact of the casino on young people because operations began several years after the study was initiated. The central finding of the study is that the revenue sharing arrangements of the casino and tribe improve child-parent interactions by raising families out of poverty. The consequent improved family interactions result in reduced rates of behavioral problems among children and adolescents and some improvement in educational performance. Although not the aim of the study, positive impacts on adults were also found.

Harrah' Cherokee Casino Economic Impacts in Detail

The previous section surveyed the broad impacts of the casino's operation on the region. In this section, we attempt a more direct estimate of the economic impact and its constituent components. Specifically, we examine the revenue flows in more detail and separate out the impacts due to casino capital investment, casino operations, and casino disbursements. Figure 17 provides an overview of the tourism data relevant to assessing the economic impact of the casino on the regional and North Carolina economy. Our data extends to cover on-site spending at the casino resort but not the off-site spending

by casino guests or the off-site spending by those who were attracted to the region in part, by the facilities and amenities which the casino's operation helped make possible but did not, in fact, visit the casino. The following discussion is therefore limited to describing and analyzing the impacts of on-site spending.

Our interest extends to three broad areas of casino cash flows. As shown in Figure 18, these include operating income, expenditures stemming from casino operation, including the several types of transfers to the EBCI (discussed in detail below), and capital expenditures. Examining the sources

Figure 17
Casino-linked Tourism Revenue

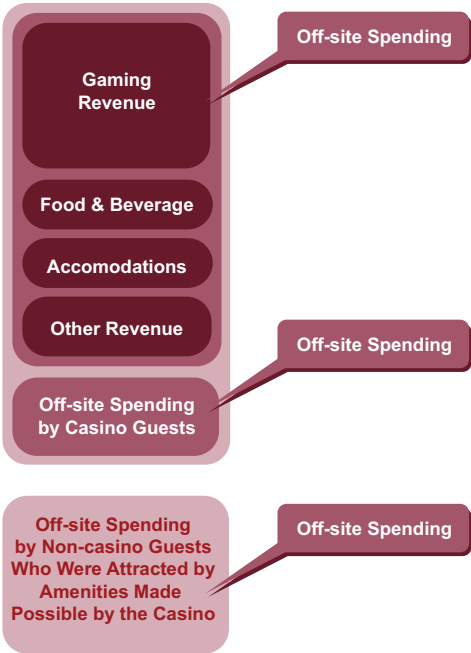


Figure 18
Relevance of Casino Cash Flows to
Regional Economic Impact



of income indicates the degree to which the casino draws money to the state. The importance of gaming in the resort's revenue flows suggests the degree to which the revenues are not merely displacements of leisure income which could be flowing to other North Carolina resorts. The separate types of expenditures have different types and routes of economic impact.

Casino revenues

We begin with an overview of casino income and expenditure. Table 9 provides a high-level summary of the cash flows of Harrah's Cherokee Casino. These are important in tracing the source and route of the economic impact of the casino on the North Carolina economy. The cash flows are divided into four categories: operating income, operating expenses, capital income, and capital expenditures. The source of the operating income, the operating expenses which remain in North Carolina, the capital expenditures in North Carolina, and the transfers to the Eastern Band of the Cherokee Indians are relevant to understanding the impact of the casino.

Having started operation in November 1997, the left side of the table begins with a summary of the operating revenue for selected years (based on October–September fiscal year). Gaming revenue began at \$134 million in the year ending in September 1998 and grew to an estimated \$386 million in

2010 after temporarily peaking at \$449 million in 2007.

The casino also raises funds in the capital market, which adds to the cash flows, and earns a modest amount of interest on its cash holdings. These are critical to the operation of the casino but are included here only for completeness. The manner in which the casino spends these funds is of more direct interest.

The next column of figures summarizes the casino's operating expenses. Payments are made to business partners and employees. Non-operational expenditures, mainly capital spending, are also shown. The casino also makes a number of financial transfers to the Eastern Band of the Cherokee Indians, the Cherokee Preservation Foundation, and regional non-profit organizations. These stem mainly from the operating surplus. Critical aspects of these financial flows are detailed below.

Table 10 summarizes information on casino revenues, breaking down the non-gaming revenues into food, hotel, retail, and showroom receipts. Non-gaming revenue has been relatively modest, hovering at approximately three percent of the total operating revenues. Those revenues have been generated by an annual flow of visitors of over three million, which reached a peak of 3.6 million in 2007 before the

Table 9: Harrah' Cherokee Casino & Hotel Financial Overview, 1997-2010

Dollar numbers are in thousands

	Income			Outflow			
	Total Operating Revenues	Non-operating income (including borrowing)	Total Revenue	Operational costs	Non-operational costs	Distributions to EBCI	Total
1998	133,985	30,465	164,450	123,418	37,059	43,412	153,532
2000	249,907	687	250,594	175,677	31,157	121,458	259,823
2002	322,173	41,899	364,072	202,105	86,001	161,398	374,067
2004	358,523	(419)	358,104	203,073	50,848	180,106	361,800
2006	426,133	97,076	523,209	232,066	129,924	236,834	515,608
2008	442,443	38,847	481,290	246,461	83,102	249,114	492,198
2010	385,786	215,052	600,838	126,547	296,167	209,304	575,271

Note: Fiscal Year October - September

Figure 19
Harrah's Cherokee Casino Market Zones

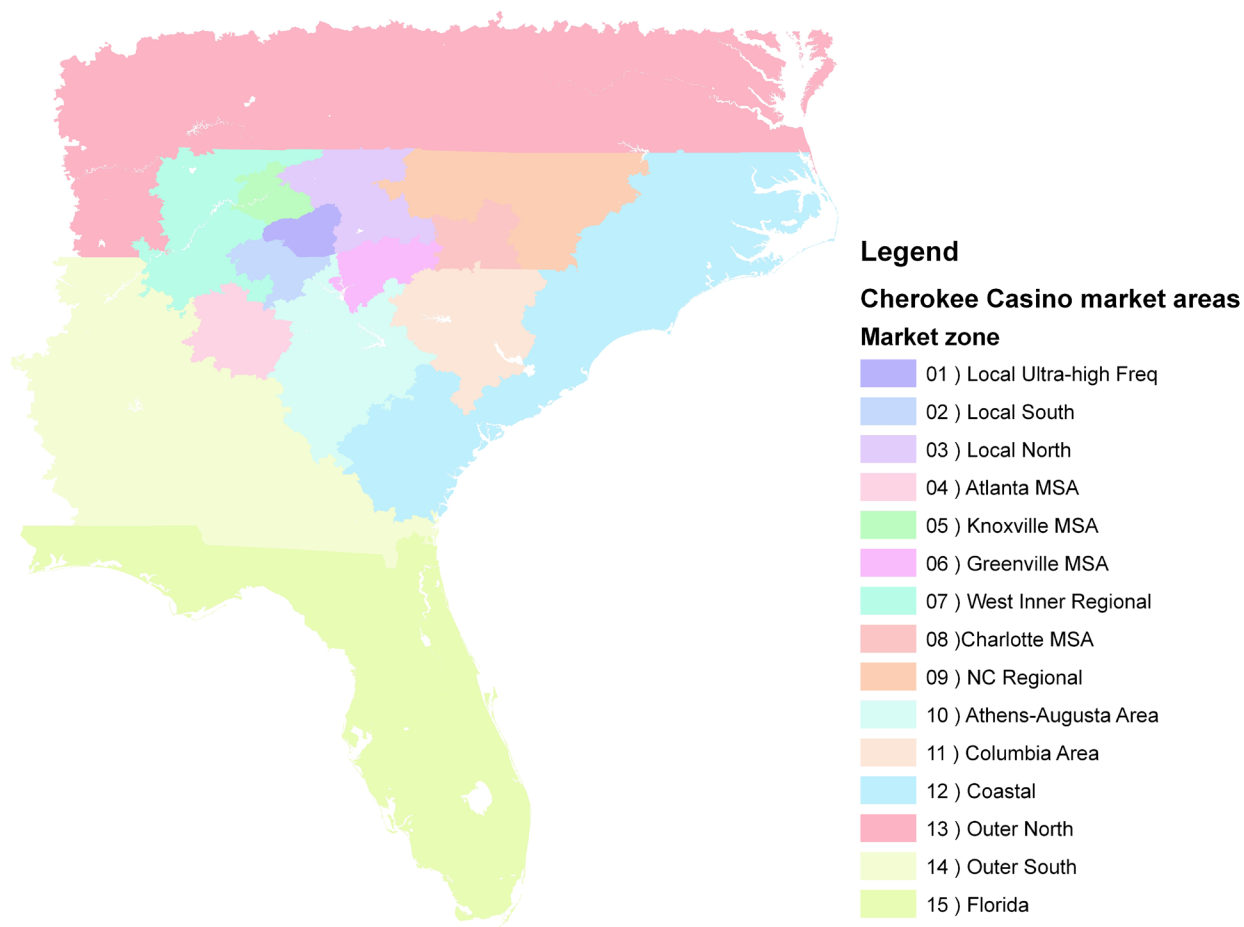


Table 10: Harrah' Cherokee Casino & Hotel Total Revenues, 1997-2010
Dollar numbers are in thousands

	Income						Non-Gaming Total	Cash incentives included in revenue	Total Operating Revenues	Meals Served
	Gross Gaming Revenue	Non-Gaming Revenue	Food	Hotel	Retail	Showroom				
1998	127,972	3,974			511	446	4,931		133,985	
2000	241,976	4,943			2,661	327	7,931		249,907	
2002	318,359	4,055	738	5,483	246	10,522	(6,708)	322,173	1,543,689	
2004	358,850	4,237	583	5,580	207	10,607	(10,934)	358,523	1,698,047	
2006	429,138	5,070	1,189	6,509	162	12,930	(15,935)	426,133	2,195,052	
2008	449,856	5,283	681	6,116	239	12,319	(19,732)	442,443	2,448,396	
2010	377,967	6,972	584	5,089	239	12,884	(5,065)	385,786	2,415,642	

Note: Fiscal Year October - September

recession began taking its toll on household recreation budgets. In 2008, the casino served a total of nearly 2.5 million meals. Food accounts for a large portion of the non-gaming revenue but retail sales have exceeded meal sales in some years. Hotel rooms and conferences, along with entertainment and events have generated smaller proportions of the revenue. In part to soften the impact of gaming losses, the casino returns a percentage of its gaming revenues to guests, mainly in the form of cash incentives to stimulate return visits and discounts on rooms, food and other services.

Gaming is clearly the main source of revenue and likely the main motivation for tourist visits. Without the gaming attraction, it is unlikely that the non-gaming revenue would be generated and it is also likely that the surrounding region outside the casino would suffer a substantial loss of tourism revenue. The significant increase in regional income over the past several years likely owes its existence to the attractions of gaming and the unique attractions of the Harrah's Cherokee Casino.

Table 11 contains information on "rated revenues," which is the spending the casino can link to individuals and home addresses because those individuals use "player's cards". A significant portion of guests choose to use player's cards because the casino bases special offers and complimentary discounts on the tracked play. In addition, a large proportion of the casino's games are raffle entry devices which are dependent on the use of a player's card to identify players and award prizes to the raffle winners. The use of a card is not mandatory on non-raffle games; therefore, the rated revenues are less than total gaming revenues. The proportion of revenue tracked via the use of player's cards reached nearly 95 percent in 2007 before diminishing and then increasing again.

Figure 19 shows the geographic zones used by the casino in its marketing analysis. Several of these zones cross North Carolina state lines. Approximately half of the casino's gaming revenue stems from the regions which are unambiguously out-of-state, reaching a few percentage points above half in some years and a few below in others. Approximately one-fourth of the gaming revenue is from the three zones closest to the casino (Local, Local South, and Local North). With a growing proportion of gaming revenues, now estimated at over two-thirds, stemming from out-of-state visitors, the data in the table suggest that a large portion of the gaming revenue, the tourist spending accompanying it, and the follow-on economic

impacts would not be generated in the state in the absence of the casino.

The Economic Impact of Casino Operations

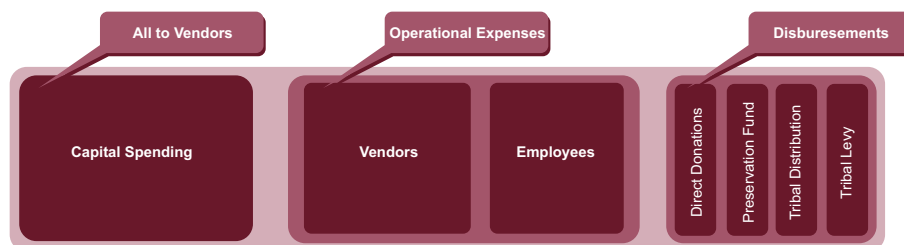
The previous paragraphs detailed the revenue sources. The next several sections discuss the revenue expenditures and how they ripple through the regional economy. Figure 20 provides a schematic overview of the three types of economic impacts to be considered. The ongoing expenses incurred by the casino in the course of its daily operation are likely the source of the most important impacts on the state's economy. Those operations also generate a profit which is transferred to the EBCI and then distributed further in the form of employment, spending, and direct transfers. Finally, capital expenditures, such as those incurred in the ongoing physical expansion, generate additional employment and purchases.

Table 12 provides a summary of casino financial outflows. The outflows include operating expenses, disbursements, and capital spending. Spending on employees includes net wage payments, federal income taxes, employee and employer contributions to social security and Medicare, and the employer cost of benefits. Tips, which are not considered casino revenue or expenditure but which are earnings, are listed at the bottom of the table. Employee tax withholdings and combined contributions to Social Security and Medicare are also listed.

The casino employed 1674 people in 2009, the most recent available count, 80 percent of whom were not enrolled members of the EBCI. Collectively, they earned a total of \$67.7 million in 2009 (down slightly from \$73.5 million in 2008) but up from \$22.7 million in 1998. Employee salary and benefits have averaged around 15 percent of operating revenues, with the proportion decreasing to 12 percent in 2009. The casino was directly responsible for approximately eight percent of all wages and salary disbursements in the Cherokee Two region and five percent of the employment.

Aside from employee-related financial flows, the casino makes payments to suppliers and other organizations which are business partners. Payments to partners inside and outside North Carolina are shown separately. Out-of-state payments are critical to the casino's operation but they do not circulate further through the North Carolina economy. The payments to employees and North Carolina organizations and firms circulate further through the State's economy. These also

Figure 20
Three Key Routes of Immediate Economic Impact



Each type of spending has a different type of economic impact, varying in geographic and temporal extent and magnitude.

Table 11: Harrah' Cherokee Casino & Hotel Total Rated Revenues, 1997-2010

Dollar numbers are in thousands

	2003	2004	2005	2006	2007	2008	2009	2010 (Through June)
Regional revenue origin	228,686	267,297	317,592	385,407	431,540	376,814	352,286	364,055
01) Local Ultra-high Freq	15,526	19,929	22,659	25,050	26,703	21,931	20,125	19,335
02) Local South	10,663	12,978	15,893	19,038	20,838	16,553	14,582	13,999
03) Local North	34,994	41,047	46,587	54,337	60,971	53,541	47,247	45,226
04) Atlanta MSA	31,630	36,631	43,043	53,594	60,571	53,080	48,966	56,573
05) Knoxville MSA	16,121	19,644	23,805	27,481	30,900	26,729	24,374	24,858
06) Greenville MSA	13,286	15,469	18,078	21,554	22,965	21,384	21,705	22,871
07) West Inner Regional	13,681	16,518	20,651	24,210	27,734	23,874	22,966	23,034
08)Charlotte MSA	16,968	19,023	21,457	26,326	30,067	26,911	24,711	25,622
09) NC Regional	26,504	29,653	34,513	39,909	45,137	37,960	35,216	34,499
10) Athens-Augusta Area	12,281	13,791	16,215	20,628	22,963	19,453	19,173	20,828
11) Columbia Area	6,926	7,140	8,318	10,557	12,310	12,311	12,129	12,860
12) Coastal	8,409	9,064	11,348	15,749	17,412	16,100	15,528	16,145
13) Outer North	6,385	7,514	9,055	11,638	12,729	11,902	11,456	11,817
14) Outer South	2,661	3,108	4,244	5,648	6,070	5,174	4,838	5,625
15) Florida	3,794	4,778	7,081	9,897	10,450	8,588	8,430	8,445
Undefined	8,857	11,009	14,645	19,793	23,720	21,324	20,841	22,317

Note: Fiscal Year October - September

Total Gaming Revenue	343,200	358,900	379,100	429,100	454,200	449,900	404,100	377,967
Percent Rated	66.6%	74.5%	83.8%	89.8%	95.0%	83.8%	87.2%	96.3%
Out of state	139,858	163,187	195,669	239,793	267,526	235,112	221,303	233,221
Percent	63.6%	63.7%	64.6%	65.6%	65.6%	66.1%	66.8%	68.2%
Close by	61,183	73,954	85,139	98,424	108,512	92,024	81,954	78,560
Percent	27.8%	28.9%	28.1%	26.9%	26.6%	25.9%	24.7%	23.0%

directly and indirectly generate tax revenues for the state and localities.

A large proportion of the out-of-state payment is to the Harrah's parent organization in the form of management and other fees. Such payments have ranged from \$36.6 million in 1998 to \$38.1 million in 2001 before declining over time to \$18.9 million in 2009. The payments have decreased as a proportion of operating revenue from 27 percent in 1998 to 5 percent in 2009. North Carolina vendors receive approximately 3 percent of operating revenues for providing a range of services.

Table 13 displays the geographic distribution of vendor payments in North Carolina. As the casino has out-sourced various services, the proportion of in-state payments within the Qualla Boundary has increased from eight percent to nearly half, suggesting the development of an expanding set of regional businesses. Regional non-profit organizations have mounted programs to increase the number of opportunity-ready entrepreneurs. Mecklenburg County typically receives one-fifth to one-fourth of the in-state vendor spend. Vendors outside the Qualla Boundary but inside the Cherokee Two region have averaged approximately 16 percent of North Carolina vendor payments.

The flows of the funds injected into the regional economy in the course of the daily operation of the casino are substantial but they also reverberate through the economy as employees purchase goods and services with their income and as the regional vendors hired by the casino purchase goods and their employees spend portions of their income. We estimated the multiplier effects of the casino's operation by modeling the follow-on impacts of employee and vendor spending. Because we do not know exactly how and where casino employees and suppliers allocate their funds, we rely on the national estimates of spending behavior compiled by the U.S. Bureau of Economic Analysis as adjusted by Implan to take the local availability of goods and services into account. That is, to the extent that particular goods and services are available locally, spending may be recycled through the local economy but to the extent desired purchases cannot be made locally, funds will leave the local economy.

Purchases made within the region generate further impacts as those hired to provide goods and services themselves make purchases with the income so obtained.

Thus the impact of each dollar spent locally can be multiplied. Because the casino is located in a relatively remote, sparsely populated, and largely rural region, the multiplier effects of purchases are likely to be modest.

The follow-on effects of daily casino operations are nevertheless substantial. Based on 2009 data, employees received a total of \$74,838,000 in wages, salaries, tips, and other compensation. We estimate that 70 percent of that, \$52,383,000, is disposable income which can be fed into the local economy (some can be saved). With an estimated multiplier effect of 1.16, the household spending generates another \$8,306,000 in economic output in the Cherokee Two region for a total employee compensation impact of \$60,689,000. The casino purchased an estimated \$3,868,000 of goods and services from suppliers in the Cherokee Two region. Being largely services, the multiplier effect was nearly as strong as that for employee compensation yielding an additional \$557,000 of impact for a supplier total effect of \$4,425,000 in 2009. Adding the two together produces an estimated total impact of \$65,114,000 of casino operation on the economies of Jackson and Swain counties in 2009.

As seen above, casino revenues fluctuate from year to year, so operational spending and its follow-on impacts will also. In addition, spending allocations may differ from year-to-year by both the casino and households. Nevertheless, the results based on 2009 data, are good indicators of the total annual impact of the casino's operation on the Cherokee Two region. We have deliberately made conservative choices in our modeling of the economic impacts. Estimates for local multiplier effects of casino operations run as high as 1.30 – positing roughly twice the multiplier that we have used in our estimates.

The Economic Impact of Casino Disbursements

In addition to operational spending, the casino also generates other funds for the regional economy. Table 12 above also shows that Harrah's Cherokee Casino transfers three types of funds to the Eastern Band of Cherokee Indians and their agents. The first is a Tribal Levy collected directly from casino guests in lieu of sales tax. As in the case of sales taxes, this is a "pass through" which is considered as neither casino revenue nor expenditure but which is circulated further in the western North Carolina economy. The casino also makes direct donations supporting tribal and regional projects. Since 2000, the casino has been making substantial direct contributions to the Cherokee Preservation Foundation.

Table 12: Harrah's Cherokee Casino & Hotel: Outflows

For the fiscal years ended September 30, 1998 - 2010

Dollar numbers are in thousands

		1998	2000	2002	2004	2006	2008	2010
Operational Costs	Capital Spending	2,242	14,617	59,654	25,571	12,479	59,795	274,960
	Total	50,357	68,469	75,437	72,227	83,216	86,479	56,747
	Out-of-state	46,565	53,276	63,085	60,927	65,316	68,479	36,716
	Management and other fees paid to Harrah's	36,585	34,556	38,061	22,447	22,696	19,696	-
	Other out-of-state payments	9,981	18,720	25,023	38,480	42,620	48,783	55,468
	North Carolina	3,792	15,193	12,352	11,300	17,900	18,000	20,031
	Donations	175	327	410	334	253	243	181
	Contributions to Preservation Foundation	-	3,500	5,000	7,438	8,728	7,500	6,728
Employees	Total employee expenses	22,704	38,739	51,232	58,619	65,634	73,503	69,800
	Salaries	19,451	31,413	38,734	41,992	46,927	49,531	42,674
	Benefits	3,253	7,326	12,497	16,627	18,707	23,972	27,126
	Investment costs (including interest)	14,627	16,540	26,347	25,277	117,445	23,307	23,667
	Interest expense	2,010	4,219	4,109	4,026	5,844	2,258	3,667
Disbursements to EBCI	Disbursements to EBCI	43,412	121,458	161,398	180,106	236,834	249,114	209,304
	Sum of funds transferred to EBCI (including Levy)	43,885	125,664	167,336	188,751	247,414	258,719	218,218

Note: Fiscal Year October - September

Harrah's Cherokee Casino "pass throughs"	Amounts withheld from employee wages and remitted to taxing authorities	1998	2000	2002	2004	2006	2008	2010
	Employee Tips		\$3,417	\$4,489	\$5,036	\$6,280	\$7,163	\$6,321
	Federal Income Tax		\$3,640	\$4,406	\$4,526	\$5,436	\$6,233	\$4,300
	Social Security Tax		\$2,437	\$2,603	\$2,834	\$3,189	\$3,562	\$2,985
	Medicare Tax		\$485	\$611	\$667	\$752	\$846	\$707
	State Income Tax		\$990	\$1,479	\$1,760	\$2,159	\$2,481	\$2,023
	Tribal levy collected from customers and remitted to Tribe	298	379	528	873	1,599	1,862	2,005

Note: Estimated 1999 to 2003; Actual fiscal years 2004 to 2010

Finally, the casino operating profits, minus a contribution to capital funds, are distributed to the tribe. The Tribal Distribution has increased from 32 percent of operating revenue (\$43.4 million) in 1998 to approximately 50 percent for 2000 through 2004, further increasing to 60 percent (\$225.8 million) in 2005, and stabilizing at 56% for 2006 through 2009, dipping to 54% in 2010.

Table 14 summarizes the allocation of the Tribal Distribution. Half of the casino's transfer is paid to individual enrolled members by the Tribe. The accounts of the children are held in trust until they reach age 21 (or 18, if they complete high school). The other half of the distribution is used to finance collective benefits to the tribe. The largest proportion of the collective portion of the distribution is used to finance the government and administration of the tribe. The EBCI employed 1116 persons in 2009. Another 287 were employed by Cherokee Hospital and 556 by the Cherokee Boys Club, for a total of 1979 jobs, largely supported by the casino Tribal Distribution and Tribal Levy on visitors to the

casino. Debt service accounts for the next largest portion of the distribution. Education and health care each receive 4.5 percent of the distribution.

We estimated the follow-on impacts of the Tribal Distribution using the methods described above. In doing so, we performed the analysis in two parts. Half of the Tribal distribution is allocated directly to households, so we modeled the impacts of those funds as if it were household income. In 2009, an estimated \$113,446,000 was distributed to households. That equals eight percent of all personal income in the two-county region. Using our estimate of 70 percent of the income being disposable, we arrived at \$79,412,000 being available for spending. The spending results in an additional \$12,592,000 being generated in the local economy. The other half of the tribal distribution was devoted to local government-type expenditures. That spending resulted in an estimated additional \$23,988,000 in multiplier spending. (The multiplier ratio for the latter spending turned out to be slightly higher than for consumer spending.) Summing the

Table 13: Casino North Carolina Vendor Spend by Geographic Region

Dollar numbers are in thousands

	2000	2002	2004	2006	2008	2010
Mecklenburg	37%	36%	23%	28%	18%	28%
Buncombe	12%	7%	8%	10%	8%	5%
Jackson	9%	7%	3%	6%	2%	2%
Haywood	2%	2%	11%	3%	2%	2%
Macon	1%	0%	1%	0%	0%	0%
Swain	1%	2%	3%	3%	15%	10%
Qualla Boundary	26%	40%	48%	43%	43%	43%
Other	13%	5%	3%	7%	12%	10%
	13%	12%	18%	12%	19%	15%
Total Vendor Spend	\$13,285	\$15,691	\$15,000	\$12,100	\$20,800	\$20,031
Mecklenburg	4,870	5,625	3,450	3,388	3,744	5,513
Buncombe	1,535	1,162	1,200	1,210	1,664	1,072
Jackson	1,201	1,113	450	726	416	460
Haywood	270	379	1,650	363	416	367
Macon	74	42	150	-	-	-
Swain	176	341	450	363	3,120	2,081
Qualla Boundary	3,490	6,304	7,200	5,203	8,944	8,623
Other	1,669	726	450	847	2,496	1,915

total impacts, \$92,004,000 and \$137,434,000, of both types of spending yields a total impact of \$229,438,000.

Cherokee Preservation Foundation grants

The Cherokee Preservation Foundation was established to build community capacity within the Qualla Boundary region. Beginning in the October 2000–September 2001 fiscal year, Harrah's Cherokee Casino has provided substantial funds to the Cherokee Preservation Foundation. The initial endowment was \$5,000,000 per year for the first three years. In years since, the endowment has been based on the increase in net gaming revenue realized by the Tribe as a result of the amended contract. By the terms of the Tribal compact, funding is set to be at least \$5,000,000 but not more than \$10,000,000 per year for the life of the compact.

By the end of the 2010 fiscal year, those donations totaled \$74 million. Correspondingly, since its formation in 2001 through mid-2010, the Cherokee Preservation Foundation has made a total of 661 grants totaling nearly \$51 million. Grants

have averaged over \$5.65 million each year and, after a start-up and catch-up period, settling down to approximately that level each year. Each dollar of Cherokee Preservation Foundation funding has been matched by an average of \$1.64 in support from other non-profit or government sources.

Over half of those grant funds have gone to cultural preservation. Another third has been spent on economic development projects with an additional 6.4 percent spent specifically on developing employment opportunities. The remaining 7.6 percent has been devoted to environmental preservation. Figure 21 charts the disbursements over time. Despite the apparent diversity of the funding, the Cherokee Preservation Foundation's grants have the aim of further strengthening and diversifying the regional economy away from its present heavy dependence on gaming.

Nearly 80 percent of the total has been dispersed within the Qualla Boundary. Another eight percent has been spent outside the Qualla Boundary within the two surrounding

Table 14: Casino Tribal Distribution by Category of Use

Dollar numbers are in thousands

	2000	2002	2004	2006	2008	2010
Tribal Distribution	\$116,664	\$161,000	\$177,482	\$239,310	\$243,860	\$210,118
EBCI Allocation of Distribution						
Per Capita	50%	50%	50%	50%	50%	50%
General Fund	13.59%	20.00%	20.00%	20.00%	20.00%	20.00%
Endowment Fund	14.41%	8.00%	8.00%	7.00%	7.00%	7.00%
Health Supplement Fund	1.00%	3.00%	3.00%	3.50%	4.50%	4.50%
Cherokee Home Improvement	2.00%	1.00%	0.25%	1.00%	1.00%	1.00%
Cherokee Schools	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Capital Improvement	3.00%	3.25%	4.00%	3.50%	3.00%	3.00%
Higher Education	0.50%	0.75%	2.00%	2.50%	2.50%	2.50%
Debt Service Sinking Fund	12.00%	10.00%	8.00%	8.00%	6.25%	6.25%
Housing Infrastructure	1.50%	1.00%	1.00%	1.50%	1.50%	1.50%
Mutual Help		1.00%	0.75%	0.50%	0.50%	0.50%
Roads Infrastructure			1.00%	0.50%	0.50%	0.50%
Police & Corrections					1.25%	1.25%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

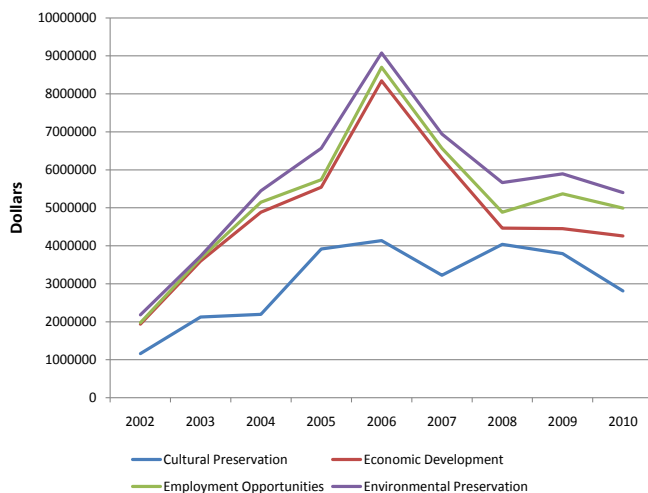
Every month's profits are sent to the Tribe monthly as a Tribal Distribution. The Tribe then uses the funds in the above manner. The community reports give a more thorough explanation of the funds and their uses.

counties, Jackson and Swain. An additional eight percent of the funds have gone to the remaining portions of the Cherokee Seven region. The final five percent were spent further afield. (Figures may not add to the total because of rounding error.) The Cherokee Preservation Foundation distributes an average of \$4,972,000 in the Cherokee Two region, those grants have an estimated total economic impact of \$5,636,000 on the local economy in addition to the benefits of the work completed with those resources.

The Economic Impact of Casino Capital Investment

The casino has mounted an aggressive capital investment

Figure 21
Cherokee Preservation Foundation grants by
program area, 2002-2010



program. Table 15 provides an overview of the allocation of the casino's capital spending. Capital investment was relatively low after the initial opening of the casino in 1998 but has since increased in waves. In 2009, one fourth of operating revenues were dedicated to new capital investment. Capital spending distributed among land and improvements, equipment, and construction. The expansion of the casino generates construction employment along with orders to North Carolina-based suppliers. The final two columns of the table are estimates of the degree to which the capital spending is out-of-state and in-state – further circulating through the economy. A portion of the equipment purchases remains in-state. We estimate that of the \$119,753,000 spent on construction in 2009, \$76,870,253 was to Cherokee Two sources as prime or sub-contractors. We estimate a total impact of \$82,494,000 on the local economy. The multiplier effects are modest in this case because a large proportion of construction spending goes to materials which are not locally produced.

Conclusion

Western Carolina was and continues to be an economically lagging region. By attracting significant gaming tourist spending to the region, a majority of which comes from out of state, the opening of Harrah's Cherokee Casino has had a clear positive impact on the economy of Western North Carolina. The long term economic trends indicate that, without the casino, the region and the state would not have attracted that revenue.

Table 15: Harrah' Cherokee Casino Capital Investment Spending
Dollar numbers are in thousands

Year	Total Capital Investment	Land & land Improvements	Equipment	Construction	Out-of-state Spending	North Carolina Spending
1998	22,432	n/a	n/a	n/a		n/a
2000	14,617	5,917	5,086	3,614	7,497	7,120
2002	59,654	2,832	5,480	51,342	39,725	19,929
2004	25,751	5,385	4,017	16,349	14,922	10,829
2006	12,479	107	5,308	7,064	10,020	2,459
2008	59,795	3,826	14,949	41,020	42,309	17,486
2010	274,960	37,003	76,101	161,856	184,059	90,901

Note: Fiscal Year October - September

The economic impact of the casino, which can be seen easily in the aggregate economic and employment statistics, is large and dramatic. As a regional export industry, the casino revenues are cycled through the regional economy in the form of employee compensation, local supplier purchases, and transfers of several types. Each generates a demand for additional goods and services as households purchase consumer goods and the tribe and the Cherokee Preservation Foundation make investments in the region. Casino capital investment also supports the regional economy.

Table 16 summarizes several of the most important impacts for 2009. The top panel of the table identifies the operating revenues and the portion generated from out-of-state. Approximately two-thirds of the casino's 2009 operating revenues stem from out-of-state sources. The bottom panel outlines the major recurring and non-recurring impacts of the casino's operation. Our calculations estimate the total two-

county region annual economic impact to be approximately \$300 million. Capital investments, such as those now ongoing, added another estimated \$82 million in 2009. Both figures will change from year-to-year depending upon the number of visitors and their spending and the casino's capital investment cycle.

The casino's operation has not solved all regional economic and social problems. High school completion rates remain disappointing. The distribution of casino revenues has alleviated family stress and therefore reduced some, but not all, youth behavior problems. The long-term impacts of the distribution of casino revenues on health behaviors remain to be seen. Nevertheless, all available evidence points towards a substantial improvement in regional well-being on almost all measurable dimensions and, although the mechanisms are often indirect, these improvements can be traced back to the establishment and expansion of Harrah's Cherokee casino.

Table 16: Overview of major casino fund sources and disbursements based on 2009 data

Revenue sources

Operating revenue	Total	Estimated in-state sources	Estimated out-of-state sources
	404,834,000	134,526,338	270,307,662

Casino disbursements

		Direct impact	Indirect impact	Total impact	Subtotal
Employee compensation	\$74,838,000	\$52,383,000	\$8,306,000	\$60,689,000	
	(Total compensation)	(Disposable income)			
Payments to local vendors		\$3,868,000	\$557,000	\$4,425,000	\$65,114,000
Tribal distribution					
Individual accounts	\$113,446,000	\$79,412,000	\$12,592,000	\$92,004,000	
		(Disposable income)			
Collective improvements	\$113,446,000	\$113,446,000	\$23,988,000	\$137,434,000	\$229,438,000
Cherokee Preservation Fund grants		\$4,972,000	\$664,000	\$5,636,000	\$5,636,000
Total estimated recurring annual impact		\$254,081,000	\$46,107,000	\$300,188,000	
Capital investments	\$119,753,000	\$76,870,253	\$5,623,747	\$82,494,000	

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⁵ The Employment Security Commission of North Carolina Labor Market Information <http://esesc23.esc.state.nc.us/d4/LAUSSelection.aspx>

⁶ The Quarterly Census of Employment and Wages (QCEW) program publishes a quarterly count of employment and wages reported by employers covering 98 percent of U.S. jobs, available at the county, MSA, state and national levels by industry. In the late 1990s, the U.S. government switched to an industrial classification system (NAICS) which is better suited to tracking employment in a service economy but data for the entire decade was reprocessed to create an historical baseline for comparison. www.bls.gov/cew/

⁷ Nationally, public administration employment is approximately 40 percent higher within tribal areas than it is for the U.S. as a whole. Employment in producer services tends to be under-represented.

⁸ Sarah Burd-Sharps, Kristen Lewis, and Eduardo Borges Martins, eds., 2008, *The Measure of America: American Human Development Report, 2008–2009*, New York: Columbia University Press for the Social Science Research Council.

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¹⁴ No confidential information was revealed for this analysis.

¹⁵ The casino market zones included in the out-of-state calculations are 04) Atlanta MSA, 05) Knoxville MSA, 06) Greenville MSA, 07) West Inner Regional, 10) Athens–Augusta Area, 11) Columbia Area, 13) Outer North, 14) Outer South, 15) Florida, three-fourths of 02) Local South, one half of 03) Local North, one fifth of 08) Charlotte MSA, and one half of 12) Coastal.

¹⁶ A portion of employee compensation is absorbed by pension contributions, Social Security, and other institutions which remove funds from immediate circulation in the regional economy.

¹⁷ A multiplier of 1.16 implies that each dollar of spending induced by casino employee compensation creates a total of \$1.16 in local spending as the supermarket clerks, automobile mechanics, and dentists which serve casino employees themselves make purchases.

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