



The Economic Impact of Tourism in Tempe, Arizona

2018 Analysis

October 2019

1. Introduction

Introduction and definitions

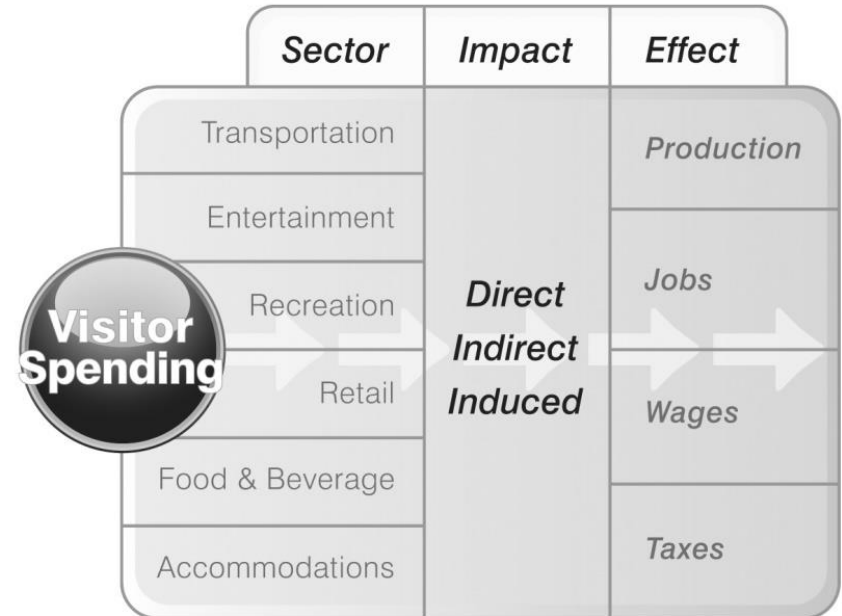
This study measures the economic impact of tourism in Tempe, AZ in 2018. The study region is defined as the City of Tempe, which has a population of 192,364, which accounts for 4.4% of Maricopa County's 4.4 million residents. Tempe has a total hotel inventory of just over 6,000 rooms across 48 properties.

Visitors to Tempe include those who stayed in overnight accommodations, and those travelers, including day trippers, whose trip to Tempe deviated from their normal routine and was at least 50 miles. Impacts were measured in terms of business sales, employment, income, and tax revenues generated.

The total impact of tourism includes direct visitor spending, indirect impacts, and induced impacts. **Direct visitor spending** creates economic value within specific visitor-related sectors such as lodging, recreation, and transportation. This supports a relative proportion of jobs, wages, taxes, and GDP within each sector. **Indirect benefits** accrue to those sectors that provide goods and services as inputs into production, such as food wholesalers, utilities, and financial or legal services. **Induced benefits** are generated when employees whose income is driven directly or indirectly by tourism, spend a portion of that income in the local regional economy.

How visitor spending generates employment and income

Visitor spending flows through the Tempe regional economy and generates indirect benefits through supply chain and income effects.



Notes

Why quantify the tourism economy?

- By monitoring tourism's economic impact, policy makers can make informed decisions regarding the funding and prioritization of tourism development.
- It can also carefully monitor its successes and future needs.
- In order to do this, tourism must be measured in the same categories as other economic sectors – i.e. tax generation, employment, wages, and gross domestic product.

Why is this a challenge?

- Most economic sectors such as financial services, insurance, or construction are easily defined within a region's economic statistics.
- Tourism is not so easily measured because it is not a single industry. It is a demand-side activity which affects multiple sectors to various degrees.
- Tourism spans nearly a dozen sectors including lodging, recreation, retail, real estate, air passenger transport, food & beverage, car rental, taxi services, travel agents, museums, and theme parks.

Methods and data sources

Estimates of direct visitor expenditures in Tempe were based on several sources including:

- Visitor volume and spending estimates from consumer research firms DK Shifflet and Longwood's International (prepared for the state).
- Data covering hotel room demand, supply, revenues, occupancy, and room rates from Smith Travel Research (STR).
- Industry data on employment, wages and sales from the U.S. Census, the Bureau of Economic Analysis, and the Bureau of Labor Statistics.
- Local bed tax data available from the Tempe Tourism Office.
- Air transportation data available from the U.S. Bureau of Transportation Statistics, where relevant.
- International data from Tourism Economics proprietary databases covering international travel to U.S. states and cities, and the National Tourism and Travel Office (NTTO)

An IMPLAN input-output model was constructed for Tempe. The model traces the flow of visitor-related expenditures through the local economy and their effects on employment, wages, and taxes. IMPLAN also quantifies the indirect (supplier) and induced (income) impacts of tourism. Tourism Economics then cross-checked these findings with employment and wage data for each sector to ensure the findings are within reasonable ranges. Custom adjustments to modeling output were made to capture benefits in the City of Tempe only.

Gasoline price data for the West region less California were obtained from the Energy Information Administration.

About Tourism Economics

Tourism Economics is an Oxford Economics company with a singular objective: combine an understanding of tourism dynamics with rigorous economics in order to answer the most important questions facing destinations, developers, and strategic planners. By combining quantitative methods with industry knowledge, Tourism Economics designs custom market strategies, destination recovery plans, tourism forecasting models, tourism policy analysis, and economic impact studies.

With over four decades of experience of our principal consultants, it is our passion to work as partners with our clients to achieve a destination's full potential.

Oxford Economics is one of the world's leading providers of economic analysis, forecasts and consulting advice. Founded in 1981 as a joint venture with Oxford University's business college, Oxford Economics enjoys a reputation for high quality, quantitative analysis and evidence-based advice. For this, it draws on its own staff of 30 highly-experienced professional economists; a dedicated data analysis team; global modeling tools, and a range of partner institutions in Europe, the US and in the United Nations Project Link. Oxford Economics has offices in London, Oxford, Dubai, Philadelphia, and Belfast.

2. Key Findings

Key findings in 2018

Tourism is an integral part of the Tempe regional economy, and the industry made significant contributions to economic growth in 2018.

Tempe had more than 4 million visitors in 2018.

Overnight visitors spent \$299 per trip and day visitors spent \$68 per trip.

Visitors to Tempe spent \$851 million in 2018, which generated a total of \$1.2 billion in total business sales, including indirect and induced impacts.

Tourism in Tempe generated \$143 million in tax revenues in 2018, including nearly \$83 million in state and local revenues, saving households in the City more than \$1,200 each in state and local taxes.

Including direct, indirect, and induced impacts, 9,310 jobs were sustained by visitors to Tempe in 2018 with total income of \$355 million.

Approximately 7% (1 in 14) of all jobs in Tempe were sustained by tourism.

An estimated 41% of tourism-supported jobs were in the food and beverage sector, 20% were in accommodations, and 16% were in recreation, and 11% in retail.

Tourism drives jobs and income growth in Tempe.



3. 2018 Trends

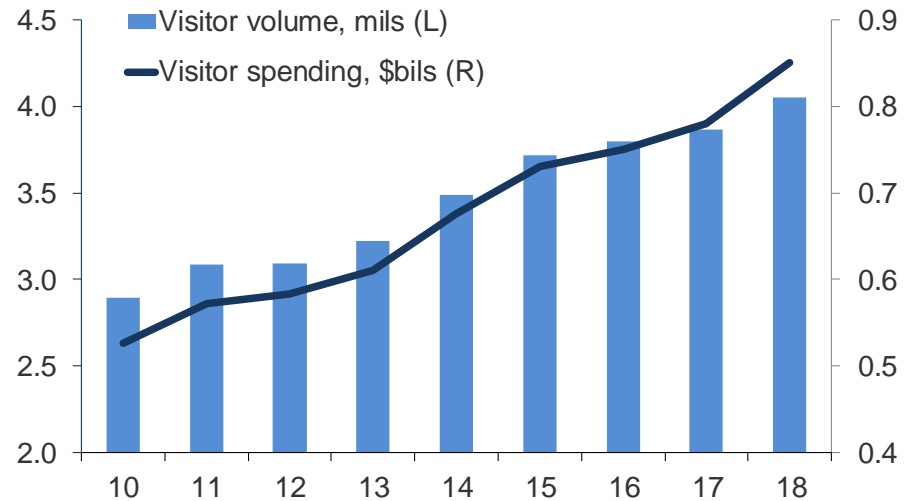
2018 Trends

Tempe visitation and visitor spending have expanded since 2010.

Visitor volume and spending expanded in 2018, driven by employment and income growth in broader Arizona and in neighboring states.

An estimated 4.0 million visitors spent \$851.5 million in 2018, increases of 4.9% and 9.1% respectively from 2017.

Tempe Visitor Volume and Spending



Source: Tourism Economics

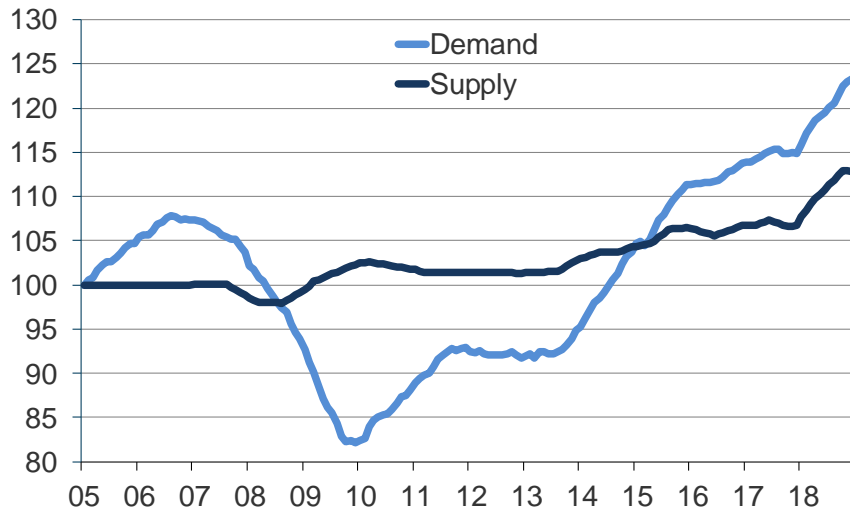
| Tempe Visitor Volume and Spending | | | | | |
|-----------------------------------|-------|-------|-------|-------|-------|
| | 2014 | 2015 | 2016 | 2017 | 2018 |
| Visitor volume (mils) | 3.491 | 3.717 | 3.797 | 3.864 | 4.053 |
| % change | 8.4 | 6.5 | 2.2 | 1.8 | 4.9 |
| Visitor spending (\$mils) | 675.9 | 730.6 | 750.3 | 780.5 | 851.5 |
| % change | 10.6 | 8.1 | 2.7 | 4.0 | 9.1 |

2018 Trends

Room demand in Tempe is outpacing that of room supply. In 2018, demand was 23.4% above that of 2005, while supply was 12.8% higher. In 2018, demand rose 7.3%, faster than the 5.7% expansion in supply. With demand growth stronger, the occupancy rate ticked up to 71.7% from 70.6% a year earlier.

Demand Continues to Outpace Supply

Room demand and supply, 12-mo sum, indexed Jan 2005 = 100



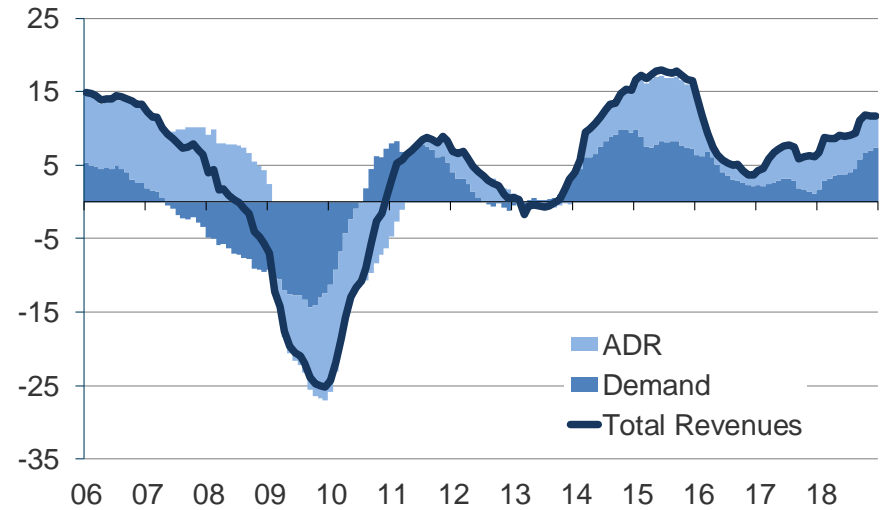
Sources: STR, Tourism Economics

Revenue growth is roughly balanced between room demand and room rate growth.

Contribution to overall revenue growth has been roughly balanced in recent years, between stronger room demand and rising room rates (ADR). In 2018, total room revenues grew 11.7% with demand accounting for about two-thirds of that growth. Average rates increased to nearly \$111 in 2018, a change of 4.1% from the year before.

Balanced Revenue Growth in Tempe

Contribution to revenue growth, 12-mo smoothed, % change year ago



Sources: STR, Tourism Economics

2018 Trends

Since 2010, tourism employment has expanded faster than job growth in Arizona and the U.S. overall, and keeping pace with overall job growth in Tempe.

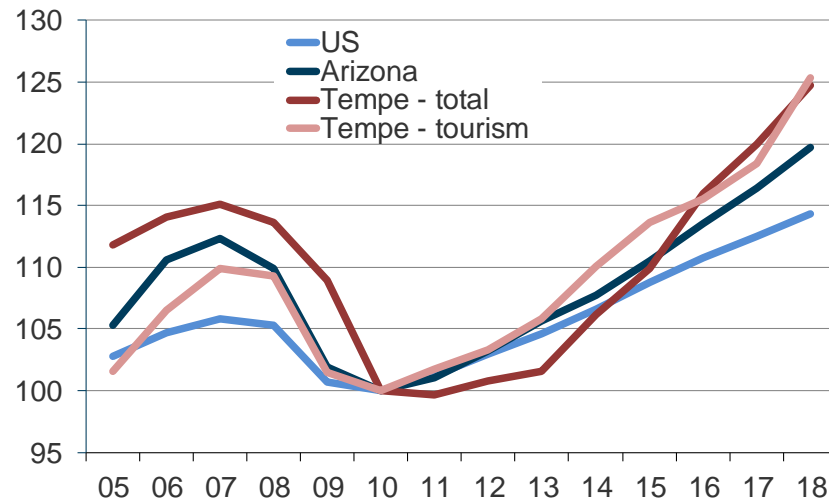
Employment in the industry is 25.3% higher than it was in 2010.

The industry added more than 180 jobs per year in Tempe, averaging annual growth of 2.9% since 2010, faster than 2.3% for the state overall, and the U.S. at 1.7% per year.

Tourism employment growth in Tempe is outpacing that of Arizona and the U.S. overall.

Job Growth in Tempe Outpaces AZ and US

Employment, indexed 2010=100



Sources: U.S. BLS, AZ EPS, Tourism Economics

4. Visitors and Spending

Visitor segmentation

Most visitors to Tempe stay overnight and come for leisure.

A total of 4.0 million visitors came to Tempe in 2018.

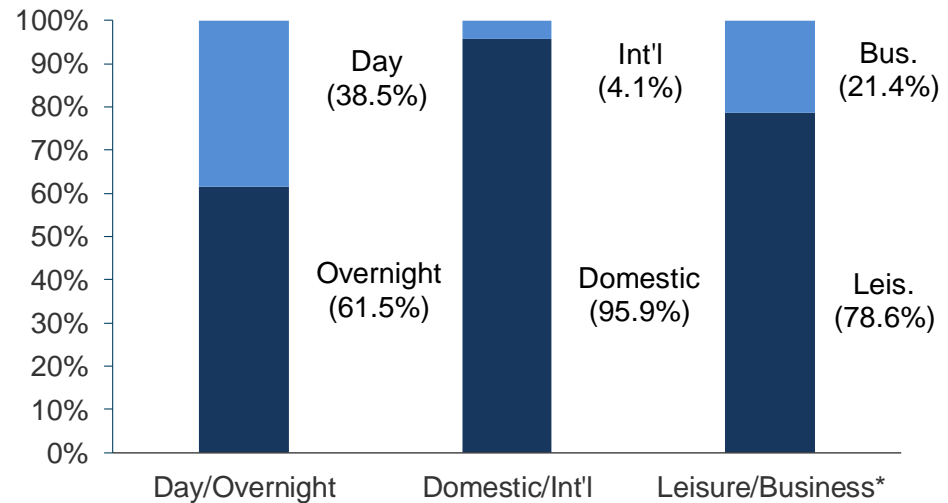
Overnight visitation amounted to 2.5 million, or 61.5% of total volume and 87.5% of total spending.

Most visitors, 78.6%, came to Tempe for leisure, and 21.4% came for business.

The average overnight stay was 3.0 days and average party size was 2.7.

International visitors amounted to 0.2 million in 2018, accounting for 4.1% of total volume, but they tend to spend more and accounted for nearly 13% of total spending.

Tempe Visitor Characteristics

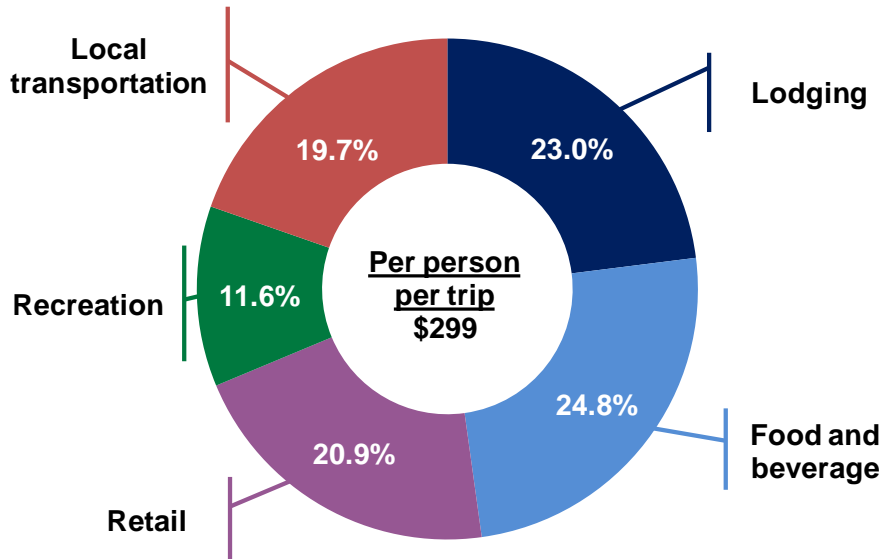


Sources: D.K. Shifflet, Longwoods Int'l, TE Global City Travel Database
Note*: domestic only

Composition of visitor spending

Tempe's variety of tourism offerings are reflected in distributed visitor spending, with lodging and food each accounting for about a quarter of the total. Spending on retail shopping and local transportation each account for about one-fifth, while recreation spending accounts for just under 12% of the total. On average, overnight visitors spend just under \$300 per person per trip to Tempe.

Tempe Overnight Visitor Spending Profile

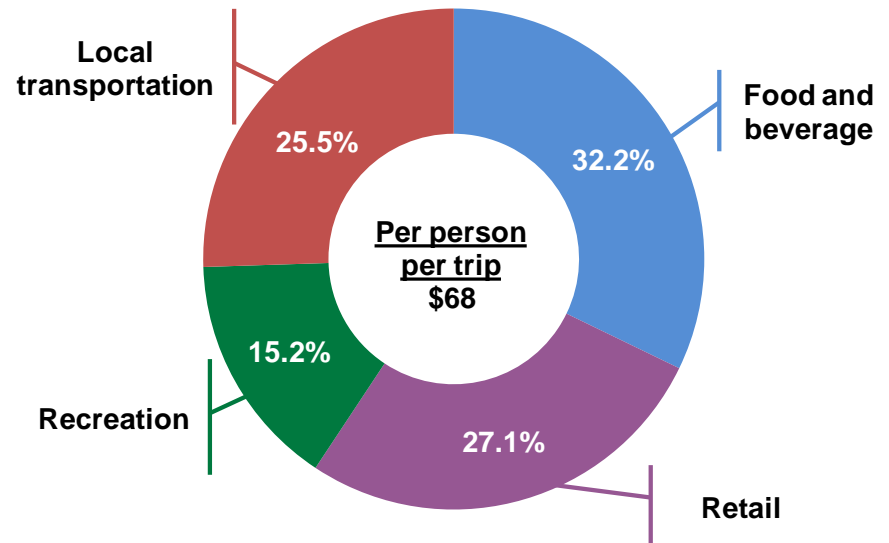


Sources: D.K. Shifflet, Tourism Economics

Overnight visitors to Tempe spend primarily on lodging, food, and retail

Day visitors to Tempe spend \$68 per person per trip. Most day visitor spending comes in food and beverage, followed by retail shopping, local transportation, and then recreation. With lower per person spending day visitation accounts for 36% of volume and only 12% of spending.

Tempe Day Visitor Spending Profile



Sources: D.K. Shifflet, Tourism Economics

Visitor spending trends

Visitor spending on lodging increased 11% in 2018.

Total visitor spending expanded 9.1% in 2018, a pick up from a year earlier.

Growth was led by lodging at 11%, food and beverage at 8.7%, and then recreation at 8.6%.

Retail spending expanded 6.5%, and higher gas prices boosted spending on local transportation.

Local transportation includes car rentals, taxi, gasoline, parking, and spending on any other local ground transportation.

Tempe Visitor Spending By Category

US\$ Millions

| | 2014 | 2015 | 2016 | 2017 | 2018 | 2017-18 % ch |
|----------------------|--------------|--------------|--------------|--------------|--------------|-----------------|
| Lodging | 121.6 | 142.1 | 145.6 | 154.5 | 171.4 | 11.0% |
| Food and beverage | 162.1 | 180.7 | 191.3 | 201.5 | 219.0 | 8.7% |
| Retail | 150.4 | 160.8 | 170.9 | 173.2 | 184.6 | 6.5% |
| Recreation | 84.4 | 92.2 | 92.5 | 94.7 | 102.8 | 8.6% |
| Local transportation | 157.4 | 154.7 | 150.1 | 156.5 | 173.6 | 11.0% |
| Total | 675.9 | 730.6 | 750.3 | 780.5 | 851.5 | 9.1% |
| % change | 10.6% | 8.1% | 2.7% | 4.0% | 9.1% | |

Note: Lodging includes ancillary spending at hotels in addition to room revenues

Fuel price trends

Average gasoline prices in the Phoenix metro area have been on the rise in recent years; they rose 11% in 2017 and another 22% in 2018. Despite the increases, prices are still lower than the peaks in 2013.

The rising gas prices likely reduced some spending in other categories and have potential to undermine consumer confidence.

The Oxford Economics forecast calls for oil prices to remain below \$60 per barrel out to 2022, which implies gas prices in Tempe below \$3.50 per gallon for an extended period.

Fuel prices rose in 2018, likely undermining visitor spending in other categories.

Gas Prices Are On the Rise

West Region, all grades, dollars per gallon



Source: Energy Information Administration

Note: West Region reflects EIA PADD 5, excluding California

5. Economic impacts

Tourism sales

Total visitor spending amounted to \$1.2 billion in 2018.

Direct visitor spending of \$851.5 million generated \$145.9 million in indirect impacts and \$177.8 million in induced impacts.

Adding direct, indirect, and induced impacts together, the total economic impact sums to \$1.2 billion in 2018.

| Gross Output (Business Sales) | | | | |
|--------------------------------------|---------------|-----------------|----------------|----------------|
| (US\$ Million) | | | | |
| | Direct | Indirect | Induced | Total |
| Agriculture, Fishing, Mining | - | 0.6 | 0.5 | 1.0 |
| Construction and Utilities | - | 10.2 | 6.0 | 16.3 |
| Manufacturing | - | 4.4 | 3.5 | 7.8 |
| Wholesale Trade | - | 5.9 | 8.1 | 14.0 |
| Air Transport (local) | - | 1.0 | 1.4 | 2.5 |
| Other Transport | 69.7 | 12.4 | 3.8 | 85.9 |
| Retail Trade | 207.5 | 1.5 | 11.0 | 220.0 |
| Gasoline Stations | 56.9 | 3.9 | 3.9 | 64.7 |
| Communications | - | 9.3 | 10.0 | 19.3 |
| Finance, Insurance and Real Estate | 47.0 | 40.0 | 59.0 | 146.1 |
| Business Services | - | 34.9 | 15.7 | 50.6 |
| Education and Health Care | - | 0.5 | 30.1 | 30.6 |
| Recreation and Entertainment | 98.1 | 7.2 | 3.1 | 108.3 |
| Lodging | 171.4 | 0.1 | 0.1 | 171.7 |
| Food & Beverage | 196.1 | 2.7 | 9.7 | 208.4 |
| Personal Services | 4.7 | 4.2 | 5.1 | 14.0 |
| Government | - | 7.1 | 6.8 | 14.0 |
| TOTAL | 851.5 | 145.9 | 177.8 | 1,175.2 |

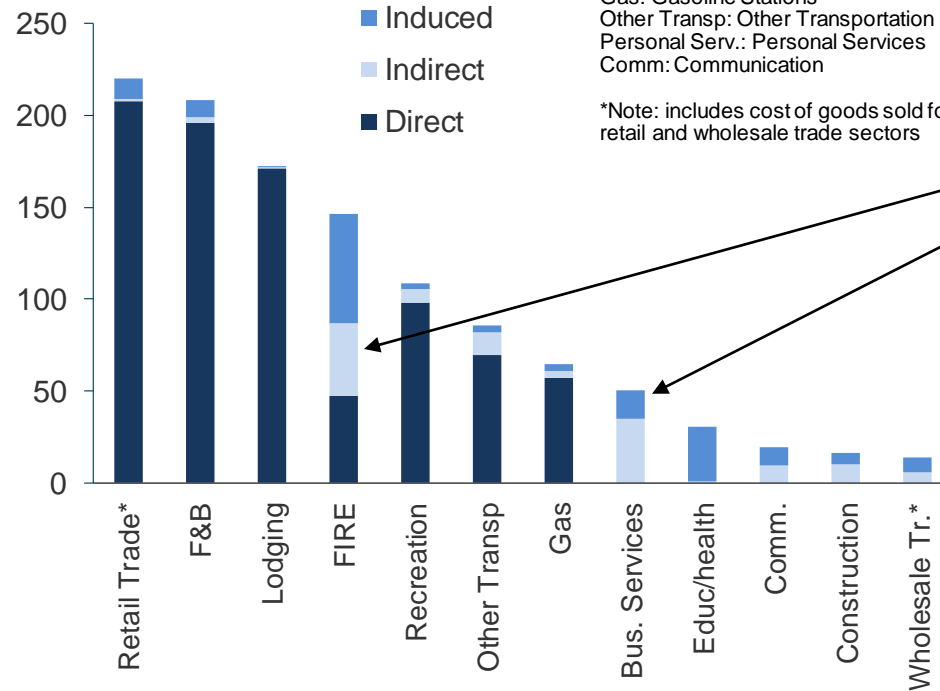
* Direct sales include cost of goods sold for retail and wholesale trade sectors

Tourism sales

Indirect benefits came primarily in finance, real estate, and insurance, and business services.

Gross Output by Industry

\$ million



F&B: Food and Beverage
 FIRE: Finance, Insurance, Real Estate
 Bus. Services: Business Services
 Gas: Gasoline Stations
 Other Transp: Other Transportation
 Personal Serv.: Personal Services
 Comm: Communication

*Note: includes cost of goods sold for retail and wholesale trade sectors

Significant indirect benefits

Tourism employment

Tourism-supported employment cuts across all sectors of the Tempe economy.

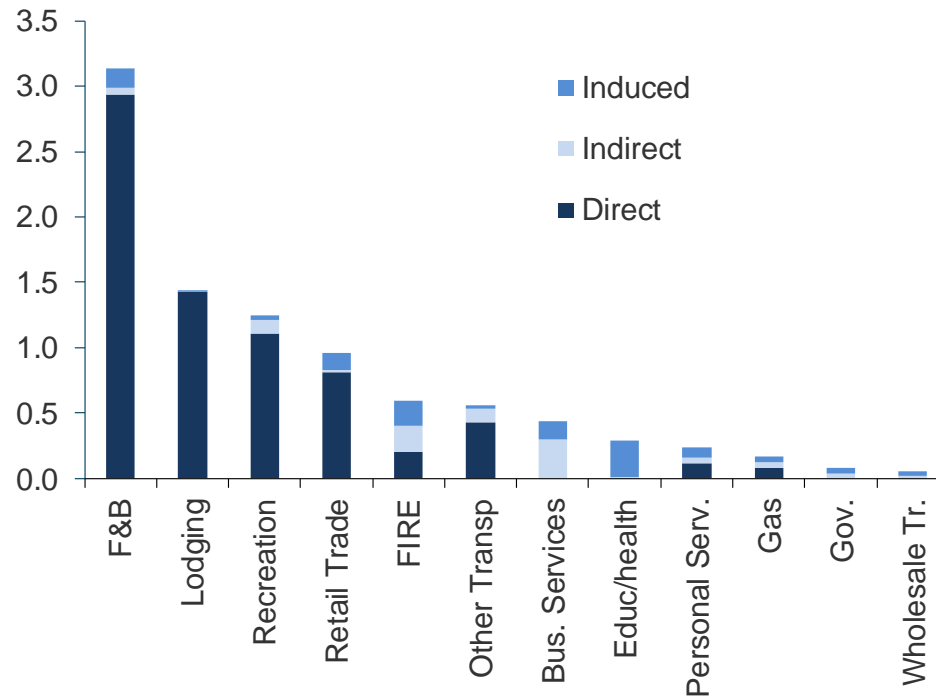
As a labor-intensive collection of services, tourism-related sectors are significant Tempe employers.

The more than 9,300 jobs supported by Tempe tourism span most sectors of the economy, either directly or indirectly.

The most significant indirect impacts are in business services, personal services, and FIRE.

Tourism Employment by Industry

Thousands



Tourism employment intensity by industry

Tourism accounts for a significant portion of employment in several industries.

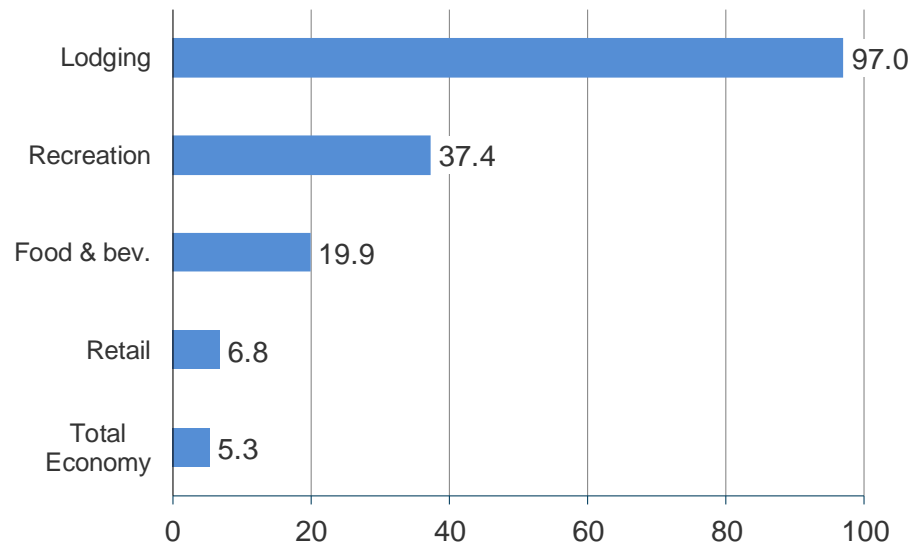
Direct visitor spending accounts for nearly all employment in lodging, at 97% of all lodging jobs.

Tourism's employment share in other industries is significant as well, at 37.4% of recreation and almost 19.4% of food and beverage employment, and 6.8% of retail jobs were supported by visitor spending.

Overall, direct tourism jobs account for 5.3% of all jobs in Tempe.

Tempe Tourism Employment Share

Direct jobs as a share of total by industry, %



Source: Tourism Economics

Tourism employment

Direct visitor spending sustained more than 7,100 jobs in 2018, or 5.3% of all jobs in the City.

Including indirect and induced jobs, a total of 9,310 jobs were sustained by tourism in 2018, accounting for 7.0% of all jobs in Tempe. This translates to 1 in 14 jobs in Tempe

Tourism-supported employment amounted to more than 9,310 jobs in 2018.

| Tourism Employment | | | | |
|------------------------------------|--------------|------------|--------------|--------------|
| | Direct | Indirect | Induced | Total |
| Agriculture, Fishing, Mining | - | 2 | 2 | 3 |
| Construction and Utilities | - | 29 | 17 | 46 |
| Manufacturing | - | 14 | 8 | 22 |
| Wholesale Trade | - | 24 | 32 | 56 |
| Air Transport (local) | - | 3 | 4 | 6 |
| Other Transport | 433 | 98 | 28 | 559 |
| Retail Trade | 815 | 16 | 125 | 956 |
| Gasoline Stations | 81 | 44 | 44 | 170 |
| Communications | - | 23 | 19 | 42 |
| Finance, Insurance and Real Estate | 205 | 196 | 192 | 593 |
| Business Services | - | 295 | 146 | 442 |
| Education and Health Care | - | 8 | 279 | 287 |
| Recreation and Entertainment | 1,105 | 103 | 35 | 1,243 |
| Lodging | 1,430 | 1 | 1 | 1,432 |
| Food & Beverage | 2,938 | 48 | 151 | 3,137 |
| Personal Services | 119 | 41 | 76 | 236 |
| Government | - | 37 | 42 | 79 |
| TOTAL | 7,127 | 981 | 1,202 | 9,310 |

Tempe tourism in context

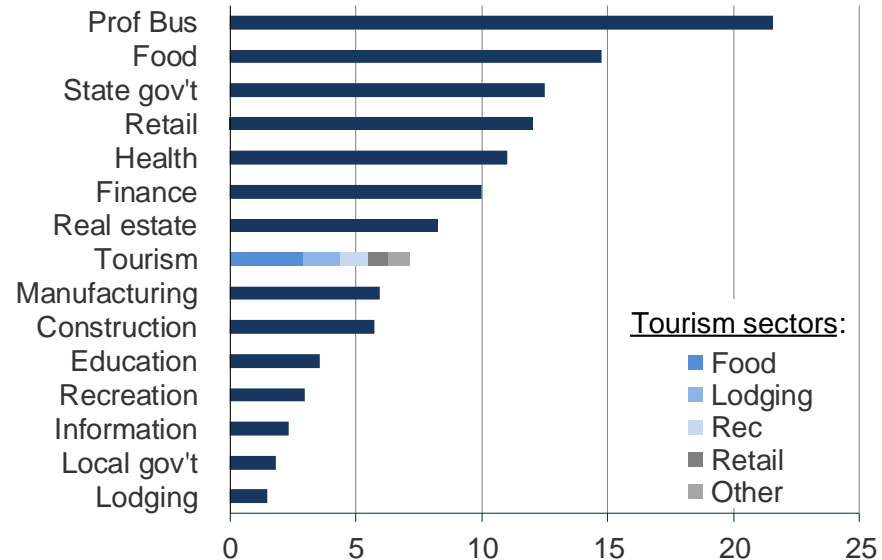
When taken together as an industry, tourism is the 8th largest employer in the Tempe region.

With more than 7,000 direct jobs, tourism is the 8th largest employer in the Tempe region.

When taken together as an industry, tourism employs more people than manufacturing, construction, education, information, and local government.

Tempe Jobs by Industry

2018, Thousands



Sources: BEA, BLS, U.S. Census, Tourism Economics

Tourism income

Visitors and their spending sustained \$243.7 million in direct income earned, primarily in food and beverage, lodging, and recreation.

When including indirect and induced benefits across other industries, a total of \$355.2 million in income was earned in the City in 2018.

Tourism sustained a total of more than \$355 million in income for employees working in Tempe's Tourism industry in 2018.

| Tourism Labor Income (Compensation) | | | | |
|--|---------------|-----------------|----------------|--------------|
| (US\$ Million) | | | | |
| | Direct | Indirect | Induced | Total |
| Agriculture, Fishing, Mining | - | 0.1 | 0.1 | 0.1 |
| Construction and Utilities | - | 2.1 | 1.2 | 3.3 |
| Manufacturing | - | 0.8 | 0.5 | 1.3 |
| Wholesale Trade | - | 2.2 | 3.1 | 5.3 |
| Air Transport (local) | - | 0.2 | 0.3 | 0.6 |
| Other Transport | 27.6 | 4.7 | 1.5 | 33.8 |
| Retail Trade | 26.6 | 0.1 | 4.8 | 31.4 |
| Gasoline Stations | 3.7 | 2.0 | 2.0 | 7.8 |
| Communications | - | 1.9 | 1.5 | 3.4 |
| Finance, Insurance and Real Estate | 10.6 | 8.5 | 9.7 | 28.8 |
| Business Services | - | 17.7 | 8.3 | 26.0 |
| Education and Health Care | - | 0.3 | 17.0 | 17.3 |
| Recreation and Entertainment | 41.4 | 3.0 | 1.1 | 45.5 |
| Lodging | 57.5 | 0.0 | 0.0 | 57.6 |
| Food & Beverage | 72.5 | 1.3 | 3.8 | 77.7 |
| Personal Services | 3.8 | 2.3 | 3.4 | 9.5 |
| Government | - | 3.5 | 2.4 | 5.8 |
| TOTAL | 243.7 | 50.8 | 60.6 | 355.2 |

Tourism tax revenue generation

\$83 million in state and local taxes were generated in 2018.

Total tourism-generated tax revenues amounted to \$143 million in 2018.

Of this, \$82.9 million accrued at the state and local level.

State tax revenues included \$22.4 million in sales tax.

Of the \$43.2 million in local tax revenues included, tourism generated \$10.0 million in sales tax revenues and \$11.5 million in bed taxes.

State and local tax revenues helped to relieve \$1,204 in tax burden for each household in Tempe.

| Tourism-Generated Revenues | |
|-----------------------------------|--------------|
| Tax Revenues | |
| 2018, \$Millions | |
| | Amount |
| Federal | |
| Personal Income | 24.4 |
| Corporate | 12.0 |
| Indirect business | 5.3 |
| Social Security | 18.4 |
| Federal total | 60.1 |
| State | |
| Sales | 22.4 |
| Personal Income | 4.1 |
| Corporate | 1.4 |
| Social Security | 0.9 |
| Lodging | 9.4 |
| Other Taxes and Fees | 1.5 |
| State total | 39.7 |
| Local (City and County) | |
| Sales | 10.0 |
| Lodging | 11.5 |
| Property | 19.2 |
| Other Taxes and Fees | 2.5 |
| Local total | 43.2 |
| TOTAL | 143.0 |

5. Additional notes

Destination promotion is economic development

Destination marketing supports economic development through four channels, extending its impact beyond direct visitor spending. Destination marketing attracts visitors who might not already consider visiting the destination. Destination marketing also raises the profile of a city among potential investors, builds transport accessibility, raises the quality of life for residents, and attracts major events that build awareness.

As a result, places that succeed as destinations are more likely to succeed in broader economic terms.

Four channels of catalytic impacts generate benefits that extend beyond direct effects of driving visitation:



Oxford Economics (2014, November) "Destination Promotion: An Engine of Economic Development: How destination promotion drives economic development." Produced in connection with Destination & Travel Foundation. [Link](http://www.oxfordeconomics.com/engine) to <http://www.oxfordeconomics.com/engine>

Description of spending categories

| Spend Category | Description |
|-----------------------|---|
| Lodging | Includes visitor spending in accommodation sector. This includes food and other services provided by hotels and similar establishments. |
| Recreation | Includes visitors spending within the arts, entertainment and recreation super-sector. |
| Local transport | Includes all forms of local transport services such as taxis, limos, trains, rental cars, and buses. |
| Shopping | Includes visitor spending in all retail sectors within the Tempe economy. |
| Service stations | Visitor spending on gasoline. Only the margin counts as local economic impact because it reflects the value-added at the local level. |
| Second homes | Where appropriate, spending associated with the upkeep of seasonal second homes for recreational use as defined by the Census Department. |
| Food and beverage | Includes all visitor spending at restaurants and bars in Tempe. |