



IDENTIFYING OPPORTUNITIES FOR TOURISM CLUSTER DEVELOPMENT IN RURAL COMMUNITIES

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ABSTRACT

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Keywords

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This work aims to identify economic opportunities for future tourism cluster development in tourism-dependent regions using the case of Taos County, New Mexico. The work analyzes the composition of local tourism economic activities of Taos County by quantifying how concentrated the tourism sector is in the county compared to the United States and the State of New Mexico from 2011 to 2019. The author analyzed data from the New Mexico Department of Tourism's state and county tourism economic impact reports, the U.S. Bureau of Economic Analysis, and the U.S. Census Bureau using location quotients analysis. Results show that Taos has no high-performing, rising, high-potential tourism-related industry, despite the tourism sector providing a steady economic base for the community. The traveler accommodation industry, which is more concentrated in Taos than the state and the nation, is trending downwards. The arts, recreation and entertainment, transportation, and retail hold the potential for strength in the future, potentially contributing more to the county's tourism economic base. The implication is that practitioners should work with groups of businesses in the tourism cluster instead of individual businesses to address their shared critical needs.

Contribution/Originality: A community may have a strong concentration of tourism-related jobs and visitor spending; however, industry gaps may exist. For the first time, this work assesses how well the group of industries within a tourism cluster is doing in terms of their visitor spending growth and sustainability and identifies opportunities for future cluster development.

1. INTRODUCTION

Clusters have been shown to increase the competitiveness of a regional industry such as tourism and its impact on local and regional economic development (Engelstoft, Jensen-Butler, Smith, & Winther, 2006; Estevão & Ferreira, 2009; Meyer, De Bruyn, & Meyer, 2017; Porter, 2002; Rocha, 2004). Clusters are defined as geographic concentrations of interconnected firms, associated institutions, specialized suppliers, and customers (Porter, 1998; Porter, 2000). Although clusters were analyzed for traditional industries, a tourism cluster was recognized as important since the satisfaction of a tourist depends not only on an area's physical attraction but also on the efficiency and quality of related business – transportation, malls, restaurants, and hotels (Porter, 1998).

A tourism cluster is defined as a geographic concentration of businesses and institutions interconnected in tourism activities (Ferreira & Estevão, 2010; Skowronek, 2015). Several works also delineate a tourism cluster (Beni, 2003; Yalçınkaya & Güzel, 2019). The objective of a tourism cluster is to bring together businesses that generally work alone to build a successful tourism product in a region (Novelli, Schmitz, & Spencer, 2006). The

tourism sector has three elements – static (accommodation, food, and beverage), mobile (all transportation), and dynamic (leisure, cultural and recreation services); the dynamic elements play a critical role in increasing visitor spending (Costa, 2005). A tourism cluster is made up of multiple industries because it is not organized in terms of co-located tourism firms but rather formed by relational dynamics developed within the cluster between different industries (Cole, 2009; Kim & Shim, 2018). Tourism cluster development involves all actors/stakeholders expected to work together with a common goal (Sarac, 2021). Aside, industries within a cluster coming together by themselves, local and regional governments can devise strategic plans to encourage the development of clusters by supporting a group of industries' efforts to achieve their full potential merger (Brown & Geddes, 2007; Iordache, Ciochină, & Asandei, 2010).

Tourism creates social and economic opportunities in rural communities through the development of clusters of complementary firms that collectively deliver a bundle of attributes to make up a specialized regional product (Michael, 2003). Tourism clustering increases the competitiveness of cluster members by improving the development of new technologies, productivity, efficiency, innovations, and market access (Kim & Shim, 2018; Mirčetić, Vukotić, & Cvijanović, 2019). A tourism cluster is a crucial factor in the diversification and revitalization of rural economies and considerably impacts the functional, social, and economic structure of rural areas (Ristić, Vujičić, & Leković, 2016). Several works corroborate the positive rural economic development impact of tourism (Almstedt, Lundmark, & Pettersson, 2016; Cawley, 2010; Halseth, Markey, & Bruce, 2010; Rogerson, 2020).

Despite the importance of tourism clusters in rural economic development, a study quantifying how concentrated tourism-related industries are in rural tourism-dependent communities to support policies in sustaining, targeting, and attracting more industries for local tourism growth is still lacking. This work investigates the potential for increasing the concentration of tourism-related industries in Taos County by quantifying how concentrated the tourism sector is in the Taos area compared to larger reference areas (the U.S. and New Mexico). It provides useful information about the local tourism economy's strengths, weaknesses, and future tourism cluster development opportunities. Taos County is historically, culturally, and economically a tourism-dependent community in the U.S. state of New Mexico (NM). Like many U.S. nonmetro counties, Taos County faces long-term socio-economic challenges such as poverty, aging population and out-migration of the working-age population, and rising housing costs (Lawson, 2018).

Over the past two decades, the tourism industry cluster in Taos, providing goods and services to both the local population and visitors to the local economy, has steadily provided about 40 percent of the total county jobs (Lawson, 2018). However, tourism industry cluster gaps may exist in the county when the cluster is broken down into smaller industries, illuminating the need to build up and sustain these industries together as a group. This work seeks to understand the regional tourism economy by quantifying how concentrated the tourism sector is in Taos County compared to New Mexico and the United States from 2011 to 2019. The work's objectives are to

- Understand the local tourism economic growth.
- Identify the most tourism goods and services export-oriented industries.
- Identify potential growing tourism-related export industries.
- Identify declining or at-risk tourism export industries that could erode Taos County's local tourism economic base.

2. METHODOLOGY

2.1. Data Sources and Study Area Description

Data for this work were gathered from several sources (New Mexico Tourism Department, 2021; Osborne & Markowitz, 2018; U.S. Bureau of Economic Analysis (BEA), 2021). These sources include the New Mexico Department of Tourism's county and state tourism economic impact reports, the U.S. Bureau of Economic Analysis, and the U.S. Census Bureau.

Located in north-central New Mexico [Figure 1](#), Taos County has 2,203.11 square miles, 1.82 percent of New Mexico’s land area. The county’s estimated population in 2019 was 32,723, 1.56 percent of the state’s 2.097 million people, 14th of NM’s 33 counties. The county seat, the Town of Taos, had an estimated population of 5,929 in 2019, about 18.12 percent of the county’s population. Between the 2010 census and 2019, New Mexico’s population increased 1.83 percent, while Taos County’s population decreased 0.65 percent ([U.S. Census Bureau, 2021](#)). The county still faces rising housing costs and poverty (18.2 percent in poverty compared with the national average of 10.5 percent), although the percentage of the county’s population in poverty reduced from 2010 to 2019 ([U.S. Census Bureau, 2021](#)).

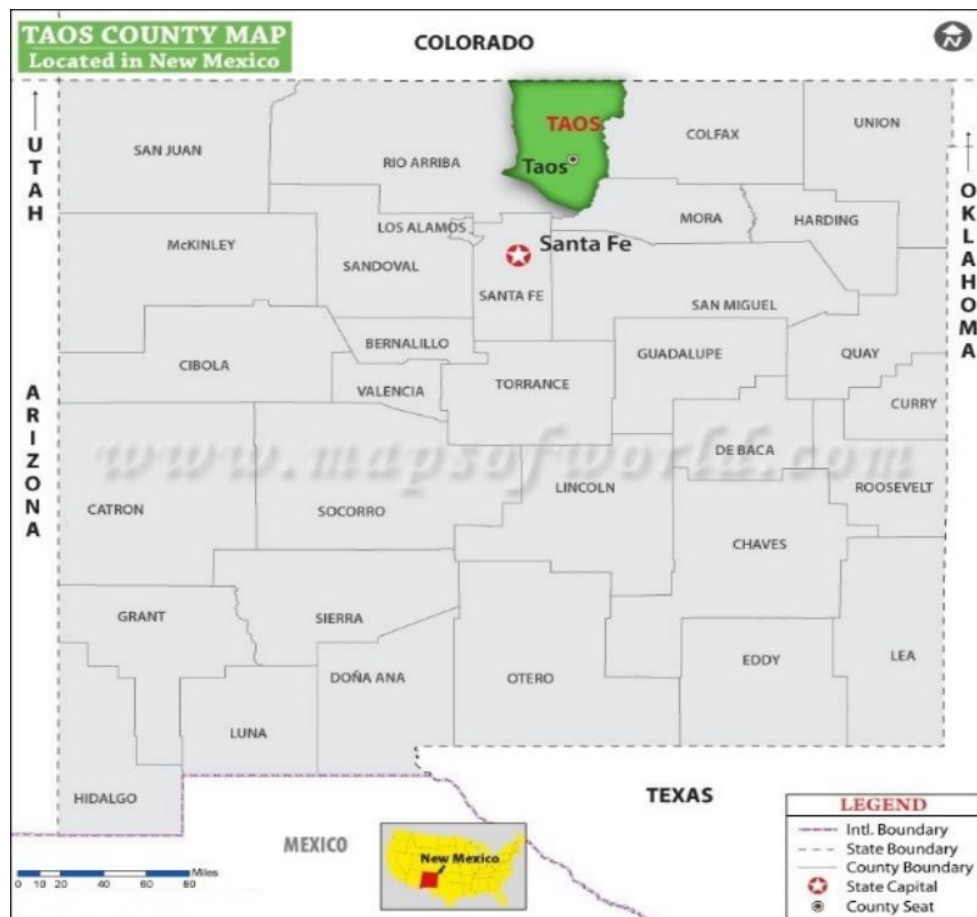


Figure-1. Map of Taos County, New Mexico.

The Taos area has long been a popular destination for visitors and retirees, attracted by the county’s Hispano and Native American history, arts, culture, outdoor recreation, and natural beauty. The county seat, the Town of Taos, is a bustling mountain resort town with lots of natural and cultural amenities, including the famous Taos Plaza, known for its craft shops, cafes & laid-back vibe. The county has more than twenty sites in the U.S. National Register of Historic Places. The county is home to one UNESCO World Heritage Cultural site – the Taos Pueblo, containing ceremonial facilities, multi-story adobe dwellings, and buildings of the present-day Puebloans. The county also has one of the iconic and most photographed churches, St. Francisco de Asis Mission Church, many artists’ homes and studios attracting more artists, and the Taos Ski Valley, a popular ski resort drawing outdoor enthusiasts. The tourism sector has a historical, cultural, and economic significance in the county.

2.2. Location Quotient Analysis

Economic base theory explains that any local economy’s industrial structure can be divided into basic and non-basic industries. The basic industries foster local economic growth. The industries bring jobs and income into the

local economy by exporting goods and services out of the locality. Non-basic industries provide support to basic industries and serve the local population. One commonly used method of identifying local basic activity is using location quotients (LQs).

Location Quotient (LQ) is employed to quantify how concentrated the tourism cluster is in a region (such as Taos County) as compared to a larger reference area (the State of New Mexico or the U.S.). LQ is a ratio that compares a local area to a larger reference area based on some economic characteristics (e.g., most LQ analyses use data on employment, income or value-added, imports, exports, etc.). The LQ can reveal what makes the Taos County tourism cluster “unique” in comparison to the state or the national average. Suppose W is the amount of some economic indicator in a region (e.g., total tourism employment), and X is the total amount of economic indicator of some comparable types in the region (e.g., total employment of all sectors). Suppose Y is total tourism employment, and Z is total employment of all sectors in a larger reference area (the state or the nation). The Location Quotient for the tourism cluster in the locality (i.e., the relative concentration of tourism-related industries in the region compared to the nation or the state) in this scenario will be given in Equation 1 as:

$$LQ = \frac{W/X}{Y/Z} \quad (1)$$

If $\frac{W}{X} = 0.15$, implying that tourism accounts for 15% of all regional employment and $\frac{Y}{Z} = 0.015$ indicating

that tourism employment is only 1.5% of the state or national employment, the region’s LQ will be 10, meaning that the tourism industry is 10 times more concentrated in the region than the state or the nation. It is important to note that the LQ analysis can identify the tourism cluster gaps in the locality. For example, Taos County’s tourism cluster can have an LQ of 10; however, when the cluster is disaggregated into industries, individual tourism-related industry LQ can be analyzed critically.

It is also noteworthy that LQs differ from one year to another year. There are a number of criticisms leveled against the LQ technique in identifying basic industries (industries that export tourism goods and services in this case) in a locality. The first criticism of the LQ technique in identifying basic industries in a region is that the LQs often change over time. In addition, LQs can vary significantly depending on the level of industry data aggregation. Because of these criticisms, in this work, first, LQs have been calculated from 2011 to 2019 for Taos County using the tourism cluster employment data with New Mexico and the U.S. as reference areas. Second, LQs have been calculated from 2011 to 2019 for Taos County with New Mexico and the U.S. as reference areas using data for visitor spending in specific tourism-related industries in the absence of employment data for specific tourism industries. Also, percentage changes in the LQs have been calculated and plotted graphically to show how the LQs have changed over time. The study used Equation 2 to calculate the percentages in LQs:

$$\% \Delta LQ = \frac{LQ_{t+1} - LQ_t}{LQ_t} \times 100 \quad (2)$$

Another solution to the criticism of the LQ technique is based on Porter (1990) cluster analysis. This solution is two-fold. First, advocates of the Porterian cluster analysis suggest that analysts consider the dynamic behavior of LQs. Analyzing an LQ at only one point in time does not tell the analyst whether the sector is declining or growing. Thus, it is imperative to analyze the changes in LQs over time. Second, the analysis requires a scale element (that is, the size of tourism visitor spending in the tourism-related industry) to determine whether an effective cluster exists in a locality. The LQ is scale-invariant, and in the case of Taos County, a tourism-related industry with a high and growing LQ may be a very small part of the county’s economy. A location quotient bubble chart is developed for Taos County’s tourism industry cluster analysis based on traditional industry cluster analysis work done at Purdue University (Beaulieu, Kumar, & Zhalinin, 2017).

3. RESULTS AND DISCUSSION

3.1. Overview

While the more detailed findings of this work are presented below, the following headline messages encapsulate the results of this work.

- Tourism provides a steady economic base for Taos County. It has consistently supported a large share of jobs in Taos County than it has supported jobs in the U.S. and New Mexico. In addition, tourism-related industries' wages are relatively steady, albeit low.
- Taos County employs a larger fraction of its workforce in the tourism industry cluster than the State of New Mexico or the U.S. However, the results show that the traveler accommodation industry growth is trending downward when the cluster is disaggregated, although the industry is relatively concentrated in the county.
- The food and beverage industry experienced limited tourism export capability and relative decline for the period of analysis.
- There is no tourism-related industry that is highly concentrated, exporting tourism goods and services and still experiencing growth in Taos. Nonetheless, the arts, recreation and entertainment, transportation, and retail industries hold the promise for future growth. Policymakers should work with groups of businesses in the tourism cluster instead of individual businesses to address their shared critical needs.

3.2. Tourism Employment and Wage Growth

Figure 2 displays the share of tourism-related employment in total county employment. Tourism-related industries are the businesses that provide goods and services to visitors to the county's economy. The author excluded the goods and services provided to the local population to accurately examine the contribution of tourism exports to the local economy. Figure 2 shows that tourism has consistently supported a large share of jobs in Taos County than it has supported employment in New Mexico and the U.S.

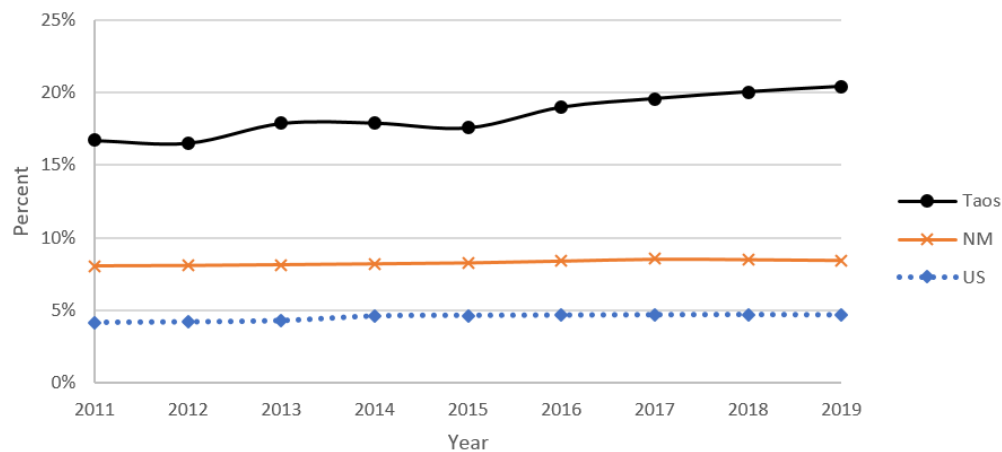


Figure-2. Tourism employment shares in total employment, 2011 – 2019.

Figure 3 shows average annual tourism-related industry wage growth in Taos County compared to New Mexico and the U.S. Tourism-related industries' wages are relatively steady albeit low. Average annual tourism wages in Taos County tend to be lower than in the U.S. but higher than in New Mexico. The implication is that local workers would face less competition for local tourism jobs. However, the comparatively low wages could make it difficult for the county's tourism businesses to employ workers from out of state. The lack of volatility in tourism employment and wages is a valuable asset for the county. Given the steady employment and wages of tourism in Taos County, tourism provides a steady economic base for the community.

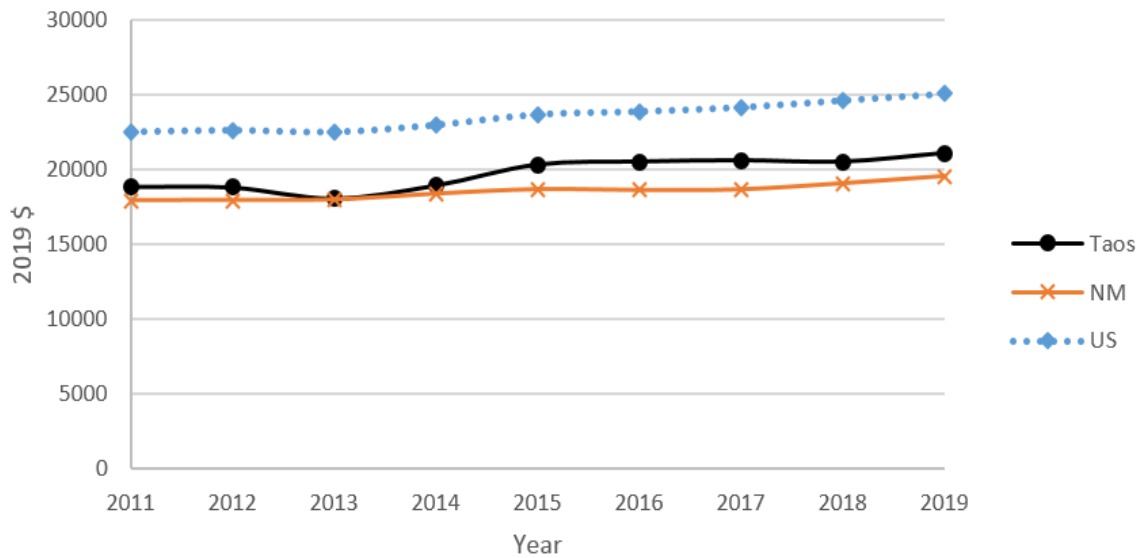


Figure-3. Annual average tourism-related industries' wages, 2011-2019.

3.3. Tourism Cluster Analysis

Employment LQs are calculated for the tourism industry cluster in Taos County, with New Mexico and the U.S. national employment as the basis for comparison. LQs are described for the tourism industry cluster from 2011 to 2019. Table 1 shows that for all the years, the Taos County tourism LQ is greater than 2.05 when New Mexico is the benchmark economy and greater than 3.79 when the U.S. is the benchmark economy. On average, a New Mexico reference LQ of 2.22 for Taos implies that the tourism sector is about two times more concentrated in Taos County than in New Mexico. Using the U.S. as the benchmark economy, an average LQ of 4.08 means that the tourism-related industries are about four times more concentrated in Taos than in the nation. The county employs a larger fraction of its workforce in the tourism industry cluster than does the state of New Mexico or the nation. The tourism industry is a basic industry in Taos based on the employment LQs.

Although the aggregate Taos County's tourism cluster has higher employment LQs, tourism industry cluster gaps may exist. When the cluster is disaggregated, individual tourism-related industry LQs show that there are industry gaps. Table 2 shows a number of low visitor spending LQs for the various individual industries in the cluster. In the absence of tourism industry-specific employment data, the study used visitor spending – the total expenditure made by a visitor or on behalf of a visitor for and during his/her trip and stay in Taos County.

Table-1. Employment Location Quotients (LQs) for Taos County, 2011-2019.

Year	Total tourism-related employment			Total Employment (All Sectors)			Location Quotients (LQs)	
	Taos County	NM	US	Taos County	NM	US	NM Based	US Based
2011	2,860	85,766	7,350,571	17,107	1,064,267	176,091,700	2.07	4.01
2012	2,831	86,301	7,534,787	17,117	1,067,211	178,979,700	2.05	3.93
2013	3,108	87,594	7,822,000	17,379	1,075,465	182,325,100	2.20	4.17
2014	3,154	88,938	8,559,012	17,614	1,083,772	186,233,800	2.18	3.90
2015	3,100	90,412	8,820,000	17,628	1,092,255	190,325,800	2.12	3.79
2016	3,358	91,869	8,997,000	17,674	1,092,500	193,378,900	2.26	4.08
2017	3,471	93,617	9,177,000	17,725	1,095,372	196,337,100	2.29	4.19
2018	3,584	94,601	9,393,000	17,875	1,110,785	200,284,200	2.35	4.28
2019	3,698	95,595	9,501,000	18,109	1,130,618	203,809,500	2.42	4.38
Average	3,240	90,521	8,572,708	17,581	1,090,249	189,751,756	2.22	4.08

Table-2. Visitor Spending Location Quotients (LQs) for Taos County, 2011-2019.

Industry	Visitor Spending LQs									Average
	2011	2012	2013	2014	2015	2016	2017	2018	2019	
NM Based										
Accommodation	1.77	1.76	1.71	1.69	1.63	1.63	1.61	1.55	1.50	1.65
Food & Beverage	0.75	0.73	0.73	0.72	0.74	0.74	0.72	0.72	0.72	0.73
Retail	0.72	0.77	0.78	0.77	0.79	0.80	0.82	0.87	0.91	0.80
Recreation	0.71	0.71	0.70	0.73	0.77	0.77	0.77	0.78	0.79	0.75
Transportation	0.50	0.50	0.53	0.53	0.56	0.57	0.59	0.61	0.63	0.56
US Based										
Accommodation	2.87	2.78	2.82	2.72	2.51	2.41	2.45	2.53	2.50	2.62
Food & Beverage	1.47	1.33	1.35	1.26	1.20	1.18	1.20	1.18	1.18	1.26
Retail	0.48	0.53	0.50	0.53	0.60	0.64	0.64	0.63	0.67	0.58
Recreation	0.87	0.85	0.87	0.89	0.92	0.92	0.93	0.97	1.00	0.91
Transportation	0.25	0.26	0.27	0.27	0.29	0.29	0.29	0.29	0.29	0.28
Multiplier	1.92	1.91	1.93	1.91	1.97	1.99	2.01	2.02	2.04	1.97

Table 2 indicates that the traveler accommodation industry has proportionately more visitor expenditure locally than it does at the national or state level. Likewise, the food and beverage services industry has proportionately more visitor expenditure in Taos than it does at the U.S. level. The traveler accommodation industry can be considered as a basic industry based on the LQs. Thus, a multiplier is obtained by dividing total visitor spending on all tourism-related industries by the basic tourism-related industry visitor spending. The average multiplier is 1.97 in the case of Taos County. The multiplier value implies that, on average, the addition of each dollar a visitor spends on traveler accommodation in Taos County would be associated with nearly an additional 2-dollar visitor spending on non-basic tourism-related industries (food and beverage, transportation, arts, entertainment, recreation, and retail industries).

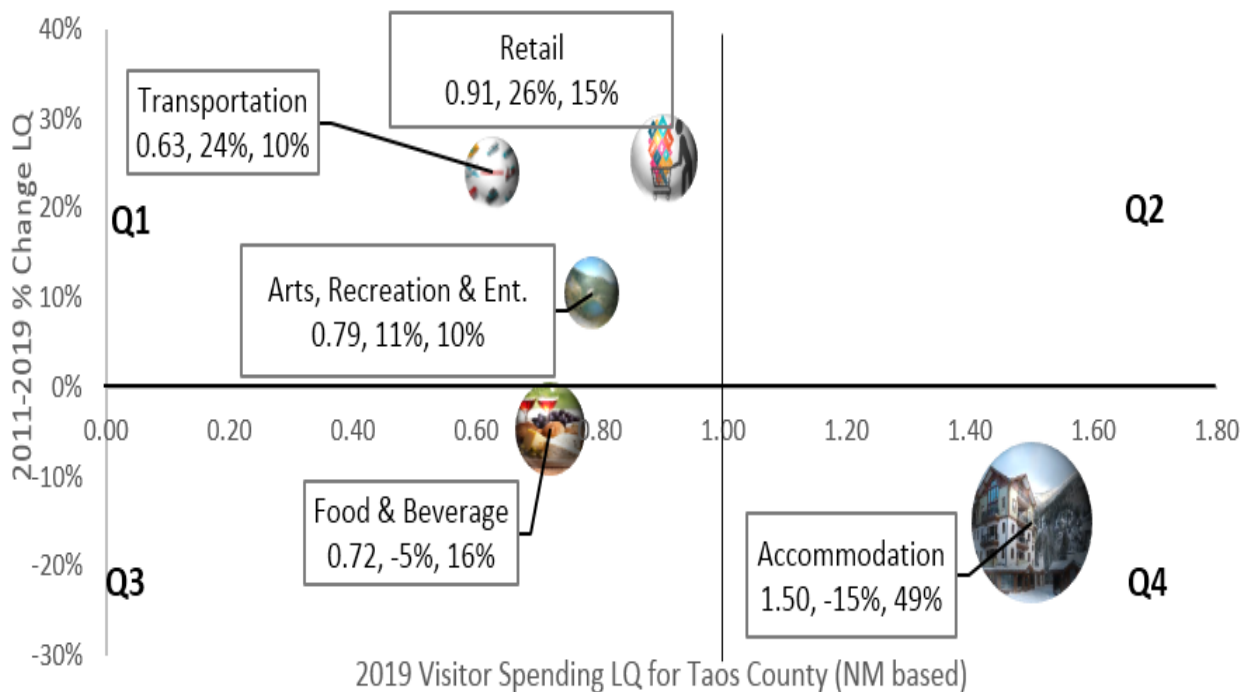


Figure-4. Bubble Chart for Taos County's Tourism Industry Cluster, 2011-2019 (NM Based).

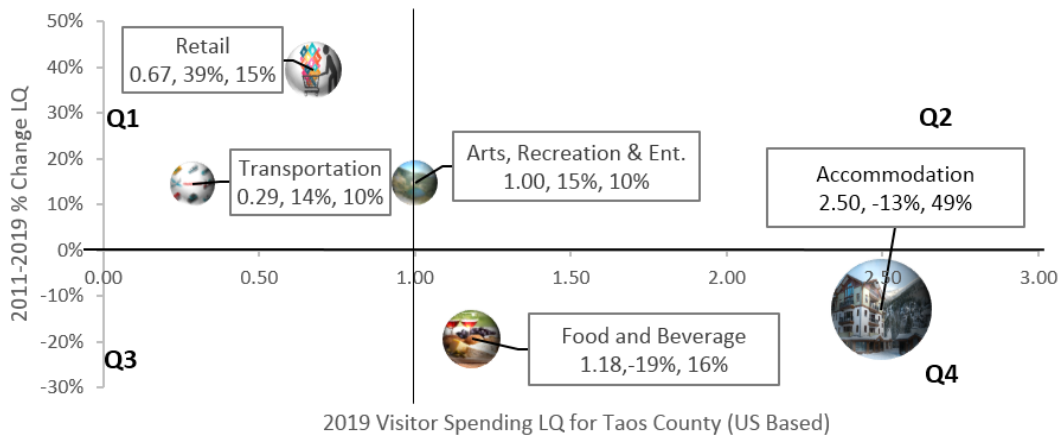


Figure-5. Bubble Chart for Taos County's Tourism Industry Cluster, 2011-2019 (US Based).

Note: Label includes tourism-related industry name, 2019 LQ, %Change LQ, and 2019 share.

Figures 4 and 5 show the tourism industry cluster analysis where the 2011-2019 percentage change in the LQs is plotted against the LQ values, and the share of visitor spending in each tourism-related industry in Taos County in 2019 is overlaid in a bubble chart. With these charts, we can envision all three metrics and explore opportunities for cluster development – identify base industries, potential growing industries, and declining industries. The import of the bubble charts is that policymakers in Taos County should target or attempt the attraction of industries with LQs more than 1, growing in terms of higher positive or lower negative percentage change in LQs and industries with a current higher share of the visitor spending in the county.

Each of Figures 4 and 5 has four quadrants. Each quadrant has an implication for future tourism cluster development policy regarding entrepreneurship and small business development. Quadrant 1 (Q1): LQ values are less than 1, but the percentage change in LQ is positive. This upper left quadrant contains tourism-related industries, which are not yet concentrated in Taos County compared to the state and national levels but are becoming more concentrated over time. If the relative concentration of these industries compared to the state or the nation continue, these industries will eventually move across the vertical axis into the upper right quadrant (Q2). Industries in Q1 are termed as “emerging” and have the potential to contribute more to the county’s tourism economic base in the future. The arts, recreation and entertainment, transportation, and retail industries are in this quadrant from the figures. This finding implies that county managers will need to work with these groups of firms and identify their shared competitive problems, which may be workforce needs, infrastructure, financial and technical assistance, to ensure their targeting, expansion, and retention.

Quadrant 2(Q2): LQ values are greater than 1, and the percentage change in LQ is positive. Industries in this upper right quadrant would be more concentrated in Taos County than the state and the nation and becoming more concentrated over time. These industries are “stars” that would distinguish the Taos County tourism regional economy. These industries are those whose fraction of visitor spending in Taos would be larger than that in the state and the nation and whose fraction of visitor spending has increased over the nine-year period relative to the state and the nation. Industries with larger visitor spending or jobs would be high performing, with growing tourism industry workforce demand. Industries with smaller visitor spending or employment would be rising, high-potential Taos County tourism export industries that should be developed further. From Figures 4 and 5, Taos has no tourism-related industry in this quadrant. This finding provides a useful insight into Taos County not being marketed as a good tourism business location to entrepreneurs and small business owners in the industry cluster. Taos County has not yet been able to leverage its majestic landscapes and climate, resort, arts, and cultural amenities, to attract tourism-related businesses to the area.

Quadrant 3(Q3): LQ values less than 1, and percentage change in LQ is negative. The lower left quadrant contains tourism-related industries, whose fraction of visitor spending in Taos is less than that in the state and the nation and whose fraction of tourism expenditure has decreased over the nine-year period relative to the state and

the nation. This quadrant has the food and beverage industry when New Mexico is the benchmark economy. There are no industries in this quadrant when the U.S. is the benchmark economy. This quadrant signal that Taos County needs to attract more businesses in the food and beverage industry in order to maintain a tourism economy that is diversified and sufficiently balanced compared to the state tourism economy. However, the growth in the food and beverage industry would require relatively large investments since it is declining.

Quadrant 4(Q4): LQ values greater than 1, but percentage change in LQ is negative: The lower right quadrant contains industries whose fraction of tourism expenditure in Taos is larger than that in the state and the nation and whose fraction of tourism expenditure has decreased over the nine-year period relative to the state and the nation. The traveler accommodation industry is in this quadrant, more concentrated in Taos County than the state and the nation, but the concentration is trending downwards. Its average location quotients are 1.67 and 2.62, indicating that the industry is nearly 2 and 3 times more concentrated in Taos than New Mexico and the U.S., respectively. Since it is a significant tourism industry in Taos County, it is an important red flag being in quadrant 4 that Taos is losing a major part of its tourism export base and should strategically invest in this industry. In addition, this industry has a higher share of visitor spending and may be employing more people; thus, the Taos tourism economy will likely enter a general recession if it is not supported. Policymakers need to work cooperatively with the group of industries within the tourism cluster to address critical issues affecting them, such as infrastructure planning and development, human capital and workforce development, and technical assistance.

3.4. Scope, Limitations, and Future Research

This work investigates the composition of local tourism economic activities of Taos County by quantifying how concentrated the tourism sector is in the county compared to the U.S. and the State of New Mexico. It aims to understand Taos County's local tourism economic growth, identify most tourism export-oriented industries, and potential growing tourism-related export industries. The study also identifies declining or at-risk export industries that could erode Taos County's local tourism economic base. The author analyzes data from the New Mexico Department of Tourism's county and state tourism economic impact reports, the U.S. Census Bureau, and the U.S. Bureau of Economic Analysis with Location Quotients and Bubble Charts.

The main limitation of this work is the level of data aggregation. Employment data were aggregated, which prevented the author from using tourism-related industry-specific employment data, hence the use of tourism-related industry-specific visitor spending data. Even with the industry-specific data, some industry data such as transportation were aggregated. The level of data aggregation can cause significant variations in LQs. More details are hidden, the more data are aggregated. Despite this limitation, the industry-specific visitor spending data produced LQs that reflected local conditions. The use of only secondary data in the cluster analysis is necessary to formulate a comprehensive cluster strategy. However, primary data from public or community meetings, business surveys, focus group discussions and individual interviews are also critical in devising a tourism cluster strategy.

Future research on the strengths and weaknesses of a tourism-dependent rural economy can combine primary data from community meetings, business surveys, focus group discussions, and individual interviews with the analyses of more disaggregated secondary employment.

4. CONCLUSION AND POLICY RECOMMENDATIONS

Despite the importance of tourism clusters in rural economic development, a study exploring the opportunities for increasing the concentration of groups of tourism-related businesses in tourism-dependent rural communities is still lacking. A community may have a strong concentration of tourism-related jobs and visitor spending at the aggregate level; however, industry gaps may exist. For the first time, this work has assessed how well the group of industries (groups of businesses) within a tourism cluster in a rural community are doing in terms of their visitor spending growth and sustainability and identified opportunities for future tourism cluster development.

The study used Taos County, New Mexico, a nonmetro community in the U.S. that has historically, culturally, and economically depended on tourism-related economic activities as a case study. The work's objective was achieved by quantifying how concentrated the tourism sector is in Taos County compared to the U.S. and the State of New Mexico. The work has provided useful information about the Taos tourism economy's strengths and weaknesses. Its analysis and findings have identified opportunities to assist the tourism cluster in maintaining and expanding its presence in the Taos community. It has highlighted the need for policymakers to devise a cluster strategy for Taos County's tourism growth. The work's method is easily adaptable to any local area's tourism economic analysis using routinely collected tourism-related economic data.

From Location Quotients and Bubble Charts analyses using data from state and federal government sources, results show that Taos's tourism industry cluster is steadily growing in terms of its share of employment and wages. Taos County's unique arts and culture continually draw visitors to the community. However, there is no tourism-related industry that is highly concentrated, exporting, and still experiencing growth in Taos when the cluster is disaggregated. The finding implies that the county has not been able to leverage its cultural and natural amenities for tourism growth.

The most export-oriented industry is traveler accommodation, yet its growth is trending downward. The industry is more responsive to visitor spending – more concentrated in Taos County than average but is declining in visitor spending. Possibly some visitors lodge in nearby cities and spend their money outside the county. The industry had about a 50 percent share of visitor spending in 2019; thus, if the county does not bolster this industry, which is its tourism economic base, the Taos County tourism economy will likely enter into a general downturn in the future.

The food and beverage industry experienced limited tourism export capability and relative decline for the period of analysis. However, opportunities exist for growth in the arts, recreation and entertainment, transportation, and retail industries. County managers should develop, expand, attract and retain especially small business entrepreneurs in all the tourism-related industries in order to maintain a county tourism economy that is sufficiently balanced and diversified compared to the tourism economy of the state and the nation.

The findings from this work imply that policymakers and economic development practitioners should work with groups of businesses (or the group of industries) in the tourism cluster instead of working with individual tourism businesses. Cluster-wide common and shared competitive problems can be identified and dealt with if policymakers should work with groups of firms in the cluster. Any growth in Taos County's tourism economic base industries such as traveler accommodation, food, and beverage services would require relatively significant investments since these industries are on a declining trajectory.

Two specific policies are recommended. First, the county should use its tourism assets – natural and cultural amenities for marketing the area as a good place for tourism-related business entrepreneurs. Policymakers and economic developers in the county should engage successful tourism business owners and entrepreneurs who have moved to Taos County. The knowledge about the achievements and challenges of successful tourism businesses could help develop, expand, and attract more businesses. Importantly, practitioners should work with groups of businesses in the tourism cluster instead of individual companies to address their shared competitive critical needs. Second, traditional arts-based tourism is mostly associated with an older population; therefore, Taos County should promote ecotourism and recreation to attract young people and families. Public-private partnerships could provide the needed resources to ensure the development of ecotourism.

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