THE ECONOMIC IMPACT OF NEW BRAUNFELS' HOSPITALITY INDUSTRY 2017

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New Braunfels Convention and Visitors Bureau

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Highlights

- The economic impact of New Braunfels' hospitality industry was $706.5 million in 2017 - an increase of 32.9% from 2013.

- In 2017, the hospitality industry employed 7,764 direct workers and supported another 3,109 indirect workers in spinoff jobs in the community.

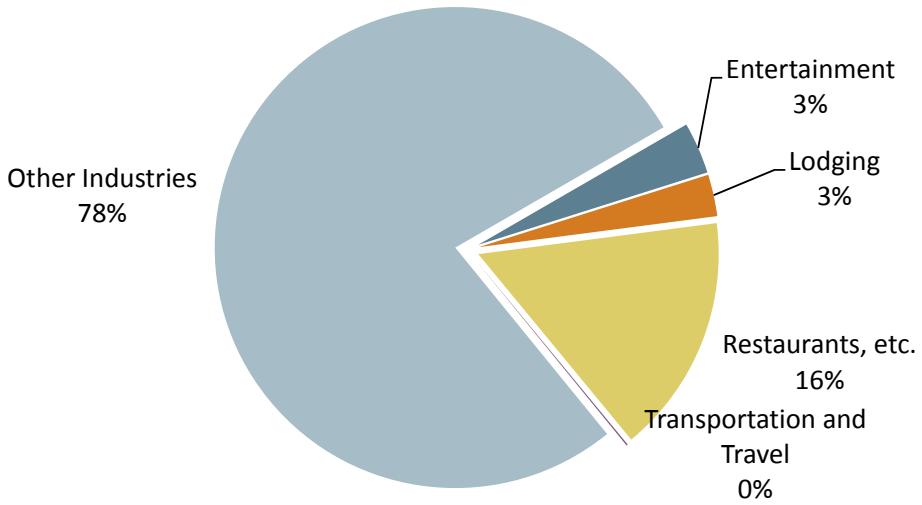
- The New Braunfels hospitality industry paid $134.2 million in direct wages and supported another $92.8 million in wages to indirect workers.

- The hospitality industry contributed $18.8 million in taxes and other revenue to the City of New Braunfels and in total contributed $32.6 million in taxes and other revenue to all local taxing districts.

Summary of Hospitality Industry					
	Direct Employment	**Direct Annual Wages**	**Direct Average Annual Wage**	**Direct Economic Output**	**Value Added**
Entertainment	1,199	$34,887,797	$29,098	$119,900,159	$109,697,670
Lodging	970	$21,750,192	$22,412	$88,303,760	$78,175,319
Restaurants, etc.	5,560	$75,976,078	$13,665	$263,834,076	$203,126,940
Transportation and Travel	35	$1,557,025	$44,556	$6,668,659	$5,791,843
Total	**7,764**	**$134,171,093**	**$17,281**	**$478,706,654**	**$396,791,772**

Total estimated employment in New Braunfels was 34,575 in 2017 meaning the direct hospitality industry in total accounts for 22.5% of total area employment.

Direct Hospitality Employment vs. Total Area Employment



Introduction

New Braunfels offers residents and visitors a wide range of recreational and entertainment opportunities including many annual events for the whole family. As a water recreation paradise, New Braunfels boasts one of the world's best water parks and two beautiful rivers perfect for fishing, tubing or swimming. The historic district of Gruene offers year-round music, dancing, shopping and dining. The annual Salute to Sausage, Wurstfest, provides entertainment food and fun while celebrating the city's German heritage. It is estimated that 1.5 million visitors visited New Braunfels in 2017. The hospitality industry that draws and accommodates these visitors plays an important and significant role in the local area economy. Just a few of the ways this industry benefits the community are detailed below.

Employment
The hospitality industry employs thousands of individuals in full and part-time positions in New Braunfels. Occupations included in the hospitality industry include cashiers, attendants, chefs, operations managers, marketing managers and accountants among others.

Multiplier Effect
Tourist dollars spent by visitors in New Braunfels ripple through the local economy supporting many indirect and induced businesses and organizations. A portion of each new tourist dollar is re-spent by local firms who purchase goods and services supporting other local businesses. Ultimately, the total impact of these tourist expenditures is greater than just the expenditures themselves.

Economic Diversification
A strong hospitality industry and resulting tourist traffic help diversify New Braunfels' local economy. The hospitality industry acts as an insurance policy against economic turmoil which may affect the area's other primary industries.

Improved Quality of Life for Residents
As a result of visitor spending, residents enjoy a vibrant community composed of a wide variety of restaurants and entertainment establishments right in their backyard.

Generous Philanthropy
Firms in the hospitality industry donate significantly to the community with charitable donations, scholarships and in-kind donations. This philanthropy enriches the community and the lives of New Braunfels' residents.

Introduction

About this Report

This report analyzes the hospitality industry's impact on New Braunfels. The hospitality industry has been defined for this report as businesses in industries that derive significant earnings from tourists or out-of-town visitors. Travel accommodations from hotels, motels, bed and breakfasts and campgrounds are included as well as water recreation and river outfitters. Restaurants and other dining establishments also contribute significantly to the hospitality industry as defined in this study. A full list of the industries considered in this study is provided in the back of this report by North American Industrial Classification System (NAICS) code. While some of the spending and economic activity at these businesses is made by residents of New Braunfels, the industries and businesses included in this analysis are typically focused on out-of-town visitors and in many cases would not exist in New Braunfels except for out-of-town visitors.

The primary source of data used to estimate the hospitality industry's economic impact was the 2017 state sales tax allocation for the City of New Braunfels. Understanding some of the direct economic activity is not subject to this sales tax, additional data sources were used. Even after collecting and analyzing supplemental data the real impact of the hospitality industry is still likely understated. A full discussion of the methodology used in this analysis is provided at the end of this report.

This study was prepared by Impact DataSource, a 25-year-old Austin-based economic consulting, research and analysis firm. The firm has conducted over 2,500 economic impact analyses of numerous projects across the country, including several in New Braunfels. In addition, the firm has developed economic impact analysis computer programs for several clients.

New Braunfels' Hospitality Industry in 2017

As a top tourist destination in Texas, New Braunfels receives millions of dollars in direct spending from out-of-town visitors each year. This direct economic activity stimulates the indirect businesses that provide goods and services to the hospitality industry. The sales and purchases related to tourism in New Braunfels supports thousands of jobs and millions in worker earnings. The main economic impacts are reported in terms of economic output, employment and workers earnings. Economic output is the total value of the goods and services produced by the industry. Employment includes both full and part-time jobs in the industry. Workers' earnings or earnings are the salaries or wages paid to the workers in the hospitality industry.

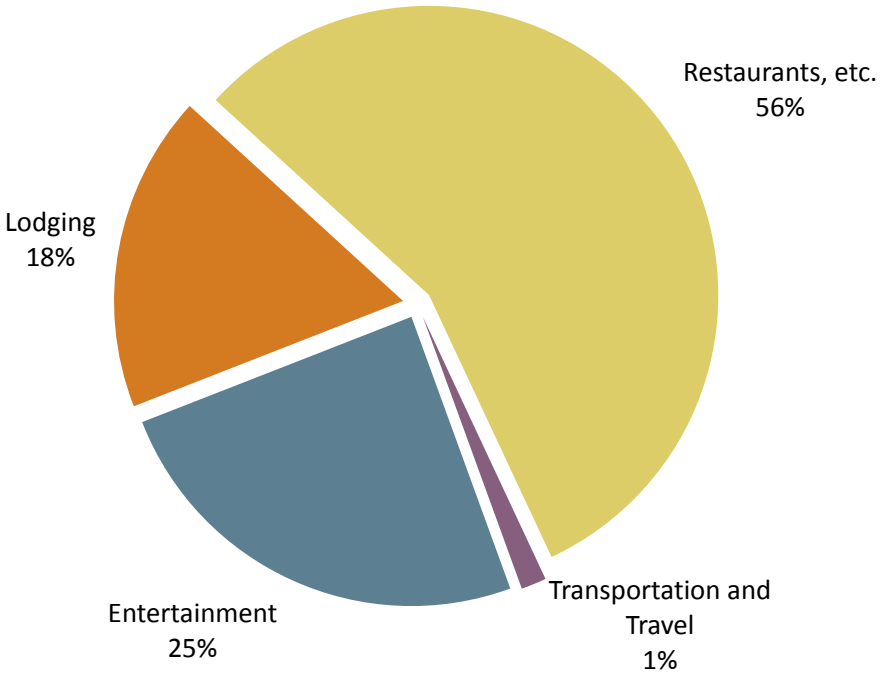
The economic impact calculated in this study can be categorized into two main types of impacts. First, the direct economic impacts are defined as those that result directly from businesses in the hospitality industry. Second, this economic impact analysis calculates the indirect and induced impacts that result from the businesses in the hospitality industry. Indirect jobs and salaries are supported in area firms, such as maintenance companies and service firms, which may supply goods and services to the industry. In addition, induced jobs and salaries are supported in local businesses, such as retail stores, gas stations, banks, restaurants, and service companies that may supply goods and services to workers and their families. For simplicity, this report refers to direct and indirect impacts but it should be noted that the indirect portion includes both indirect and induced impacts.

New Braunfels' Hospitality Industry in 2017

Economic Output

The hospitality industry's impact during 2017 was $706.5 million. The total economic output of $706.5 million includes $478.7 million in direct economic impact activity and $227.8 million in indirect or spin-off output. Clearly, the hospitality industry plays an important role in the economy of New Braunfels. The chart below illustrates the total economic impact of the hospitality industry by sub-category.

Total Economic Output: $706,519,234



Economic Output - Detail

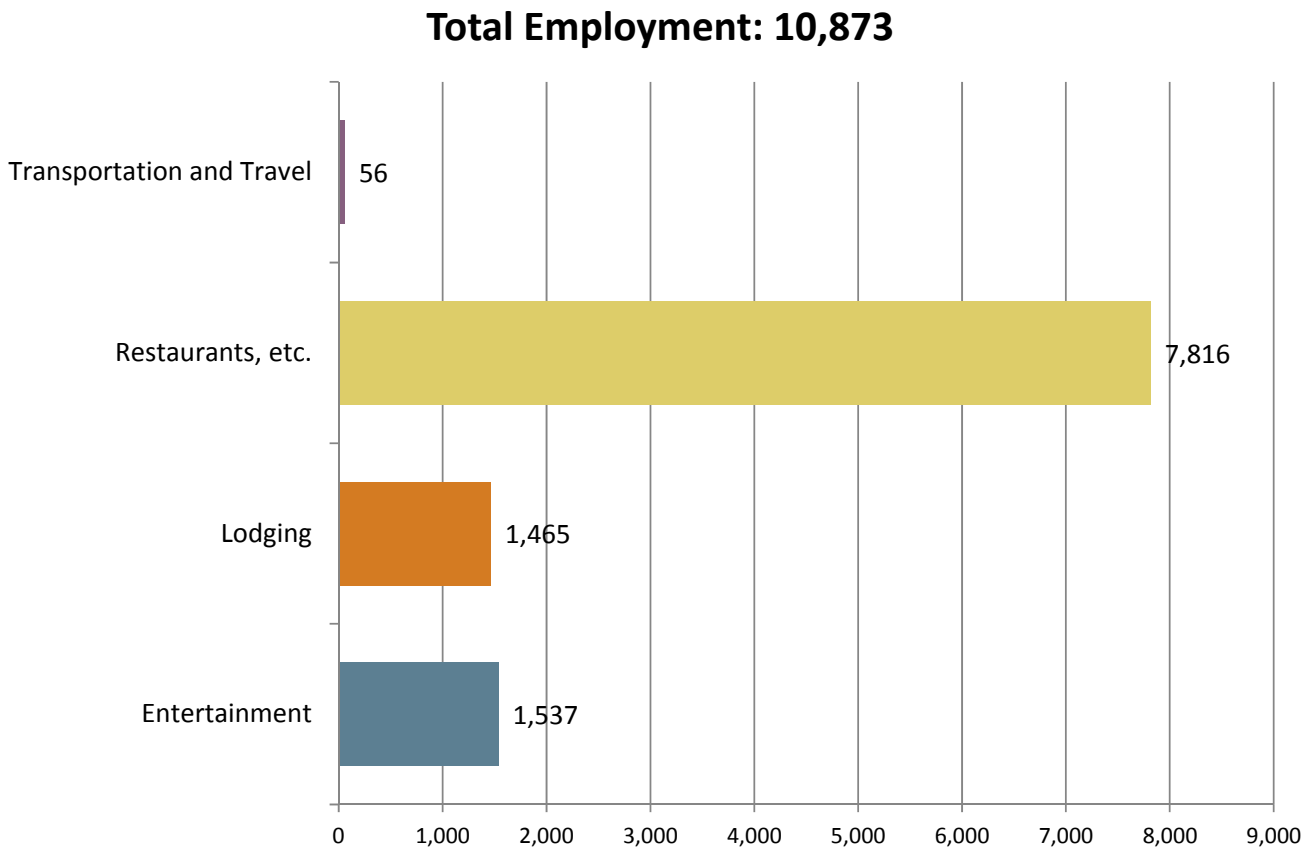
The table below provides more detail on the economic output including the direct, indirect and induced portions of industry impact by category.

Economic Output by Hospitality Industry Category			
	Direct	**Indirect & Induced**	**Total**
Entertainment	$119,900,159	$54,074,784	$173,974,943
Lodging	$88,303,760	$36,822,668	$125,126,428
Restaurants, etc.	$263,834,076	$133,627,254	$397,461,329
Transportation and Travel	$6,668,659	$3,287,875	$9,956,535
Total	**$478,706,654**	**$227,812,580**	**$706,519,234**

New Braunfels' Hospitality Industry in 2017

Employment

The businesses that make up the hospitality industry support 10,873 jobs. This represents 31.4% of total employment in New Braunfels. The hospitality industry directly supports 7,764 jobs and another 3,109 jobs in indirect employment.



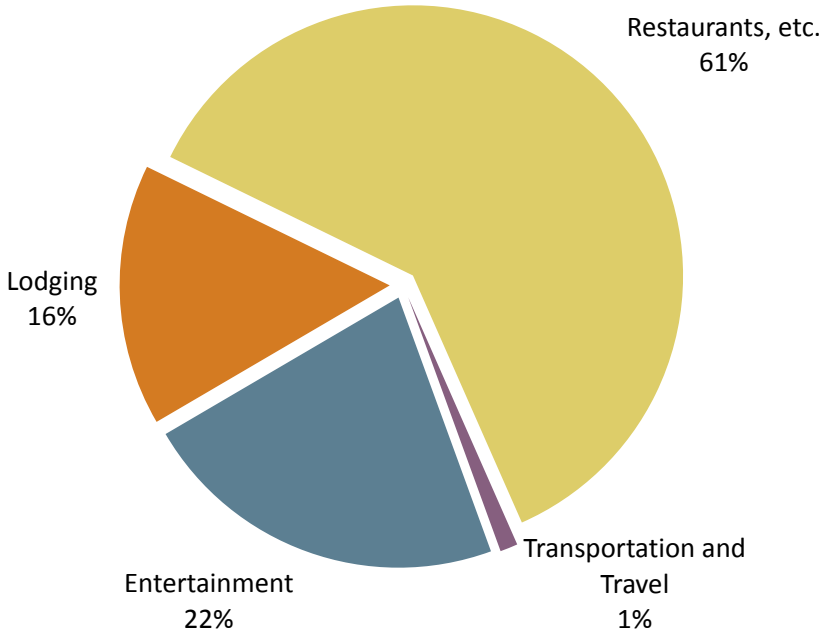
Employment by Hospitality Industry Category			
	Direct	Indirect & Induced	Total
Entertainment	1,199	338	1,537
Lodging	970	494	1,465
Restaurants, etc.	5,560	2,256	7,816
Transportation and Travel	35	21	56
Total	**7,764**	**3,109**	**10,873**

New Braunfels' Hospitality Industry in 2017

Workers' Earnings

The hospitality industry is responsible for more than $227.0 million in wages to full-time and part-time employees each year. The total earnings for the hospitality industry includes $134.2 million in direct earnings for workers in the industry and $92.8 million in indirect or induced workers' earnings.

Total Workers Earnings: $226,986,676

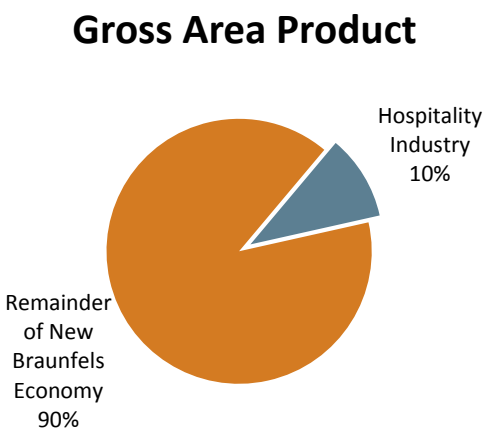


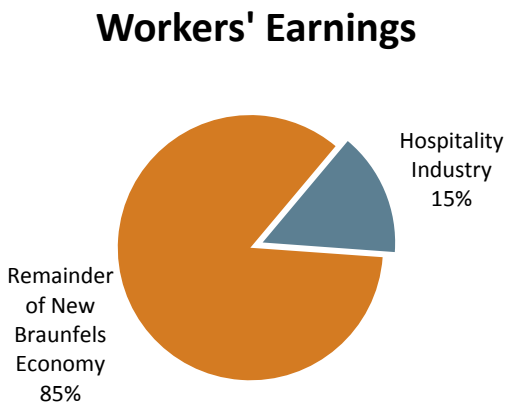
Workers' Earnings by Hospitality Industry Category			
	Direct	**Indirect & Induced**	**Total**
Entertainment	$34,887,797	$15,318,709	50,206,506
Lodging	$21,750,192	$13,811,372	35,561,564
Restaurants, etc.	$75,976,078	$62,838,204	138,814,282
Transportation and Travel	$1,557,025	$847,298	2,404,323
Total	**$134,171,093**	**$92,815,583**	**$226,986,676**

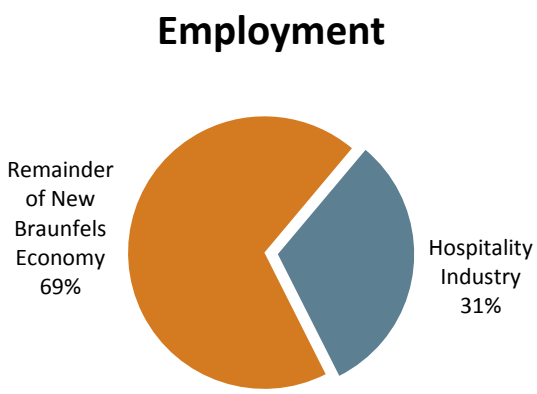
Economic Impact in Perspective

Economic Output, Workers' Earnings and Employment

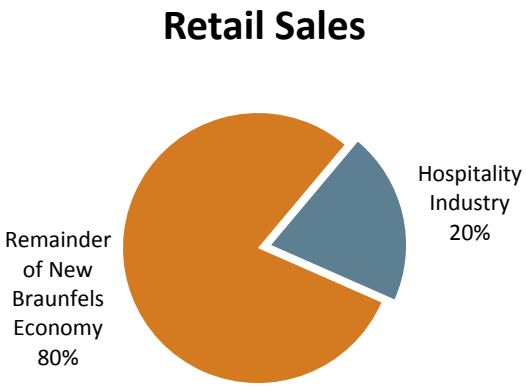
The hospitality industry contributes significantly to the New Braunfels economy and the graph below illustrates the importance of the industry. The value added supported by the hospitality industry accounts for 10.4% of the estimated gross area product in New Braunfels. Similarly, the industry's direct and indirect workers' earnings account for 15.0% of total earnings in New Braunfels. Hospitality is a labor intensive industry and not surprisingly employs or supports 31.4% of total employment in New Braunfels.







Retail sales attributable to the hospitality industry account for 20.5% of total retail sales in New Braunfels.



New Braunfels' Hospitality Industry in 2017

Fiscal Impact

The economic activity described above in terms of output, earnings and employment translates into significant revenue for the City of New Braunfels and other taxing districts through taxes and fees. Some of the sources of revenue the City of New Braunfels receives from the hospitality industry include sales taxes, property taxes, hotel occupancy taxes, mixed beverage taxes, river use fees, utility fees and other miscellaneous licenses and fees. The hospitality industry contributed $18.8 million in city revenue during 2017.

Revenue for the City Generated by the Hospitality Industry		
Revenue Category		**Total**
Sales Taxes		$5,420,315
General Fund	*$4,065,236*	
New Braunfels Industrial Development Corporation	*$1,355,079*	
Property Taxes		$3,447,977
General Fund	*$2,036,568*	
Debt Service	*$1,411,409*	
Hotel Occupancy Taxes		$3,991,648
Mixed Beverage Taxes		$500,268
Solid Waste Fund Revenue		$1,655,444
New Braunfels Utility Franchise Fee		$571,350
Other Miscellaneous Revenue		$3,231,102
Civic/Convention Center Fund - Rental Fees*	*$431,000*	
Golf Fund - Fees for Services*	*$1,423,250*	
River Activities Fund	*$635,952*	
Parks and Recreation*	*$427,100*	
Permits & Licenses*	*$313,800*	
Total Revenue		**$18,818,104**

** Represents a portion of the total revenue for the fund or category. The hospitality industry's portion was estimated based on line-item analysis or percentage attributable to hospitality or tourism.*

The above city revenue supported by the hospitality industry activity represents 12.8% of the City of New Braunfels' All Funds Revenue.

New Braunfels' Hospitality Industry in 2017

Fiscal Impact

In addition to the taxes and fees generated for the City of New Braunfels, other local taxing districts benefit from the industry through property taxes and sales taxes. The table below illustrates the revenues generated for the city an other taxing districts in the area.

Revenue for Local Taxing Districts Generated by the Hospitality Industry					
	City of New Braunfels	**Comal County**	**Local ISDs**	**Road District**	**Total**
Sales Taxes	$5,420,315	$1,806,772			$7,227,086
Property Taxes	$3,447,977	$2,173,937	$9,457,182	$353,823	$15,432,920
Hotel Occupancy Taxes	$3,991,648				$3,991,648
Mixed Beverage Taxes	$500,268				$500,268
Other Revenue	$5,457,896				$5,457,896
Total	**$18,818,104**	**$3,980,709**	**$9,457,182**	**$353,823**	**$32,609,818**

Hospitality Industry 2009 - 2017

Economic Impact Comparison

Impact DataSource completed an analysis of the hospitality industry in New Braunfels in 2009 and 2013 as well. This section compares some of the key impacts from the current analysis to the previous reports. Generally speaking, the direct economic output, employment and workers' earnings of the hospitality industry is growing at a faster rate than the city's economy overall.

Direct employment in the hospitality industry increased 49.9% from the 2009 study which is slightly more than overall employment growth in New Braunfels over this period. Direct economic output in the hospitality industry increased by more than 111% over the period. Direct workers' earnings in the hospitality industry increased by a greater percent than workers' earnings citywide.

Summary of Direct Hospitality Industry Growth from 2009 to 2017

Direct Hospitality Industry	**2009**	**2013**	**2017**	**Increase from 2009-17**	**Average Annual Increase**
Direct Economic Output	$226,487,435	$345,593,369	$478,706,654	111.4%	9.8%
Direct Employment	5,181	5,662	7,764	49.9%	5.2%
Direct Workers' Earnings	$70,314,011	$70,314,011	$134,171,093	90.8%	8.4%
New Braunfels*	***2009***	***2013***	***2017***	***Increase from 2009-17***	***Average Annual Increase***
Population	*55,867*	*62,381*	*63,335*	*13.4%*	*1.6%*
Gross Area Product ($000)	*$2,412,241*	*$2,794,780*	*$3,821,950*	*58.4%*	*5.9%*
Employment	*26,326*	*28,174*	*35,302*	*34.1%*	*3.7%*
Workers' Earnings ($000)	*$958,309*	*$1,117,045*	*$1,509,339*	*57.5%*	*5.8%*

** U.S. Census Estimates, Bureau of Economic Analysis, BLS Local Area Unemployment Statistics, BLS Quarterly Census of Employment and Wages and Impact DataSource estimates.*

The total economic impacts supported by the hospitality industry - including the direct, indirect and induced impacts - have grown since 2009 but slightly slower than the direct impacts. This can be attributed to slightly lower spin-off multipliers in later studies compared to those used in the initial study.

Summary of Hospitality Industry Growth from 2009 to 2017

Total Hospitality Industry	***2009***	***2013***	***2017***	***Increase from 2009-17***	***Average Annual Increase***
Total Economic Output	$469,659,043	$531,541,134	$706,519,234	*50.4%*	*5.2%*
Total Employment	6,979	7,321	10,873	*55.8%*	*5.7%*
Total Workers' Earnings	$121,816,816	$150,424,010	$226,986,676	*86.3%*	*8.1%*

Hospitality Industry 2009 - 2017

Fiscal Impact Comparison

Overall, city revenues generated by the hospitality industry have grown by 28% since 2009. Sales taxes and hotel occupancy taxes - the two most significant and direct sources of revenue for the City of New Braunfels derived from the hospitality industry - show strong growth from 2009 through 2017. Sales taxes attributable to the hospitality industry have increased by 56% over the period and hotel occupancy taxes have increased by 80% from 2009. Mixed beverage taxes, property taxes, utility-related revenues and miscellaneous revenues have each increased since 2009 as well.

Revenue for the City Generated by the Hospitality Industry				
Revenue Category	**2009**	**2013**	**2017**	**% Increase**
Sales Taxes	$3,484,791	$4,148,800	$5,420,315	55.5%
Property Taxes	$1,896,692	$2,522,177	$3,447,977	81.8%
Hotel Occupancy Taxes	$2,213,461	$3,524,005	$3,991,648	80.3%
Mixed Beverage Taxes	$192,924	$274,836	$500,268	159.3%
Solid Waste Fund Revenue	$1,073,925	$1,343,775	$1,655,444	54.1%
New Braunfels Utility Franchise Fee	$308,853	$445,483	$571,350	85.0%
Other Miscellaneous Revenue*	$2,167,711	$2,219,750	$3,231,102	49.1%
Total Revenue	**$11,338,358**	**$14,478,826**	**$18,818,104**	**66.0%**

NAICS Codes for the Hospitality Industry

Entertainment	
NAICS Code	**Description**
7111	Performing arts companies
7113	Promoters of performing arts
7115	Independent artists, writers and performers
7121	Museums, historical sites, zoos, etc.
71121	Spectator sports
71311	Amusement and theme parks
71312	Amusement arcades
71391	Golf courses and country clubs
71399	Other amusement and recreation
81341	Civic and Social Organizations

Lodging	
NAICS Code	**Description**
7211	Hotels, motels, etc.
7212	RV parks and recreational camps

Restaurants, etc.	
NAICS Code	**Description**
7225	Full service restaurants
7225	Limited-service eating places
7223	Special food services
7224	Drinking places

Transportation and Travel	
NAICS Code	**Description**
48111	Scheduled air transportation
48521	Interurban and rural bus transportation
48551	Charter buses
48599	Other ground passenger transportation
48711	Scenic and sightseeing transportation
48811	Airport operations
53211	Passenger car rental and leasing
56152	Tour operators
56159	Other travel arrangement services
81293	Parking lots and garages

Methodology

Impact DataSource analyzed a combination of New Braunfels city data and US government data sources to complete this analysis. This section describes the methodology used to calculate the economic impacts this report.

The City of New Braunfels provided a report of 2017 sales tax collections, detailing the 1.5% sales tax allocation to New Braunfels from sales generated in the city. Taxable sales were derived from this data and then summarized by industry. The majority of direct output by the hospitality industry shown in this report was obtained by isolating the NAICS industries included in our definition of the hospitality industry. Taxable sales do not represent total economic output for the area since not all economic output in the hospitality industry is subject to sales tax. Recognizing this fact, specific adjustments were made to this calculation of the hospitality industry's output. For example, hotel accommodations and mixed beverages were not subject to sales taxes in 2017 but easily quantifiable by analyzing the state reported hotel occupancy taxes and mixed beverage taxes. Although adjustments were added to the taxable sales activity, the economic output of the hospitality industry is still likely a conservative estimate. Direct employment and earnings are based on estimated economic output using NAICS industry-specific ratios calculated from the US Census Bureau's Business and Industry Economic Census. The Economic Census provides sales, employment and earnings by industry and geographical location. Estimates for New Braunfels were based on statewide data for Texas. Economic Census data for New Braunfels, Comal County and San Antonio MSA were either unavailable or did not contain enough data to calculate reliable ratios.

The economic impacts calculated in this report can be categorized into two main types of impacts. First, the direct economic impacts are defined as those that result directly from businesses in the hospitality industry. Indirect jobs and salaries are supported in new or existing area firms, such as maintenance companies and service firms, which may supply goods and services to the industry. In addition, induced jobs and salaries are created in new or existing local businesses, such as retail stores, gas stations, banks, restaurants, and service companies that may supply goods and services to workers and their families.

To estimate the indirect and induced economic impact of the industry on the area, regional economic multipliers were used. Regional economic multipliers are included in the US Department of Commerce's Regional Input-Output Modeling System (RIMS II).

Three types of regional economic multipliers were used in this analysis: output multipliers, earnings multipliers and employment multipliers. Output multipliers were used to estimate the increase in revenue or economic output generated by each of these businesses based on the direct output. Earnings multipliers were used to estimate the amount of salaries to be paid to workers in new indirect and induced jobs. Employment multipliers were used to estimate the number of indirect and induced jobs supported in the area. The multipliers used in the analysis were specific to each firm and industry.

Methodology

Taxable Property Methodology

The taxable value of hospitality industry property and resulting property taxes are based on 2015 Comal County Central Appraisal District (CAD) data and the number of employees classified as industrial and commercial. The following information was obtained from the 2015 State of Texas Property Value Study for Comal County.

2015 Appraised Value by State Code Classification

	Classification	Value	% of Total
A	Real Property: Single-family Residential	$10,077,343,815	62.45%
B	Real Property: Multi-family Residential	$413,913,977	2.57%
C	Real Property: Vacant Lots and Tracts	$899,099,288	5.57%
D1	Real Property: Qualified Agricultural Land	$0	0.00%
D2	Real Property: Non-Qualified Land	$9,150,351	0.06%
E	Real Property: Farm and Ranch Improvements	$624,310,681	3.87%
F1	Real Property: Commercial	$1,732,184,979	10.74%
F2	Real Property: Industrial	$658,073,291	4.08%
G	Oil, Gas and Other Minerals	$570	0.00%
H	Tangible Personal Property: Nonbusiness Vehicles	$0	0.00%
J	Real and Personal Property: Utilities	$136,318,985	0.84%
L1	Personal Property: Commercial	$863,752,185	5.35%
L2	Personal Property: Industrial	$543,864,208	3.37%
M	Mobile Homes and Other Tangible Personal Property	$46,372,509	0.29%
N	Intangible Personal Property	$0	0.00%
O	Real Property: Residential Inventory	$83,462,196	0.52%
S	Special Inventory	$47,805,410	0.30%
	Comal County Total Taxable Value	**$16,135,652,445**	

Commercial and industrial property was estimated based on a per private employee basis, comparing total Comal County private employment to total taxable values for real and personal property classified for commercial and industrial. The table below summarizes the results of the per employee taxable values.

		Taxable Value	Employment	Taxable Value
F1	Real Property: Commercial	$1,732,184,979		$43,340
L1	Personal Property: Commercial	$863,752,185		$21,612
	Total Commercial	**$2,595,937,164**	**39,967**	**$64,952**
F2	Real Property: Industrial	$658,073,291		$112,357
L2	Personal Property: Industrial	$543,864,208		$92,857
	Total Industrial	**$1,201,937,499**	**5,857**	**$205,214**

Industrial employment includes NAICS 31-33 Manufacturing, NAICS 42 Wholesale trade, and NAICS 21 Mining, quarrying, and oil and gas extraction.
Commercial employment includes all other NAICS codes excluding NAICS 11 Agriculture, forestry, fishing and hunting and NAICS 22 Utilities.

The commercial value per employee was applied to the number of employees supported by the hospitality industry in New Braunfels.

The tax rates used in this analysis are discussed below.

Methodology

Tax Rates

Impact DataSource obtained and used the current sales, hotel occupancy and property tax rates.

	Sales Tax Rate	Hotel Occupancy Tax Rate	Property Tax Rate (Per $100 value)
City of New Braunfels	1.5%	7.0%	0.488220
Comal County	0.5%		0.307821
New Braunfels ISD and other School Districts			1.339100
Lateral Road			0.050100
Total	**2.0%**	**7.0%**	**2.185241**

Some additional information on the RIMS II multipliers used in this analysis is provided next.

Regional Input-Output Modeling System (RIMS II)

The economic impact estimates in this report are based on the Regional Input-Output Modeling System (RIMS II), a widely used regional input-output model developed by the U. S. Department of Commerce, Bureau of Economic Analysis. The RIMS II model is a standard tool used to estimate regional economic impacts. The economic impacts estimated using the RIMS II model are generally recognized as reasonable and plausible assuming the data input into the model is accurate or based on reasonable assumptions. The RIMS II model is described in basic detail below.

Generally speaking, input-output modeling attempts to estimate the changes that occur in all industries based on a change in the demand for the output of an industry. An input-output model allows an analyst to identify the subsequent changes occurring in various industries within a regional economy in order to estimate the total impact on the economy. Total economic impact is the sum of three components: (1) direct, (2) indirect, and (3) induced impacts.

If the demand for the output of an industry, measured by industry sales or revenue, increases by $1 million, total regional output increases by $1 million. This initial change in output is called the change in direct economic output and also referred to as the direct expenditure effect. The change in total economic output in the region resulting from the initial change does not stop with the change in direct economic output. Businesses in a variety of industries within the region will be called upon to increase their production to meet the needs of the industry where the initial increase in demand occurs. Further, other suppliers must also increase production to meet the needs of the group of initial supplier firms to the industry. This increase in expenditures by regional suppliers is considered the indirect economic impact of the initial $1 million in sales, and is classified as indirect expenditures of the total economic impact or the change in indirect economic output.

The total economic impact of the $1 million in sales includes one more component, the *induced* impact. All economic activity, whether direct or indirect, that results from the initial increase in demand of $1 million, requires workers, and these workers must be paid for their labor. This means that part of the direct and indirect expenditures is actually in the form of wages and salaries paid to workers in the various affected industries. These wages and salaries will in turn be spent in part on goods and services produced locally in the region. This spending is another part of the regional economic impacts referred to as induced impacts and is classified as induced expenditures or the change in induced economic output.

Based on the initial direct impact, the RIMS II model can be used to estimate the direct, indirect and induced impacts on economic output, value added, earnings and employment in a given region. Economic output is gross output and is the sum of the intermediate inputs and final use. This is a duplicative total in that goods and services will be counted multiple times if they are used in the production of other goods and services. Value added is defined as the value of gross output less intermediate inputs. Workers' earnings or earnings consist of wages and salaries, employer provided benefits and proprietors' income. Employment consists of a count of jobs that include both full-time and part-time workers.

Methodology

The RIMS II model is based on regional multipliers, which are summary measures of economic impacts generated from changes in direct expenditures, earnings, or employment. Multipliers show the overall impact to a regional economy resulting from a change in demand in a particular industry. Multipliers can vary widely by region. Multipliers are higher for regions with a diverse industry mix. Industries that buy most of their materials from outside the state or region tend to have lower multipliers. Multipliers tend to be higher for industries located in larger areas because more of the spending by the industry stays within the area.

The RIMS II model generates six types of multipliers for more than 400 industrial sectors for any region in the United States. The multipliers include four “final-demand” multipliers and two “direct-effect” multipliers. Final demand multipliers indicate the impact of changes in final demand for the output of a particular regional industry on total regional output, earnings, employment and value added. Direct-effect multipliers indicate the impact of changes in regional earnings or employment within a particular industry on total employment or earnings within a region.

Final-demand output multipliers indicate the total regional output (direct, indirect and induced expenditures) that results from an increase in direct expenditures for a good produced by a particular regional industry. For example, if an industry in a particular region is said to have a final demand output multiplier of 2, this tells us that a $1 increase in final demand for the good produced by that industry results in a $2 increase in total output or expenditures within the regional economy. Final-demand earnings multipliers indicate the impact of an increase in final demand for the good of a particular regional industry on the total earned income of households within the region. Final-demand employment multipliers indicate the increase in total regional employment that results from a $1 million increase in final demand for the good produced by a particular regional industry. Final-demand value-added multipliers indicate the increase in total regional value added that results from a $1 million increase in final demand for the good produced by a particular regional industry. Direct-effect earnings multipliers indicate the impact of a $1 change in earnings within a particular regional industry on total earnings in all industries within a region. Direct-effect employment multipliers indicate the impact of a change in employment in a particular regional industry on total employment in all industries within a region.
Theoretically, changes in final demand drive the total change in economic output, earnings, and employment. However, these multipliers relationships can be used to estimate impacts in other ways if only limited information is known about a project. For example, the multiplier relationships can be used to estimate the increase in direct economic output based on a given level of employment in a specific industry.

Additional Notes on RIMS II
RIMS II multipliers are based on the average relationships between the inputs and outputs produced in a local economy. The multipliers are a useful tool for studying the potential impacts of changes in economic activity. However, the relative simplicity of input-output multipliers comes at the cost of several limiting assumptions.

- Firms have no supply constraints—Input-output based multipliers assume that industries can increase their demand for inputs and labor as needed to meet additional demand.
- Firms have fixed patterns of purchases—Input-output based multipliers assume that an industry must double its inputs to double its output.
- Firms use local inputs when they are available—The method used by RIMS II to develop regional multipliers assumes that firms will purchase inputs from firms in the region before using imports.

RIMS II, like all input-output models, is a “static equilibrium” model. This means that there is no specific time dimension associated with the results using the model. For the RIMS II model, it is customary to assume that the impacts occur in one year because the model is based on annual data.

About Impact DataSource
Impact DataSource's team includes the following members:
- Jerry Walker, principal/economist,
- Paul Scheuren, principal/economist, and
- Michael Kester, economist.

Methodology

Jerry Walker is an economist and Impact DataSource's Principal. Over the past seventeen years, he has conducted economic and fiscal impact analyses and cost-benefit studies of a variety of firms, facilities, projects and activities. He has also developed several economic impact analysis computer programs for clients to do their own economic impact analyses of firms, projects, activities and organizations.

He also has a background in government accounting and auditing. Prior to his economic consulting career, he had a fifteen-year career as a supervisory auditor with two federal departments – the U.S. Department of Education and the U.S. Department of Health and Human Services. He reviewed federal programs operated by states, local governments, colleges and universities, local education agencies, and nonprofit organizations in a six state area from Austin, Texas. He performed financial audits and operational reviews. During the operational reviews, the operations of the federal programs were reviewed for economy, efficiency and effectiveness. The financial audits included analyzing costs incurred for federal programs and components of indirect cost rates. He has also served as a part-time accounting instructor at Austin Community College, Austin, Texas.

Jerry has Bachelor of Science and Master of Business Administration degrees in accounting and economics from Nicholls State University, Thibodaux, Louisiana.

Paul Scheuren is an Impact DataSource economist. Over the past three years, he has conducted economic and fiscal impact analyses and cost-benefit studies of a variety of firms, facilities, projects and activities. Recently, Paul analyzed more than 30 renewable energy projects funded by the Iowa Power Fund, Iowa's energy-related economic development fund.

Prior to joining Impact DataSource, Paul worked as a compensation analyst at the Texas Association of School Boards where he supported compensation consulting projects and helped streamline data analysis for a statewide salary survey.

Paul has a Master of Arts in Economics from Clemson University as well as a Bachelor of Business Administration in actuarial science from Temple University.

Michael Kester is an Impact DataSource economist.

His diverse consulting background in healthcare and compensation combined with his advanced analytical skills make him a great addition to the Impact DataSource team.

Michael previously worked in New York as an actuarial healthcare consultant for Deloitte where he provided in-depth financial and claims projections to his clients. Michael has also worked as a compensation analyst at the Texas Association of School Boards where he supported compensation consulting projects and analyzed key trends in survey data.

Michael has a Bachelor of Science in Mathematics from Kansas State University.