ECONOMIC IMPACT OF TOURISM IN TEMPE 2019 AND 2020

Prepared for: Tempe Tourism Office



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INTRODUCTION

The travel sector is an integral part of the Tempe, AZ economy and the broader regional economy. Visitors generate significant economic benefits to households, businesses, and government alike and represent an important driver of the region's future. Gross output (business sales) attributable to tourism spending in the City of Tempe totaled \$1.2 billion in calendar year (CY) 2019.

By monitoring the visitor economy, policymakers can inform decisions regarding the funding and prioritization of the sector's development. They can also carefully monitor its successes and future needs. This is particularly true for the City of Tempe, as the visitor economy was severely affected in 2020 by the COVID-19 pandemic. By establishing a baseline of economic impacts, the industry can track its progress over time as recovery takes hold. To quantify the economic significance of the tourism sector in Tempe, Tourism Economics has prepared a comprehensive analysis detailing the far-reaching impacts arising from visitor spending. The results of this study show the scope of the travel sector in terms of direct visitor spending, as well as the total economic impacts, jobs, and fiscal (tax) impacts in the broader economy.

The full economic impacts are presented for the 2019 calendar year, measured in terms of direct spending, gross business sales, employment, income, and tax revenues generated.

A supplemental analysis examines the impacts of the COVID-19 pandemic on visitor volume and spending in calendar year 2020 and the on-going recovery in the visitor economy.



METHODOLOGY AND DATA SOURCES

An IMPLAN input-output model was constructed for the Maricopa County region. 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. Modeling results were then calibrated to reflect the benefits realized only in the City of Tempe. Estimates of visitor expenditures in the City of Tempe based on several sources including:

- Smith Travel Research (STR) data on hotel room demand, supply, and revenues.
- Visitor profile survey research completed by DK. Shifflet, a national consumer research firm.
- Data from the US National Travel and Tourism Office (NTTO) and Tourism Economics proprietary database Global City Travel (GCT) were consulted to develop estimates for international visitor volume and spending.
- Gasoline price data were obtained from the U.S. Energy Information Administration
- Industry data on employment, wages and sales from the U.S. Census, the Bureau of Economic Analysis, and the Bureau of Labor Statistics.



KEY FINDINGS

KEY FINDINGS

Tourism was expanding in Tempe through 2019 but was severely impacted by the COVID-19 pandemic.

Visitation, spending, and employment

Tourism is an integral part of the Tempe regional economy and is a key driver of business sales, employment, and tax revenue. Visitor volume to Tempe expanded 2.9% per year, on average, from 2015 to 2019, and spending grew 4.7% per year. In CY 2019, 7% (1 in 14) of all jobs in Tempe were sustained by tourism.

Visitation in CY 2020 was reduced by health and safety concerns of travelers and by travel restrictions and business closures. As a result, visitor spending was lower and the industry was more than 30% smaller in 2020 compared with the prior year.



Visitor Spending

Visitors to Tempe spent nearly \$884 million in 2019, 3.8% more than in 2018. This direct spending generated \$1.2 billion in total business sales, including indirect and induced impacts.

Visitor volume expanded

Visitor volume to Tempe increased 2.8% in 2019, to 4.2 million.



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Employment supporter

A total of 9,698 jobs were sustained by visitors to the City of Tempe in 2019, generating \$363 million in income for workers in the City.

Fiscal Contributions

Tourism in the City of Tempe generated \$156 million in tax revenues in 2019, with \$96.7 million accruing to state and local government.



TOURISM ECONOMY TRENDS TO 2019

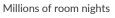
TOURISM ECONOMY TRENDS

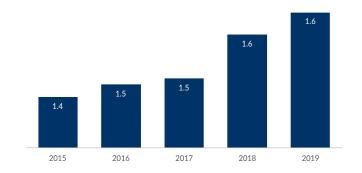
Hotel industry

Room demand in the City of Tempe expanded 3.5% per year, on average, from 2015 to 2019.

Room demand and revenues expanded through 2019; room demand by 3.5% per year on average, and revenues by 7% per year. Demand reached 1.6 million room-nights and total room revenues peaked at \$187 million in 2019.

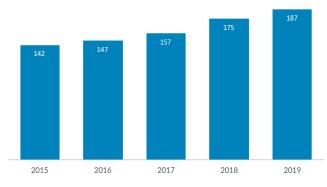
Hotel room demand





Hotel room revenues

Millions of nominal dollars



Sources: STR, Tourism Economics



TOURISM ECONOMY TRENDS

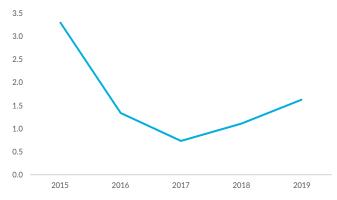
Hotel industry

Rising occupancy pushes up prices.

As demand outpaced supply, tighter occupancy rates pushed up average room rates 3.4% per year on average. Occupancy stood at 73.3% and average room rates were at \$114 in 2019.

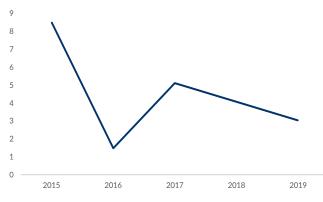
Hotel occupancy 2015-2019

Amounts expressed as the change in occupancy rate, percentage points



Average daily rate (ADR) 2015-2019

Amounts expressed as year over year percent change



Sources: STR, Tourism Economics



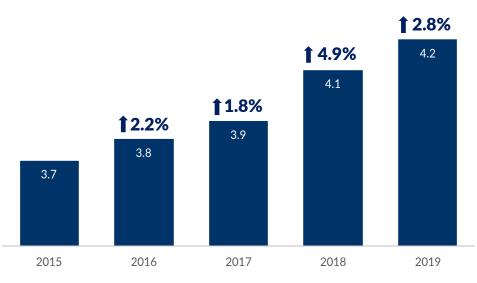
Total visitor count

Visitation reached 4.2 million in 2019.

Total visitor volume grew consistently from 2015 to 2019, reaching 4.2 million in 2019, averaging 2.9% growth per year.

Tempe visitor volume, level and annual growth

Amounts in millions of visitors and year-on-year percentage growth



Source: Tourism Economics



Total visitor volume trends

Visitor volume growth was led by overnight visitation.

Through 2019, growth in visitor volume was led by overnight visitors, expanding 3.5% per year on average. The rate of growth outpaced day visitation growth at 2.3% per year on average. In 2019, overnight visitors accounted for 60.1% of all domestic visitors to the City.

Visitor volume to Tempe

Amounts in billions of nominal dollars and growth rates

	2015	2016	2017	2018	2019	2019 Growth	CAGR 15-19
Total visitor volume	3.72	3.80	3.86	4.05	4.17	2.8%	2.9%
Domestic	3.54	3.63	3.69	3.88	3.99	3.0%	3.0%
Day	1.45	1.49	1.53	1.56	1.59	2.1%	2.3%
Overnight	2.09	2.14	2.16	2.32	2.40	3.5%	3.5%
International	0.17	0.17	0.17	0.18	0.18	-0.5%	0.4%

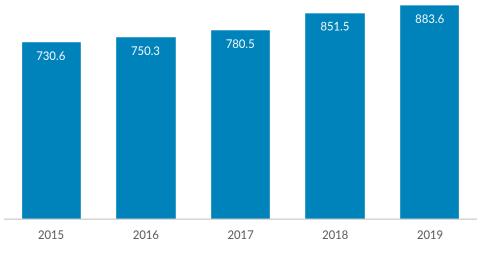


Total visitor spending

Visitor spending expanded to \$883.6 million.

Tempe total visitor spending Amounts in millions of nominal dollars

Expanding visitor volume brought more spending. Through 2019, total visitor spending in Tempe reached \$883.6 million and averaged 4.9% growth per year since 2015.



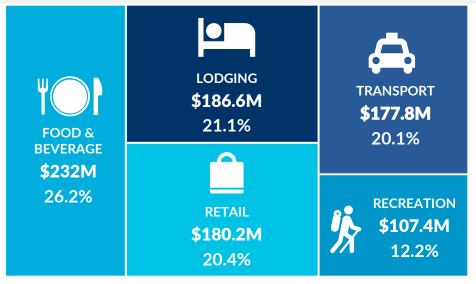


Total visitor spending by category

Visitors to the City of Tempe region spent \$883.6 million across a range of sectors in 2019.

Visitors spent \$232 million on food and beverages, \$187 million on lodging, another \$180 million on retail shopping, \$178 million on local transportation, and \$107 million on recreation.

\$884 MILLION TOTAL VISITOR SPENDING



Note: Lodging spending is calculated as an industry, including meetings, catering, etc.



Total visitor spending trends

Visitor spending reached \$883.6 million in 2019.

Visitor Spending in Tempe

Amounts in billions of nominal dollars and growth rates

Visitor spending increased 3.8% in 2019, led by growth in lodging and food and beverage at 8.9% and 5.7%, respectively. Spending on recreation and local transportation expanded 4.5% and 2.4% respectively, while retail spending declined slightly.

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	2015	2016	2017	2018	2019	Growth	15-19
						1	
Total visitor spending	730.6	750.3	780.5	851.5	883.6	3.8%	4.9%
Lodging	142.1	145.6	154.5	171.4	186.6	8.9%	7.0%
Food and beverage	180.7	191.3	201.5	219.0	231.5	5.7%	6.4%
Retail	160.8	170.9	173.2	184.6	180.2	-2.4%	2.9%
Recreation	92.2	92.5	94.7	102.8	107.4	4.5%	3.9%
Transporatation	154.7	150.1	156.5	173.6	177.8	2.4%	3.5%

Source: Tourism Economics



2019

CAGR

ECONOMIC IMPACT 2019: TOTAL TOURISM IN TEMPE

ECONOMIC IMPACTS IN CONTEXT

Spending, jobs, and income impacts in context



VISITOR SPENDING

The \$884 million in visitor spending corresponds to \$2.4 million per day in visitor spending on average throughout the year.



PERSONAL INCOME

The \$363 million in total income generated by tourism is the equivalent of \$4,960 in income per household in Tempe, on average.



EMPLOYMENT

The number of total jobs sustained by tourism accounts for 7.0% of jobs in Tempe.



STATE AND LOCAL TAXES

Just considering the local portion, these tax revenues would cover the average salaries for 2,200 teachers, 1,100 police officers, or 1,000 firefighters in Maricopa County.

Sources: BLS, BEA, US Census, Tourism Economics



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How visitor spending generates employment and income

Our analysis of tourism's impact in the City of Tempe begins with actual spending by visitors, but also considers the downstream effects of this injection of spending into the local economy. To determine the total economic impact of tourism in the City, we input visitor spending into a model of the Tempe regional economy created in IMPLAN. The model calculates three distinct types of impact: direct, indirect, and induced.

The impacts on business sales, jobs, wages, and taxes are calculated for all three levels of impact.

- Direct Impacts: Visitors create direct economic value within a discrete group of sectors (e.g. recreation, transportation). This supports a relative proportion of jobs, wages, taxes, and GDP within each sector.
- 2. Indirect Impacts: Each directly affected sector also purchases goods and services as inputs (e.g. food wholesalers, utilities) into production. These impacts are called indirect impacts.
- 3. Induced Impacts: Lastly, the induced impact is generated when employees whose wages are generated wither directly or indirectly by visitors, spend those wages in the local economy.

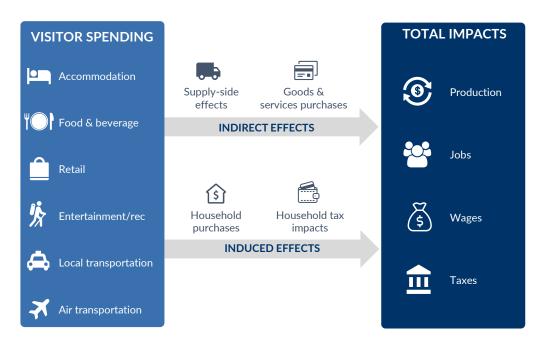


How visitor spending generates employment and income

Economic impact flowchart

IMPLAN is particularly effective because it calculates these three levels of impact – direct, indirect, and induced – for a broad set of indicators. These include the following:

- Spending
- Wages
- Employment
- Federal Taxes
- State Taxes
- Local Taxes





Business sales impacts by industry

Visitors spent \$884 million in Tempe in 2019. This supported a total of \$1.2 billion in business sales when indirect and induced impacts are considered.

Business sales impacts by industry

Amounts in millions of current	Direct		Indirect		Induced	Total
dollars	sales	sales			sales	sales
Total, all industries	\$ 883.6	\$	174.6	\$	193.0	\$ 1,251.2
By industry						
Retail Trade	\$ 256.5	\$	2.8	\$	18.2	\$ 277.6
Food & Beverage	\$ 218.4	\$	5.9	\$	11.9	\$ 236.2
Lodging	\$ 186.6	\$	0.0	\$	0.1	\$ 186.7
Finance, Insurance and RE	\$ 29.2	\$	53.7	\$	64.1	\$ 147.0
Recreation and Entertainment	\$ 107.4	\$	3.8	\$	2.8	\$ 114.1
Other Transport	\$ 85.5	\$	10.8	\$	4.6	\$ 100.9
Business Services	\$ -	\$	44.5	\$	17.7	\$ 62.2
Education and Health Care	\$ -	\$	0.4	\$	31.8	\$ 32.3
Communications	\$ -	\$	16.5	\$	9.8	\$ 26.2
Wholesale Trade	\$ -	\$	7.9	\$	9.2	\$ 17.2
Personal Services	\$ -	\$	6.8	\$	9.6	\$ 16.4
Construction and Utilities	\$ -	\$	10.9	\$	5.0	\$ 15.9
Government	\$ -	\$	5.5	\$	3.7	\$ 9.3
Manufacturing	\$ -	\$	3.6	\$	2.3	\$ 5.9
Air Transport	\$ -	\$	1.0	\$	1.8	\$ 2.8
Agriculture, Fishing, Mining	\$ -	\$	0.3	\$	0.3	\$ 0.6

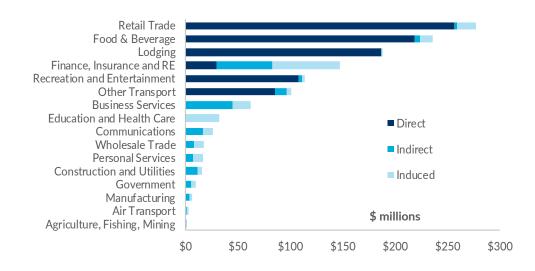


Business sales impacts by industry

While the majority of sales are in industries directly serving visitors, about \$98 million in business sales were in finance, insurance and real estate as a result of selling to tourism businesses – indirect benefits.

Total indirect and induced benefits sum to nearly \$368 million in business sales.

Business sales impacts by industry





Personal income impacts by industry

Tourism generated \$256 million in direct income and \$363 million when indirect and induced impacts are considered.

Personal income impacts by industry

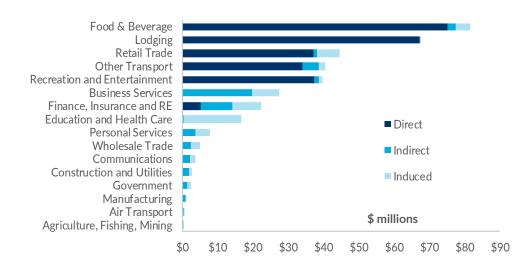
Amounts in millions of current	Direct		Indirect		Induced		Total
dollars	income		income	income		income	
Total, all industries	\$ 256.0	\$	50.1	\$	56.7	\$	362.7
By industry							
Food & Beverage	\$ 75.2	\$	2.4	\$	4.1	\$	81.6
Lodging	\$ 67.2	\$	0.0	\$	0.0	\$	67.2
Retail Trade	\$ 37.1	\$	1.0	\$	6.5	\$	44.5
Other Transport	\$ 34.1	\$	4.5	\$	1.8	\$	40.4
Recreation and Entertainment	\$ 37.3	\$	1.3	\$	1.0	\$	39.6
Business Services	\$ -	\$	19.6	\$	7.8	\$	27.4
Finance, Insurance and RE	\$ 5.2	\$	9.0	\$	8.1	\$	22.3
Education and Health Care	\$ -	\$	0.2	\$	16.4	\$	16.6
Personal Services	\$ -	\$	3.6	\$	4.2	\$	7.8
Wholesale Trade	\$ -	\$	2.3	\$	2.5	\$	4.8
Communications	\$ -	\$	2.2	\$	1.5	\$	3.7
Construction and Utilities	\$ -	\$	1.7	\$	0.9	\$	2.6
Government	\$ -	\$	1.4	\$	1.0	\$	2.3
Manufacturing	\$ -	\$	0.7	\$	0.4	\$	1.1
Air Transport	\$ -	\$	0.2	\$	0.4	\$	0.6
Agriculture, Fishing, Mining	\$ -	\$	0.0	\$	0.0	\$	0.1



Personal income impacts by industry

Most of the personal income impacts are the direct result of visitor spending, compared to other impact results.

Personal income impacts by industry





Employment impacts by industry

Tourism supported a total of 9,698 jobs in 2019 when indirect and induced impacts are considered.

Employment impacts by industry

Amounts in millions of current	Direct	Indirect	Induced	Total
dollars	jobs	jobs	jobs	jobs
Total, all industries	7,471	1,025	1,202	9,698
By industry				
Food & Beverage	3,180	86	160	3,426
Lodging	1,620	-	1	1,621
Recreation and Entertainment	1,140	41	33	1,214
Retail Trade	881	27	186	1,094
Other Transport	441	112	58	611
Finance, Insurance and RE	209	238	158	605
Business Services	-	337	139	476
Education and Health Care	-	4	269	273
Personal Services	-	78	117	195
Wholesale Trade	-	26	28	54
Communications	-	28	19	47
Construction and Utilities	-	20	12	32
Government	-	12	9	21
Manufacturing	-	12	7	19
Air Transport	-	2	4	6
Agriculture, Fishing, Mining	-	2	2	4



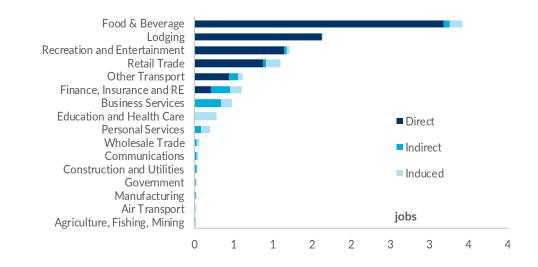
Employment impacts by industry

As a labor-intensive collection of services, tourism-related sectors represent significant employment to Tempe.

The nearly 9,700 jobs supported by tourism span every sector of the economy, either directly or indirectly.

The most significant indirect impacts come in business services, education and healthcare, and FIRE.

Employment impacts by industry





DIRECT TOURISM INDUSTRY

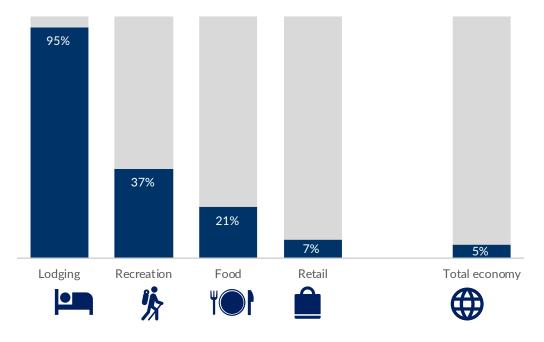
Tourism employment

Tourism accounted for a significant share of employment in several industries.

Tourism supports significant shares of several industries – nearly all of lodging, 37% of recreation, 21% of food and beverage employment, and 7% of retail employment.

Tourism employment intensity

Amounts in percentage of total industry employment





TOURISM IN CONTEXT

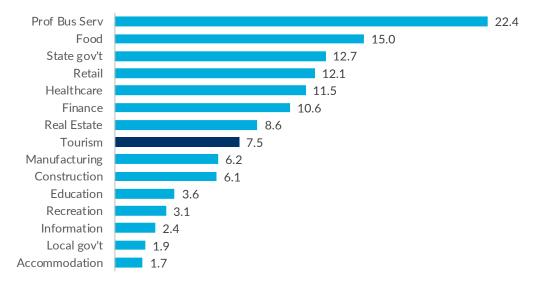
Tourism employment

When taken as an industry, tourism is a major employer in the City of Tempe.

Tourism jobs span across sectors and include many small businesses and independent proprietors. Total *direct* employment from tourism in 2019, when taken as a group, amounted to nearly 7,500 jobs and ranked as the 8th largest employer in the City.

Employment in the City of Tempe, by major industry

Amounts in thousands of jobs, 2019 estimates



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



Fiscal (tax)

Total tourism-generated tax revenues amounted to \$156.5 million in 2019.

State and local tax revenues totaled \$96.7 million in 2019.

Fiscal (tax) impacts

\$ 159.3
\$ 62.6
\$ 29.9
\$ 5.9
\$ 5.2
\$ 21.6
\$ 96.7
\$ 5.8
\$ 19.9
\$ 35.1
\$ 7.3
\$ 0.8
\$ 23.0
\$ 4.8
\$ \$\$\$\$ \$ \$\$\$\$\$



Fiscal (tax)

Tourism generated \$44.2 million in local tax revenues in 2019.

Both state and local government benefit from tourism-generated tax revenues. \$52.4 million in state revenues were generated in 2019, and local government accrued \$44.2 million in revenues. Key revenue sources for local government included lodging tax, sales tax, and property taxes.

Fiscal (tax) impacts

Amounts in millions of current dollars			
	State	Local	
Total tax revenues	\$ 52.4	\$	44.2
Personal income	\$ 5.8	\$	-
Lodging	\$ 10.3	\$	9.6
Sales	\$ 23.2	\$	11.9
Social security	\$ 7.3	\$	-
Corporate income	\$ 0.8	\$	-
Property tax	\$ 3.2	\$	19.7
Other taxes and fees	\$ 1.8	\$	3.0



COVID-19 IMPACTS IN 2020

Total visitor count

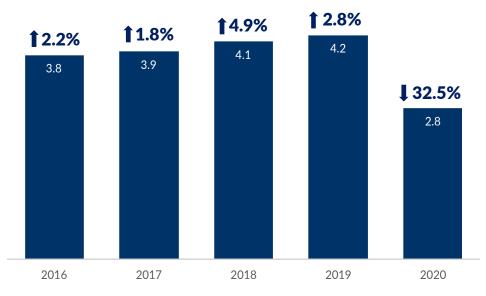
Visitation levels fell 32.5% in 2020.

Due to concerns over public health and safety, travel restrictions, and business closures, total visitor volume to Tempe fell significantly in 2020, as it did in most destinations.

Visitor volume declined to 2.8 million in 2020.

Tempe visitor levels and annual growth

Amounts in millions of visitors and year-on-year percentage growth



Source: Tourism Economics



Total visitor volume trends

Visitor volume fell to 2.8 million in 2020.

The decline in visitor volume was more severe on the domestic overnight side at -33.4%, versus a 27.6% decline in domestic day visitors.

Visitor volume to Tempe

Amounts in billions of nominal dollars and growth rates

	2016	2017	2018	2019	2020	2020 Growth	CAGR 16-20
Total visitor volume	3.80	3.86	4.05	4.17	2.81	-32.5%	-7.2%
Domestic	3.63	3.69	3.88	3.99	2.75	-31.1%	-6.7%
Day	1.49	1.53	1.56	1.59	1.15	-27.6%	-6.2%
Overnight	2.14	2.16	2.32	2.40	1.60	-33.4%	-7.0%
International	0.17	0.17	0.18	0.18	0.06	-65.1%	-22.7%



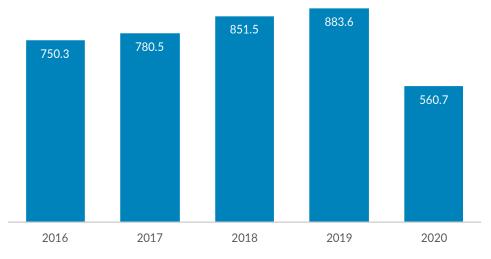
Total visitor spending

Visitor spending decreased 36.5% to \$560.7 million.

Tempe total visitor spending Amounts in billions of nominal dollars

The COVID-19 pandemic cut about \$320 million of visitor spending out of the local economy in 2020.

Prices in lodging, retail, recreation, and gasoline, were all lower in 2020 compared with a year earlier. Prices for prepared food were the only category with some inflation at 3% above 2019, likely driven more by local demand.





Total visitor spending trends

Visitor spending fell to \$561 million in 2020.

Visitor spending decreased 36.5% in 2020, driven by primarily by lower visitor volume, but also by lower prices in most categories.

Visitor Spending in Tempe

Amounts in billions of nominal dollars and growth rates

	2016	2017	2018	2019	2020	2020 Growth	CAGR 16-20
Total visitor spending	750.3	780.5	851.5	883.6	560.7	-36.5%	-7.0%
Lodging	145.6	154.5	171.4	186.6	104.3	-44.1%	-8.0%
Food and beverage	191.3	201.5	219.0	231.5	151.7	-34.5%	-5.6%
Retail	170.9	173.2	184.6	180.2	107.5	-40.3%	-10.9%
Recreation	92.5	94.7	102.8	107.4	68.1	-36.6%	-7.4%
Transporatation	150.1	156.5	173.6	177.8	129.1	-27.4%	-3.7%



COVID-19 IMPACTS

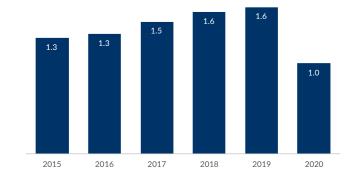
Hotel industry

Overall, room demand in Tempe contracted 38.4% in 2020.

Room revenues were impacted by both lower demand and reduced room rates and declined to \$104 million. Room demand fell to 1.0 million roomnights, the lowest level in nearly a decade.

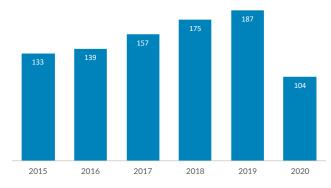
Hotel room demand

Millions of room nights



Hotel room revenues

Millions of nominal dollars



Sources: STR, Tourism Economics



COVID-19 IMPACTS

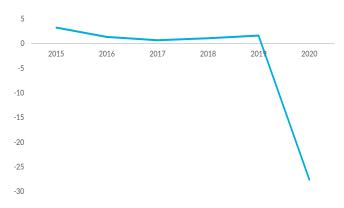
Hotel industry

Occupancy fell to 45.6% for the year overall from 73.3%, and ADR was lower at \$103.

Occupancy rates and room rates tend to move together, and with occupancy soft, room rates fell accordingly. Occupancy was nearly 28 percentage points lower than a year earlier, and average room rates were about 9% lower in 2020.

Hotel occupancy 2015-2020

Amounts expressed as the change in occupancy rate, percentage points



Average daily rate (ADR) 2015-2020

Amounts expressed as year over year percent change





COVID-19 IMPACTS IN THE REGION

Labor market

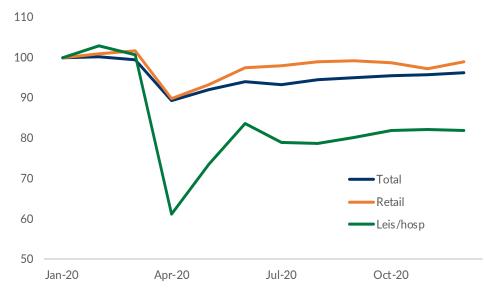
Leisure & Hospitality was hit hard in the Tempe region.

The impact of the COVID-19 pandemic was felt across all sectors of the economy, but Leisure & Hospitality was more severely affected. While retail employment was reduced to a lesser degree and recovery was more robust, the broader Leisure & Hospitality sector experienced a deeper trough in the Spring of 2020 and recovery has been more muted.

Leisure & Hospitality includes Arts, Entertainment and Recreation, Accommodations, and Food and Beverage Services, sectors that serve significant non-local demand.

Employment trends in the broader Phoenix MSA

Employment index Jan 2020 = 100



Sources: BLS, Tourism Economics



POST-COVID RECOVERY

RECOVERY IS ON-GOING

Tourism trends

Recovery since the trough in the Spring of 2020 has been decent, but there is still room to go.

With most restrictions lifted, vaccination rates rising, and significant pent-up demand, many Americans started to travel and spend again. As of August 2021, monthly room demand in Tempe had expanded nearly fourfold and monthly room revenues were five times greater than at the April 2020 trough.

Job growth in the broader Leisure and hospitality sector has outpaced total job growth since the trough, coming from a much lower base in April 2020.

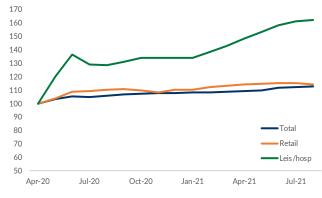
Hotel performance since April 2020

Tempe monthly room demand and revenues, indexed April 2020 = 100



Job growth since April 2020

Phoenix MSA jobs by industry, indexed April 2020 = 100



Sources: STR, BLS, Tourism Economics



ABOUT TOURISM ECONOMICS

Tourism Economics is an Oxford Economics company with a singular objective: combine an understanding of the travel sector with proven economic tools to answer the most important questions facing our clients. More than 500 companies, associations, and destination work with Tourism Economics every year as a research partner. We bring decades of experience to every engagement to help our clients make better marketing, investment, and policy decisions. Our team of highlyspecialized economists deliver:

- Global travel data-sets with the broadest set of country, city, and state coverage available
- Travel forecasts that are directly linked to the economic and demographic outlook for origins and destinations
- Economic impact analysis that highlights the value of visitors, events, developments, and industry segments
- Policy analysis that informs critical funding, taxation, and travel facilitation decisions
- Market assessments that define market allocation and investment decisions

Tourism Economics operates out of regional headquarters in Philadelphia and Oxford, with offices in Belfast, Buenos Aires, Dubai, Frankfurt, and Ontario.

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