



**TOURISM  
ECONOMICS**

AN OXFORD ECONOMICS COMPANY

# **A COST/BENEFIT ANALYSIS OF SAVANNAH'S TOURISM SECTOR**

**SEPTEMBER 2017**

## Tourism Economics

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## 2017

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# EXECUTIVE SUMMARY

Tourism Economics engaged with the City of Savannah to provide a comprehensive economic impact and cost-benefit analysis for the Savannah tourism sector. The analysis quantifies the economic impact of tourism in detail, as well as the fiscal, economic, and social costs of sustaining the tourism sector.

## SOCIAL IMPACTS

Our analysis of local surveys suggests that residents are generally satisfied with Savannah’s tourism industry and encourage its further development. Traffic and congestion appear to be the main concern for residents. Conversely, residents are proud that their city is known as a premier destination and appreciate the shopping, dining, and cultural opportunities it brings. Most of all they support the industry due to the perceived economic benefits it provides.

Our analysis of the National Gallup-Sharecare Well-Being Index indicates that the size of a local tourism industry does not significantly impact a community’s well-being. In sum, we could find no evidence that the tourism sector imposes a significant social cost on the City of Savannah.

## CONGESTION IMPACTS

We found that the added cost of congestion (above what is to be expected in a city of Savannah’s size) is equal to \$22.6 million. However, this additional cost could be attributable to factors such as Savannah’s urban design. Further investigation found no discernible relationship between the size of a community’s tourism sector and the per capita cost of congestion on a national level, and therefore indicate that the cost of additional congestion should not be attributed solely to the tourism sector and the \$22.6 million should be considered a very high-end estimate.

## ECONOMIC IMPACTS

We consider income for residents to be the main economic benefit of tourism. Our analysis indicates that \$2.5 billion in tourism industry spending generates \$866 million in income when indirect and induced impacts are considered.

## FISCAL IMPACTS

Tourism supports a total of \$98.7 million in government revenue for the City of Savannah (Table 10). User fees are the greatest source of revenue, generating \$27.0 million dollars. Property taxes (\$21.1 million), sales and business taxes (\$15.9 million), and selective taxes (\$20.8 million) are other key contributors.

**\$22.6m**

High-end estimate of congestion costs due to tourism

**\$866m**

Local income generated by tourism

**\$98.7m**

Government revenue generated for the City of

**\$51.3m**

City of Savannah expenses associated with tourism

In total, the fiscal expenses associated with the tourism sector equal \$51.3 million. These are incurred in a combinations of recurring budget items dedicated to support and promote tourism, police expenses, city services, overhead, and other expenses.

**COST-BENEFIT COMPARISON**

Given that we could find no evidence that the tourism sector imposes a significant social cost (or at least a cost significantly higher than the social benefits) on the City of Savannah, we focus our analysis on fiscal and economic costs and benefits.

We consider two types of costs and benefits. One for residents, and one for the city government. For residents, we consider income generated by tourism to be the benefit of tourism and congestion to be the cost. For the city government, we consider the government revenue from taxes and user fees to be the benefit and the expenses to be the cost.

**\$844m**

Total net benefit for residents

Residents receive \$866.4 million of income supported by tourism. They suffer \$22.6 million in lost fuel and time due to additional congestion in the city. Residents therefore receive a net benefit of \$843.7 million, or a benefit of \$5,740 per resident (Table 1). They receive \$38.36 dollars of benefit for every dollar of cost.

**Table 1: Cost benefit analysis for residents**

Income supported by tourism	\$866,358,000
Cost of congestion	\$22,585,000
Net benefit	\$843,773,000
Net benefit per resident	\$5,740
Benefit-to-cost ratio	38.36

Source: Tourism Economics

**\$5,740**

Net benefit per resident

The City of Savannah receives \$98.7 million of government revenue supported by tourism, and the City of Savannah incurs \$51.2 million of expenses relating to tourism. The City of Savannah therefore receives a net benefit of \$47.5 million, or a benefit of \$323 per resident (Table 2). For every dollar spent supporting the tourism industry, the City of Savannah gains \$1.93 in revenue.

**Table 2: Cost benefit analysis for the City of Savannah**

Government revenue supported by tourism	\$98,747,000
City of Savannah expenses on tourism	\$51,328,000
Net benefit	\$47,419,000
Net benefit per resident	\$323
Benefit-to-cost ratio	1.92

Source: Tourism Economics

**\$47.5m**

Total net benefit for the City of Savannah

**\$1.93-to-\$1**

Benefit to cost ratio for the City of Savannah

# INTRODUCTION

Tourism Economics (“we”) engaged with the City of Savannah to provide a comprehensive economic impact and cost-benefit analysis for the Savannah tourism<sup>1</sup> sector. The analysis quantifies the economic impact of tourism in detail, as well as the fiscal, economic, and social costs of sustaining the tourism sector.

The fiscal costs of tourism measured include expenses dedicated for tourism specific purposes, police costs associated with tourism, and a category that combines city services, overhead and other expenses. Other costs include congestion and the potential negative social impacts of tourism. These costs are compared to the positive economic and fiscal impacts of tourism.

The benefits of tourism are measured by both the income and city revenue generated by tourism. This includes not only spending by visitors, but also the capital investment required to develop and sustain the tourism sector.

The report is organized in five main sections

- (1) The social impacts of tourism
- (2) Congestion impacts
- (3) Economic impact
- (4) Fiscal impact
- (5) Summary and conclusion

Three appendices give further details on social impacts, research methods, and economic impacts.

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<sup>1</sup> Tourists are defined as individuals who travel 50 miles or more to the City of Savannah for leisure, business, or personal reasons. This includes day and overnight trips.

# 1. SOCIAL IMPACTS

## 1.1 INTRODUCTION

To evaluate the social costs of tourism, we rely on three main data sources.

- (1) A survey of Savannah residents and business owners performed by John Salazar and James Duffy of the University of South Carolina Beaufort
- (2) The Tourism Management Plan Survey conducted by The EXPERIENCE Institute
- (3) The Gallup-Sharecare Well-Being Index: a national study examining the psychical, economic, and social well-being of a community

## 1.2 RESIDENT ATTITUDES

### 1.2.1 University of South Carolina, Beaufort study

Salazar and Duffy randomly surveyed households in Savannah and received a total of 407 responses to their 26-question survey. This survey examined the following topics:

- (1) Frequency of visitor engagement.
- (2) Tourism’s contribution to the economy.
- (3) Tourism management.
- (4) Tourism infrastructure needs.
- (5) How tourism impacts residents.
- (6) Tourism industry program needs.
- (7) Impacts of the tourism industry on life and the community. (Salazar & Duffy, p2)

Overall, Salazar and Duffy find that the residents are very supportive of the tourism industry (see Table 3). Residents believe that tourism development should continue in the city, that tourism is a positive economic force for the city, and that the benefits of tourism outweigh the costs.

**75%**  
Residents’ agreement that the benefits of tourism outweigh the costs

**Table 3: Savannah residents’ responses to key questions**

Tourism development questions	Agreement
Tourism industry is important to Savannah’s future	90%
Proud that the city has become such a high profile destination	84%
Savannah’s Historic Landmark District is positive and should be actively encouraged	73%
Economic questions	
Local tourism community contributes to the city’s economic health	82%
Tourism related tax revenues benefit residents	74%
Cost benefit questions	
The positive benefits of tourism outweigh the negative impacts	75%
The impact of tourism in Savannah is positive and should actively be encouraged	73%

Source: University of South Carolina Beaufort

Residents also expressed a high level of agreement (3.9 on a scale of 1 to 5) that tourism contributes to “better shopping, dining and cultural opportunities for Savannah’s residents” (p6).

The authors do report concerns about local congestion, stating:

“Respondents’ perspectives on the future of the City of Savannah primarily focus on concerns about growth of the number of visitors in an area which already feels (by residents) to be too congested on surface streets... Parking, buses, and traffic which poses real and perceived inconvenience to the everyday lives of Savannah residents, and responses seems to prove that people believe that problems on these fronts will only get worse unless significant infrastructure changes are made, or alternative solutions are posed.” (Salazar & Duffy p5).

Further analysis of congestion issues can be found in section 2.

Concerns about crime are addressed in open-ended questions, however, these are typically phrased as a concern about local crime negatively impacting the tourism sector, rather than crimes by tourists impacting residents.

The authors note that residents of the downtown neighbourhoods generally have the same opinions as residents of outlying neighbourhoods, they did believe that “noise from afterhours commercial activities” is a greater concern, but they also believe that tourism creates more shopping, dining, and cultural opportunities. As would be expected, it appears that those living in the area most visited by tourists feel both the costs and benefits of tourism more intensely.

As a whole, the results of their survey led Salazar and Duffy to believe that residents are appreciative of the tourism sector and in favor of its future development. They conclude:

In the end, the residential community at large seems to really love the City of Savannah and the amenities and attractions that they can experience regularly, and that tourists come to see on their travels. The benefits of tourism are sometimes lost in the day-to-day struggles with parking and accessibility, but for the most part, might be described by residents as a “necessary evil” in order to reap the rewards of a thriving tourism industry. (p11)

While concerns about congestion, parking, and noise do arise in the survey, overall positive sentiment and hope for the future dominate the survey results.



**1.2.2 Tourism Management Plan Survey**

We also performed an independent analysis on a survey conducted by [The EXPERIENCE Institute](#) on the City of Savannah’s Tourism Management Plan. The survey received 928 total responses from the Savannah area residents, and we analyzed 390 total open-ended responses left by respondents (open-ended questions were optional). In these open-ended responses, we identified 229 complaints/concerns with the tourism industry and categorized these complaints/concerns by key theme (Table 4).

**Table 4: Complaints identified in Tourism Management Plan Survey**

Theme of complaint/concern	Responses	Percent of total complaints
Too many hotels	45	19.7%
Too many STVRs	31	13.5%
Crowding out locals	29	12.7%
Congestion	28	12.2%
Loss of authenticity	25	10.9%
Too few parking spots	25	10.9%
High cost of living	16	7.0%
Too much noise and inebriated tourists	15	6.6%
Too many trolleys, carriages, and/or tour busses	8	3.5%
Low paying jobs	7	3.1%

Sources: Tourism Economics; City of Savannah

We found that the primary concern of residents is the real or perceived imbalance between hotels/STVR and residential housing stock.

**1.3 BUSINESS OWNER ATTITUDES**

Salazar and Duffy also surveyed upper management tourism professionals in Savannah. They received a total of 173 responses to their 26-question survey. Perhaps unsurprisingly, the business owners believe strongly in tourism’s positive impact on Savannah, and disagree that tourism has reached its capacity in the city (Table 5).

**Table 5: Savannah tourism professionals’ responses to key questions**

Cost benefit questions	Agreement
The local tourism community contributes to the economic health of our community	96%
Tourism creates better shopping, dining, and cultural opportunities for residents	90%
Overall, the positive benefits of tourism outweigh the negative impacts of tourism	90%
Tourism development questions	
It appears that tourism has reached its capacity in Savannah’s Historic Landmark District	21%
I believe that Savannah is growing too rapidly due to tourism	12%
It appears that tourism has reached its capacity in the metro Savannah area	8%

Source: University of South Carolina Beaufort

The tourism professionals also agree with citizens that congestion and traffic are likely the largest issue facing the tourism/resident relationships in the city. Salazar and Duffy summarize: “It is the basic infrastructure issues of parking and traffic, with and without pedestrians, that are most often

perceived by the survey’s respondents, generating the negative feedback” (p14).

#### 1.4 WELL-BEING

The Gallup-Sharecare [Well-Being Index](#) describes itself as:

“The world’s largest data set on well-being, with over 2.5 million surveys fielded to date. The Well-Being Index provides unmatched, in-depth insight into the well-being of populations, is frequently cited by national media, and has been leveraged by Nobel laureates and academicians for peer-review and scholarly articles. Gallup interviews 500 people every day; the result is a sample that projects to an estimated 95% of U.S. adults.” (Gallup-Sharecare)

This survey examines well-being in 189 communities across the US in five key areas: purpose, social, financial, community, and physical. These separate inputs are combined into a well-being score.

Savannah scored a 60.6, ranking 162 out of the 189 communities, well below the average Well-Being score for a community of 62.0 and below other neighbouring cities (Table 6).

**Table 6: Well-Being Score data in Savannah, nearby coastal communities, and national averages**

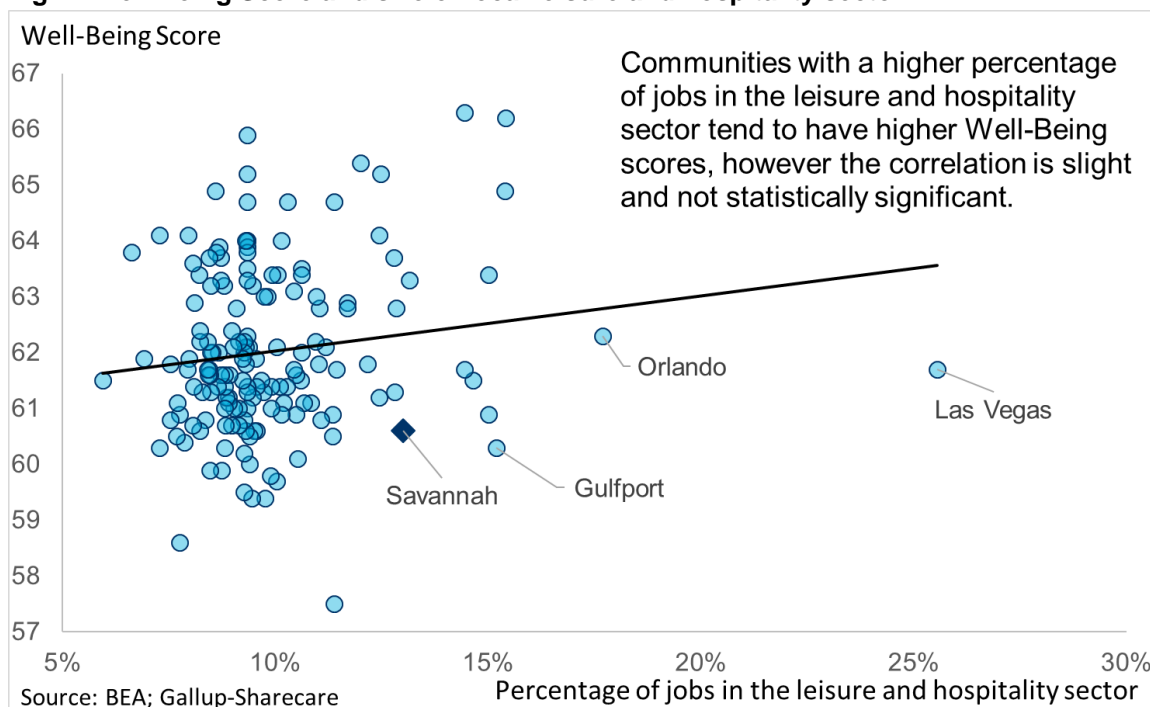
Community	Score
Hilton Head Island	64.9
Charleston	62.9
Jacksonville	62.2
Myrtle Beach	62.1
<b>National average</b>	<b>62.0</b>
<b>National median</b>	<b>61.8</b>
Savannah	60.6

Source: Gallup-Sharecare Well-Being Index

However, the local tourism sector may or may not be a factor in Savannah’s low Well-Being score. Many cities with very large tourism sectors such as Las Vegas and Orlando scored relatively well in the survey (61.7 and 62.3, respectively). To determine the importance of tourism in impacting community Well-Being, we calculated the percentage of jobs in the leisure and hospitality sector for all of the communities (using BEA data) and then examined the relationship between the size of the local tourism sector and Well-Being Score.

Statistical analysis demonstrated that while there is a slight positive correlation between the size of a community's tourism sector and its Well-Being score (Fig 1), this relationship has a very low  $R^2$  score<sup>2</sup> of 0.02 and is not statistically significant ( $p > 0.05$ ). **These results indicate that the size of a local tourism sector does not have a negative impact on a community's well-being.** See Appendix 1 for additional analysis on each of the five components of the Well-Being Index.

**Fig. 1: Well-Being Score and size of local leisure and hospitality sector**



A further examination of the data revealed that of the 11 communities that have a higher percentage of employment in the leisure and hospitality sector, only one, Gulfport, Mississippi, had a lower Well-Being Score. This indicates that Savannah's combination of a large tourism sector and poor Well-Being Score is relatively unique.

In sum, while Savannah did score poorly on the Well-Being Index, there is no evidence to suggest that the tourism industry is a root cause of this poor performance.

### 1.5 SUMMARY

We could find no evidence that the tourism sector imposes a significant social cost or benefit on the city of Savannah. Resident concerns typically revolve around congestion, which is covered in Section 2, and residents' main interests in tourism relate to perceived economic benefits, which are examined in Section 3.

<sup>2</sup> An  $R^2$  score measure the degree to which two variables are correlated, the number ranges from 0 to 1 with 0 equating to no correlation and 1 equating to perfect correlation; an  $R^2$  of 0.02 indicates that the two variables are 2% correlated, a very weak correlation.

## 2. CONGESTION IMPACTS

### 2.1 INTRODUCTION

To examine the cost of congestion in the city of Savannah, we use [Texas A&M’s Urban Mobility Scorecard](#). This study analyzes “traffic speed data collected by INRIX on 1.3 million miles of urban streets and highways, along with highway performance data from the Federal Highway Administration” (Texas A&M Transportation Institute website). This data is analyzed to calculate the amount of congestion in 471 urban areas. Additional data in the report includes the number of commuters in each community, the total annual hours of delay, and the total cost of congestion. We use 2015 data as this is the latest available.

The report gives a variety of key metrics on congestion in Chatham County including excess fuels used, hours of delay, and total costs of congestions (including both wasted fuel and commuters’ time) (Table 7).

**Table 7: Key congestion metrics in Chatham County**

Population	276,000
Excess fuel used	3,528,000
Hours of delay	8,013,000
Congestion costs	\$178,620,000
Cost per citizen	\$647

Sources: Urban Mobility Scorecard;  
US Census Bureau; Tourism Economics

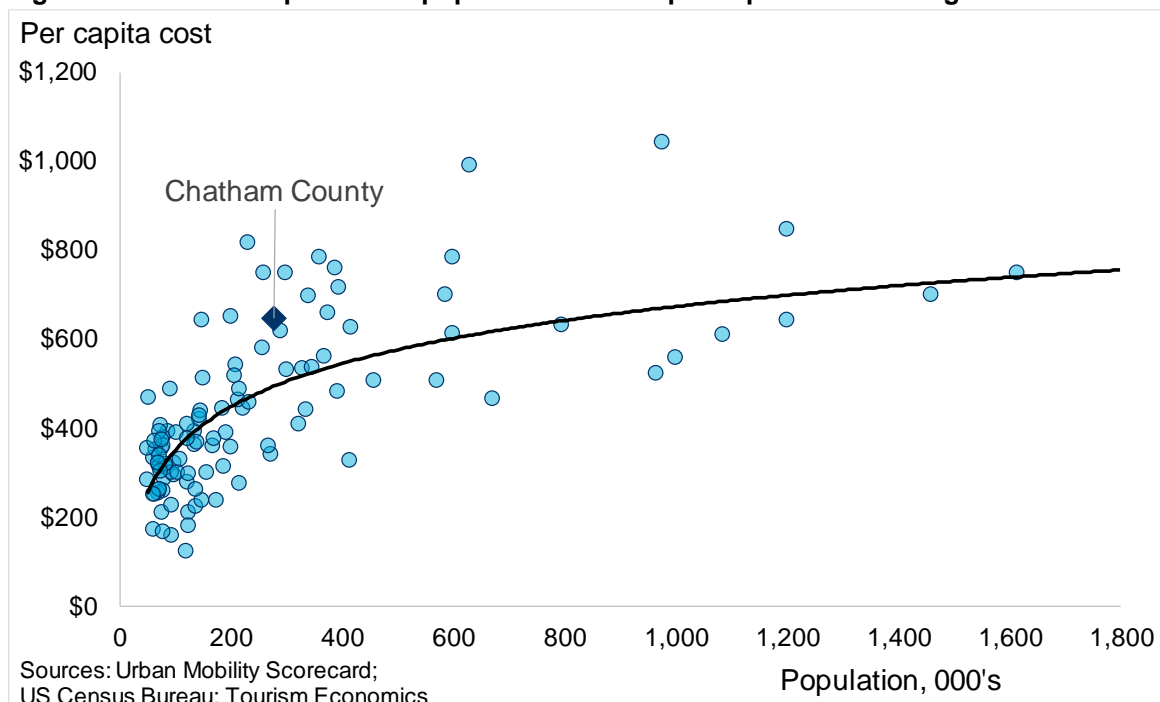
### 2.2 CONGESTION COST ANALYSIS

While these findings demonstrate that \$179 million dollars of fuel and time is wasted in Chatham County, we should account for the fact that all communities have some level of congestion and compare Chatham County’s figure to a ‘normal’ amount of congestion.

To evaluate Savannah’s level of congestion, we extracted data on the 144 communities in in the Southeast. Analysis of this data demonstrated a clear relationship between the local population size and the congestion cost per citizen. For example, congestion costs in New Orleans, LA (pop. 975,000) is \$1,040 per capita, while in Hinesville, GA (pop. 61,000), the cost is only \$171 per capita.

After evaluating several relationship types, we determined that the natural log of population was the best predictor of per capita commuting costs ( $R^2=0.54$ ,  $p<0.001$ ) (Fig. 2).

**Fig. 2: The relationship between population and the per capita cost of congestion**



This analysis demonstrates that Chatham County has a greater per capita cost of commuting than would be expected of a city its size.

To quantify the cost of this excess congestion on the City of Savannah (as opposed to the entire county), we compared its \$647 per capita cost of congestion to our line of best fit (i.e. the black line on Fig. 2). This line represents what a city of Savannah's size should expect based on a regression analysis and indicated that Savannah should expect a per capita cost of congestion of \$494. We consider this the added cost of congestion. We then multiply the difference by the population of Savannah to determine the total cost of the additional congestion, \$22.6 million (Table 8).

**\$22.6m**  
Cost of additional congestion in Savannah

**Table 8: The cost of additional congestion**

Per capita cost in Savannah	\$647
Expected per capita cost	\$494
Added cost	\$154
Population of Savannah	X 147,000
Total added cost	\$22,585,000

Sources: Urban Mobility Scorecard; US Census Bureau; Tourism Economics

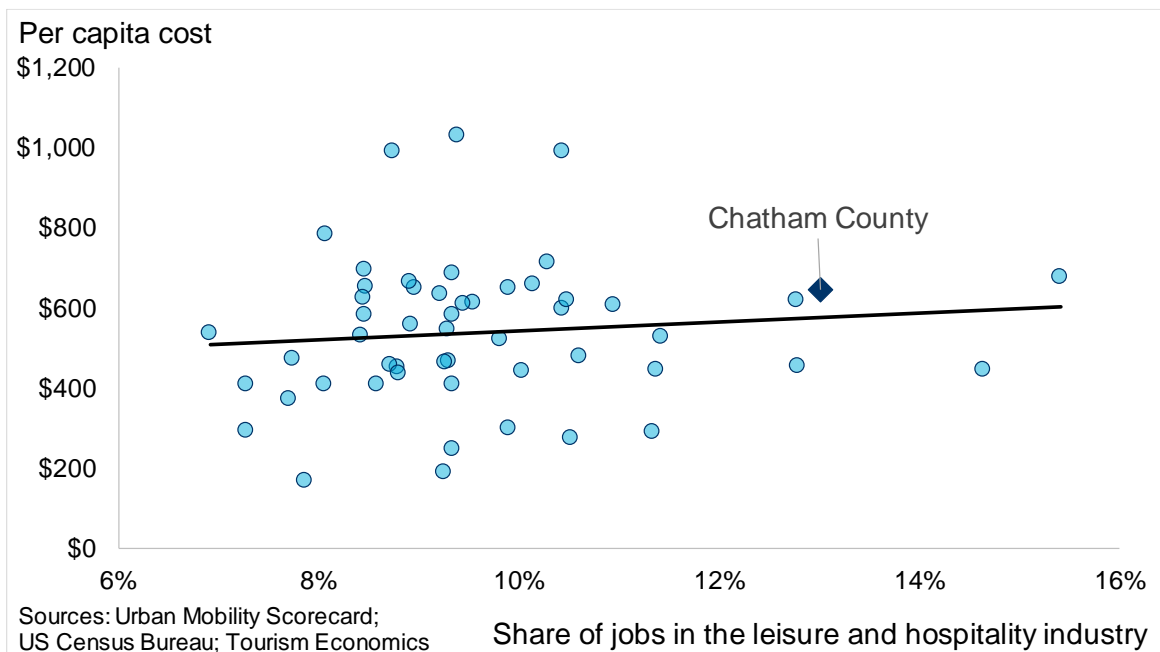
**2.3 TOURISM RELATED CONGESTION ANALYSIS**

These results demonstrate that the added cost of congestion (above what is to be expected) is equal to \$22.6 million. However, this additional cost could be attributable to any number of factors.

Therefore, we sought to analyze the relationship between the size of a city's tourism sector and congestion. We found 54 communities in which the BEA and Urban Mobility Scorecard used the same geography and compared the percentage of jobs in the leisure and hospitality sector to the congestion

cost per capita. While there is a slight positive correlation, the result shows almost no predictive power ( $R^2=0.01$ ) and is not statistically significant. This analysis indicates that the size of the local tourism sector does not impact a city's congestion (Fig. 3).

**Fig. 3: The relationship between share of jobs in the leisure and hospitality sector and per capita congestion costs**



As an additional test, we examined whether the leisure and hospitality sector impacted congestion while controlling for population size. A multivariate regression analysis demonstrates that even after controlling for population, the size of the tourism sector has no impact on congestion (Table 9). The share of jobs in the leisure and hospitality sector is not a statistically significant predictor and has essentially no predictive power on per capita congestion costs ( $PR^2=0.01$ ;  $p>0.1$ ).

**Table 9: Multivariate regression analysis results**

Dependent variable = Per capita congestion cost

	Coef.	Std. Err.	p	Partial correlation <sup>2</sup>
L&H share	987	1283	0.45	0.01
ln(population)	136	35	0.00	0.23
Constant	-351	246	0.16	--

Source: Tourism Economics; BEA; Urban Mobility Scorecard; US Census Bureau

Given the lack of any discernible relationship between the size of a community's tourism sector and the per capita cost of congestion on a national level, **we should consider the \$22.6 million dollars of additional cost to be a very high-end estimate.** Our analysis indicates that Savannah's congestion problem is not related to the large local tourism sector.

**1%**

Correlation between per capita congestion costs and the size of a community's tourism sector; a statistically insignificant amount

## 3. ECONOMIC IMPACTS

### 3.1 INTRODUCTION

Tourism is the fifth-largest private employer in the State of Georgia and supported \$16.6 billion of in-state wages (Tourism Economics, 2016). Residents of Savannah benefit from the numerous jobs needed to support the industry. To measure these impacts, we performed an economic impact analysis on Savannah's tourism sector (methodology detailed in Appendix 2). This analysis uses a combination of survey data, private sector data on hotels and air traffic, government employment and tax data, and an economic model of Savannah's economy to measure not only the impact of tourism spending but also the downstream supply chain and income effects.

### 3.2 ECONOMIC IMPACT SUMMARY

Tourism has a substantial economic impact on the City of Savannah (this includes the Savannah Airport but not Tybee Island). Our analysis indicates that in 2016, \$2.5 billion in tourism industry spending occurred in the city, including \$2.3 billion in visitor spending and \$0.2 billion in capital expenditures (i.e. new development and major renovations).

This spending ultimately generates \$3.4 billion in total business sales, \$0.9 billion in income, 27,586 total jobs (Table 10 - additional details in Appendix 3).

**Table 10: The economic impact of Savannah's tourism sector, 2016  
(dollar figures in millions)**

<b>Spending in Savannah</b>	
<b>Total tourism demand</b>	<b>\$2,464</b>
Visitor spending	\$2,254
Capital expenditures	\$210
<b>Impacts on Savannah</b>	
<b>Total business sales</b>	<b>\$3,357</b>
Direct business sales	\$2,464
Indirect and induced sales	\$893
<b>Total income*</b>	<b>\$866</b>
Direct income	\$583
Indirect and induced income	\$284
<b>Total jobs*</b>	<b>27,586</b>
Direct jobs	20,561
Indirect and induced jobs	7,025

Source: Tourism Economics

\*Jobs and income refer to jobs and income generated in Savannah. A portion of these jobs are held by individuals that are not residents of the City of Savannah.

**\$2.5b**

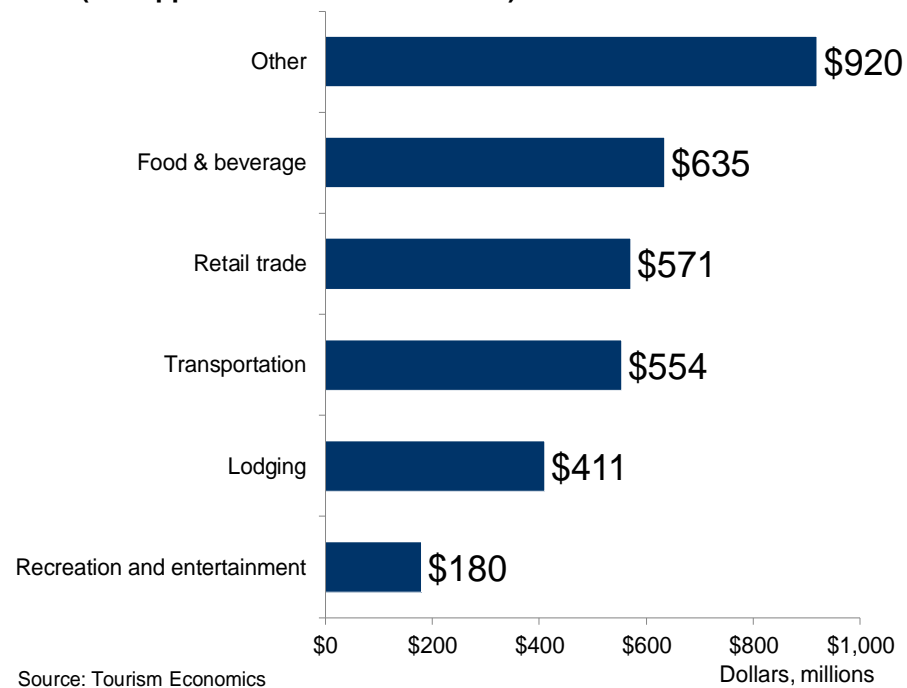
Total tourism demand in Savannah, 2016

**\$866m**

Total tourism supported income in Savannah, 2016

The food and beverage sector is the chief beneficiary of the tourism industry spending, receiving \$635 million in total business sales. Tourism spending also supported \$920 million in industries not typically associated with tourism, predominately through capital investment and induced/indirect impacts (Fig. 4).

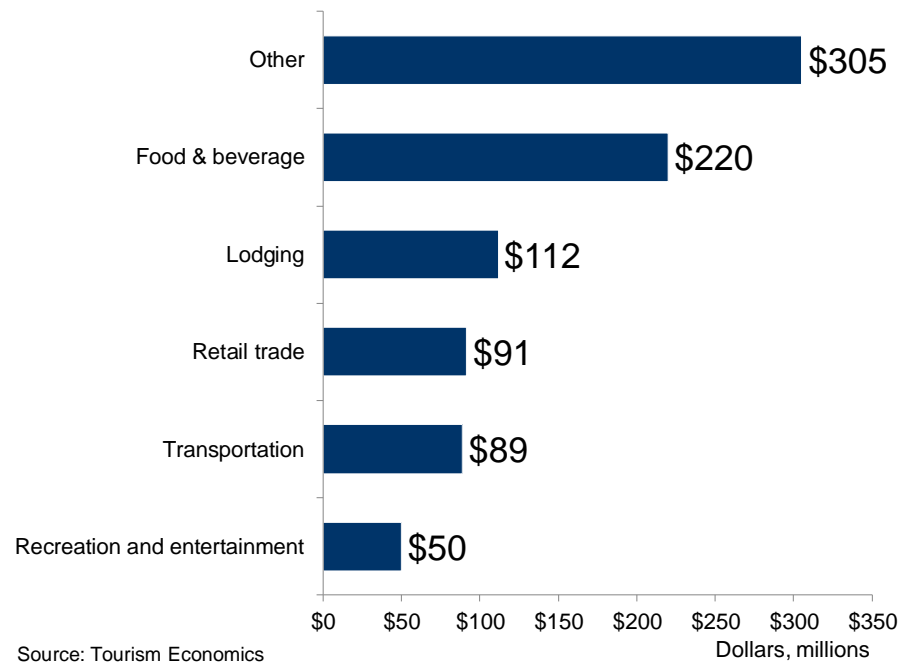
**Fig. 4: Total tourism supported business sales by sector (millions), 2016 (see appendix 3 for further details)**





The food and beverage sector also received the most income from tourism industry spending, receiving \$220 million in total income for locals. Tourism spending supported \$305 million in industries not typically associated with tourism, predominately through capital investment and induced/indirect impacts. This income is considered the chief economic impact of tourism for local residents (Fig. 5).

**Fig. 5: Total tourism supported income by sector (millions), 2016 (see appendix 3 for further details)**



## 4. FISCAL IMPACTS

### 4.1 INTRODUCTION

To measure the positive impacts of tourism on the City of Savannah’s finances, we use the economic model discussed in the previous section.

To measure the negative impacts of tourism on the City of Savannah’s finances, we examined the City’s Comprehensive Annual Financial Report (CAFR), the City’s 2017 budget (using projected 2016 figures), and other select documents provided by the City of Savannah and Visit Savannah (methodology detailed in Appendix 2). Our analysis here includes enterprise funds which are largely self-sustaining. Tourists generate additional user fees which fund the enterprise funds, but a share of the expenses of the programs under the enterprise funds are also attributed to tourists. We provide additional analysis that excludes enterprise funds in Appendix 4.

### 4.2 FISCAL BENEFITS

Tourism has a substantial fiscal impact on all levels of government. Our analysis indicates that tourism supports \$423.6 million dollars in total government revenue (Table 11) in 2016 (we use the term “government revenue” here instead of “taxes” as this figure includes service fees such as water and sewage) .

**Table 11: Government revenue generated (millions) by tourism in the city of Savannah for different levels of government, 2016**

Government	Tax revenue
Federal	\$202.2
State	\$80.0
County	\$42.7
City	\$98.7
<b>Total</b>	<b>\$423.6</b>

Sources: IMPLAN; Tourism Economics

Tourism supports a total of \$98.7 million in government revenue for the City of Savannah (Table 12). User fees are the greatest source of government revenue, generating \$27.0 million dollars. Property taxes (\$21.1 million), sales and business taxes (\$15.9 million), and selective taxes (\$20.8 million) are other key contributors.

**Table 12: Government revenue generated for the City of Savannah by the tourism industry, 2016**

Tax	Direct	Indirect/induced	Total
Property taxes	\$15.4	\$5.7	<b>\$21.1</b>
Sales and business taxes	\$12.2	\$3.7	<b>\$15.9</b>
Selective taxes*	\$20.7	\$0.1	<b>\$20.8</b>
User fees**	\$2.6	\$24.4	<b>\$27.0</b>
Other	\$10.0	\$3.9	<b>\$14.0</b>
<b>Total</b>	<b>\$60.9</b>	<b>\$37.9</b>	<b>\$98.7</b>

Sources: IMPLAN; Tourism Economics

\*includes hotel and auto rental tax

\*\*includes items such as water, sewage, parking, facility rental, etc.

**\$98.7m**

Total tourism supported government revenue for the City of Savannah in 2016

### 4.3 FISCAL COSTS

We examined three different types of fiscal costs: expenses dedicated for tourism specific purposes, police costs associated with tourism, and a category that combines city services, overhead and other expenses.

#### 4.3.1 Tourism funds

We examined the City of Savannah's 2017 adopted budget ([link](#)) to determine recurring expenses dedicated entirely to tourism. In total, we found four items with a total of \$10.0 million in projected expenses for 2016 (Table 13). Note that in some items we list the total expenditure of a department or expense type, while other specific line items are broken out as the total includes some non-tourism spending (for instance the hotel/motel tax fund also contributes \$9.6 million to the City of Savannah's general revenue fund).

**Table 13: Expenses dedicated entirely to tourism purposes, 2016**

Hotel/motel tax	
Contribution to Visit Savannah	\$6,416,025
Tourism Management & Ambassadorship	
Total expenditures	\$1,249,662
General Fund Interdepartmental	
Tourism and Promotion	\$2,232,843
River Street Hospitality Center	
Total expenditures	\$145,224
<b>Total</b>	<b>\$10,043,754</b>

Sources: Savannah 2017 budget; Tourism Economics

### 4.3.2 Police expenses

We examined the police department independently as 1) it is the second largest individual department in the city, and 2) the department possess data that allows us to estimate the percent of its effort devoted to tourists.

The Savannah-Chatham Metropolitan Police Department (SCMPD) provided a dataset of arrest and citations from August 2016 to July 2017 that included the offenses committed and the home zip code of the offender. We examined the data and found that 89.6% of incidents involved Chatham County residents (Table 14), 4.3% involved residents of a nearby county (too close to be considered tourists), and 6.2% of arrests involved individuals from far enough away to be considered tourists (i.e. the county seat was more than 50 miles from Savannah).

**Table 14: Police arrests and citations by origin of offender.**

	Incidents	Percent of total
Chatham residents	6,451	89.6%
Residents of nearby counties	307	4.3%
Residents of "tourist" counties	445	6.2%
<b>Total</b>	<b>7,203</b>	<b>100.0%</b>

Sources: Tourism Economics; SCMPD

A closer examination of the arrests of "tourists" (Table 15) indicates that many are probably not tourists as we would typically define them. "Theft by shoplifting" and "Hold for other agency" are more likely to involve career criminals than leisure travellers who perhaps had too much to drink. This indicates that 6.2% might be a high-end estimate of the SCMPD's involvement in tourism.

**Table 15: Police codes most often cited in "tourist" incidents**

Code	Incidents
Theft by shoplifting	47
Hold for other agency	38
DUI less safe alcohol	32
Possession marijuana	31
Disorderly conduct	26
Escort without a license	24
Obstruction of an officer	15
Possession of controlled substance	15
Criminal trespassing	14
Battery	10
Public drunkenness	10
Simple battery	9
DUI alcohol .08 grams or more	8

Sources: Tourism Economics; SCMPD

The SCMPD's projected budget in 2016 was \$68.8 million, therefore we estimate that \$4.3 million should be considered expenses on tourism (Table 16), though as noted above, this should be considered a high-end estimate.

**Table 16: Tourism’s share of the police budget (dollar amounts in millions)**

Police budget	\$68.8
Tourist's share of incidents	x 6.2%
<b>Tourism share of police expenses</b>	<b>\$4.3</b>

Sources: Tourism Economics; SCMPD

**\$4.3m**

Expenses by the SCMPD  
attributable to tourism

#### 4.3.3 Services, overhead and other expenses

Aside from expenses directly associated with tourism, and SCMPD expenses related to tourism, we also sought to assign a percentage of other City of Savannah’s expenses and overhead costs to tourism. These events range in their involvement with tourism (e.g. expenses on the St. Patricks Day Parade might be highly related to tourism, and expenses on Senior Services might be not at all related to tourism), however assigning a percentage to each City of Savannah expense is impossible due to lack of any appropriate data or metric so a universal ratio is applied.

In calculating the total amount of services, overhead and other expenses attributable to tourism, we use the total expenditures line projected for 2016 from the 2017 adopted budget (which has already removed inter-department transfers). From this number, we subtract the tourism funds and the police funds that have already been accounted for, and refer to the remaining expenses, \$242.6 million, as services, overhead, and other expenses in 2016 (Table 17). This category covers a range of items; the majority of these expenses are related to public works departments such as the Public Works and Water Resources Bureau and the Sanitation Bureau. These bureaus are largely funded by user fees (and thus have a much smaller impact on the city’s net fiscal position than their expenses would indicate). However, since user fees are included as a fiscal benefit (in section 4.2), they are also included here as a cost.

Other costs include general services such as the Fire and Emergency Services Bureau and the Community and Economic Development Bureau and overhead costs like General Administration. Departments such as these may have little direct involvement in the tourism industry, but tourism places additional strain on their services and should therefore be held accountable for a portion of the spending.

We assign tourism a share of these expenses in proportion to the relative size of tourism’s contribution to the economy. Based on data provided by the BEA and the Census Bureau, we estimate that there are 134,661 total jobs in the City of Savannah (this includes seasonal, part-time, self-employed, and temporary positions), and given our prior estimate of 20,561 direct tourism jobs (see Table 10), we calculate that tourism directly represents approximately 15.3% of Savannah’s economy. Therefore we assign \$37.0 million of services, overhead and other expenses to tourism.

**Table 17: Tourism's share of services, overhead and other expenses, 2016**

City of Savannah expenses	
Total expenditures	\$321.4
Tourism funds	- \$10.0
Police funds	- \$68.8
<b>Services, overhead, and other expenses</b>	<b>\$242.5</b>
Tourism's share of Savannah economy	
Total Savannah employment	134,661
Direct tourism employment	÷ 20,561
<b>Tourism's share of economy</b>	<b>15.3%</b>
Tourism's share of services, overhead, and other expenses	
Services, overhead, and other expenses	\$242.5
Tourism's share of economy	x 15.3%
<b>Tourism's share of expenses</b>	<b>\$37.0</b>

Sources: Tourism Economics; City of Savannah; BEA; Census Bureau

#### 4.3.4 Total expenses

In total, the City of Savannah's fiscal expenses related to tourism sum to \$51.3 million in 2016 (Table 18).

**Table 18: Total City of Savannah fiscal expenses associated with tourism (millions), 2016**

Tourism dedicated expenses	\$10.0
Police expenses	\$4.3
Overhead and other expenses	\$37.0
<b>Total</b>	<b>\$51.3</b>

Source: Tourism Economics

**\$51.3m**

Total fiscal expenses on tourism by the city of Savannah

# 5. COST-BENEFIT COMPARISON AND CONCLUSION

## 5.1 COST-BENEFIT COMPARISON

We consider two types of costs and benefits. One for residents, and one for the City of Savannah. For residents, we consider income generated by tourism (Section 3.2) to be the benefit of tourism and congestion (Section 2.2) to be the cost. For the City of Savannah, we consider the tax revenue (Section 4.2) to be the benefit and the expenses (Section 4.3) to be the cost.

Residents receive \$866.4 million of income supported by tourism. They suffer \$22.6 million in lost fuel and time due to additional congestion in the city (though this could be attributed to a number of factors besides tourism, we use this estimate as a high-end estimate of the costs). Residents therefore receive a net benefit of \$843.7 million, or a benefit of \$5,740 per resident (Table 19). They receive \$38.36 dollars of benefit for every dollar of cost.

**\$844m**

Total net benefit for residents

**\$5,740**

Net benefit per resident

**\$47.5m**

Total net benefit for city government

**\$1.93-to-\$1**

Benefit to cost ratio for the City of Savannah

**Table 19: Cost benefit analysis for residents**

Income supported by tourism	\$866,358,000
Cost of congestion	\$22,585,000
Net benefit	\$843,773,000
Net benefit per resident	\$5,740
Benefit-to-cost ratio	38.36

Source: Tourism Economics

The City of Savannah receives \$98.7 million of revenue supported by tourism, and the City of Savannah spends \$51.3 million on promoting and supporting tourism. The City of Savannah therefore receives a net benefit of \$47.5 million, or a benefit of \$323 per resident (Table 20). For every dollar spent supporting the tourism industry, the City of Savannah gains \$1.93 in revenue.

**Table 20: Cost benefit analysis for the City of Savannah**

Government revenue supported by tourism	\$98,747,000
City of Savannah expenses on tourism	\$51,328,000
Net benefit	\$47,419,000
Net benefit per resident	\$323
Benefit-to-cost ratio	1.92

Source: Tourism Economics

## **5.2 CONCLUSION**

While various problems associated with the tourism industry may bother residents, our findings indicate that tourism is a substantial positive force in the financial health of both city residents and the city government.

It appears that residents have, by and large, reached a similar conclusion, as Salazar and Duffy state in their report; "The benefits of tourism are sometimes lost in the day-to-day struggles with parking and accessibility, but for the most part, might be described by residents as a 'necessary evil' in order to reap the rewards of a thriving tourism industry" (p11).

We believe that continued funding of departments, grants, and programs that support the tourism industry will ensure that the Citizens and government of Savannah continue to reap these rewards in the future.



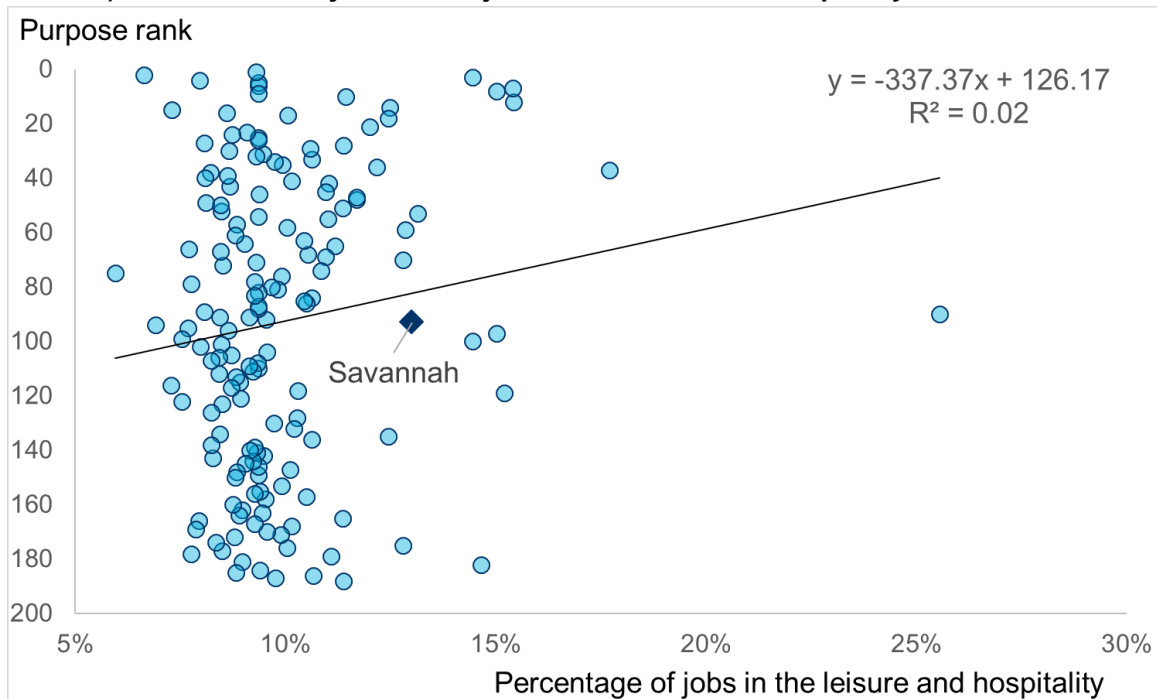
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# APPENDIX 1: ADDITIONAL WELL-BEING ANALYSIS

The following charts detail the relationship between the size of a community's leisure and hospitality sector and its rankings in various aspects of the Gallup-Sharecare Wellbeing Index. No significant results were found in any factor.

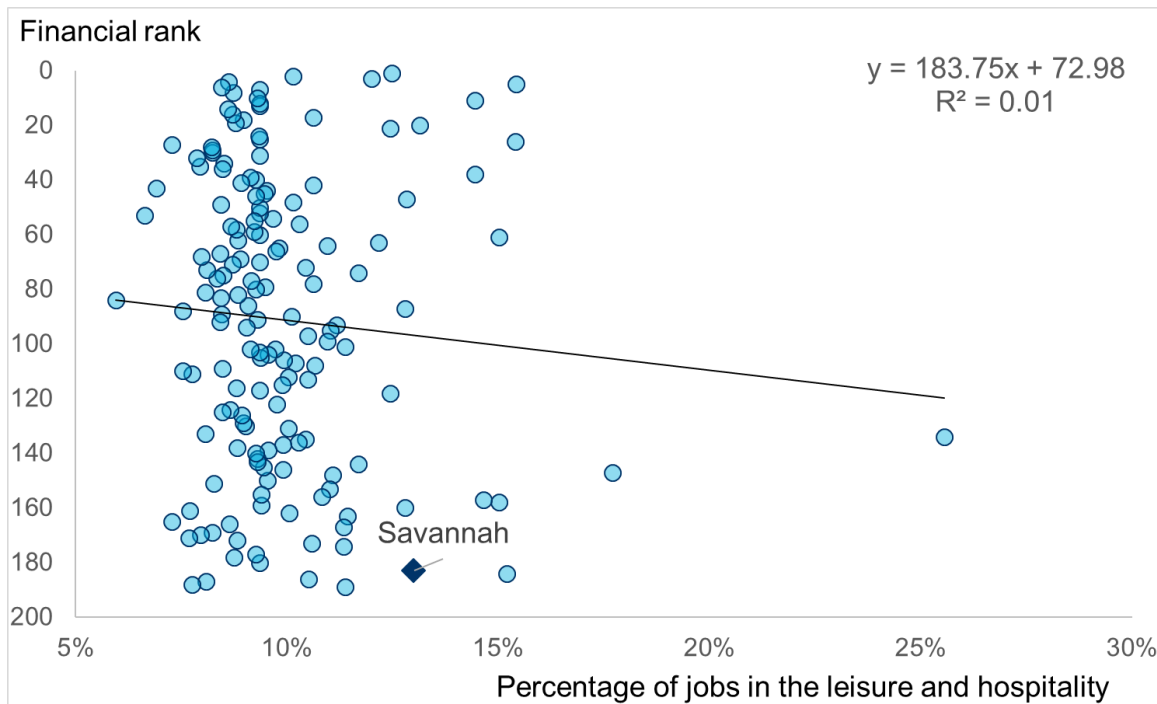
**Fig. 6: The relationship between the "purpose" rank of the Well-Being Index (1 is best, 189 is worst) and a community's share of jobs in the leisure and hospitality sector**



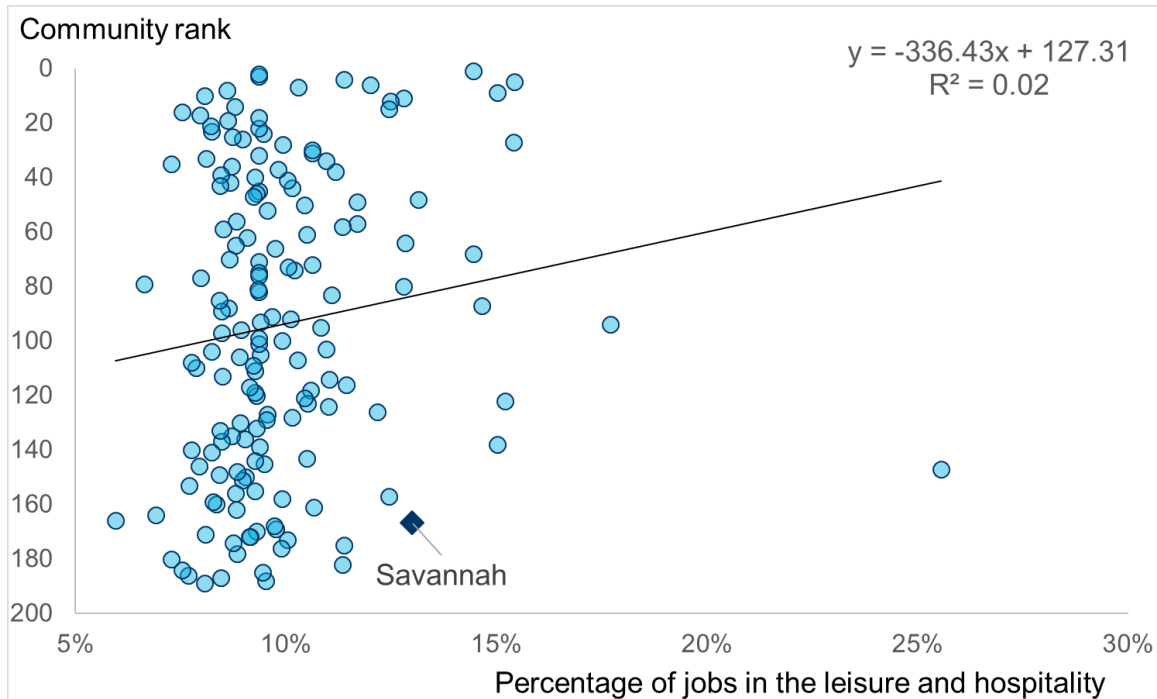
**Fig. 7: The relationship between the “social” rank of the Well-Being Index (1 is best, 189 is worst) and a community’s share of jobs in the leisure and hospitality sector**



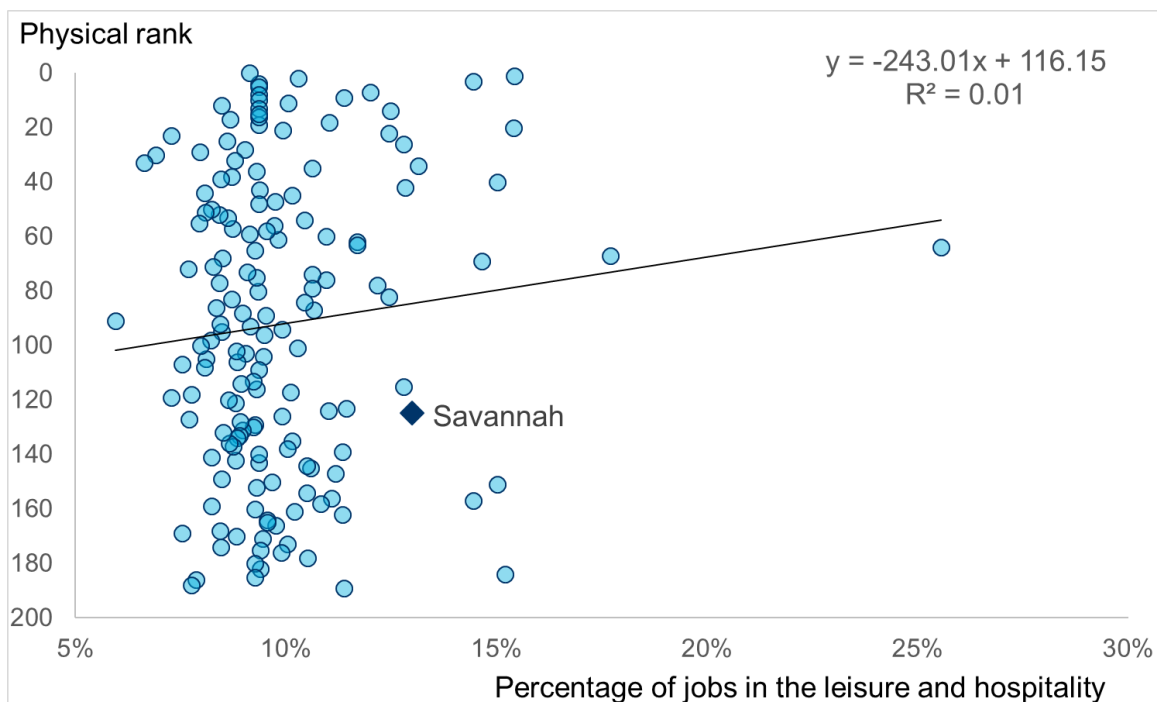
**Fig. 8: The relationship between the “financial” rank of the Well-Being Index (1 is best, 189 is worst) and a community’s share of jobs in the leisure and hospitality sector**



**Fig. 9: The relationship between the “community” rank of the Well-Being Index (1 is best, 189 is worst) and a community’s share of jobs in the leisure and hospitality sector**



**Fig. 10: The relationship between the “purpose” rank of the Well-Being Index (1 is best, 189 is worst) and a community’s share of jobs in the leisure and hospitality sector**



# APPENDIX 2: ECONOMIC AND FISCAL IMPACT METHODOLOGY

## ECONOMIC IMPACT METHODOLOGY

We began our calculations by determining total visitor spending and capital investment related to tourism in Savannah. For this, we utilized a variety of data including:

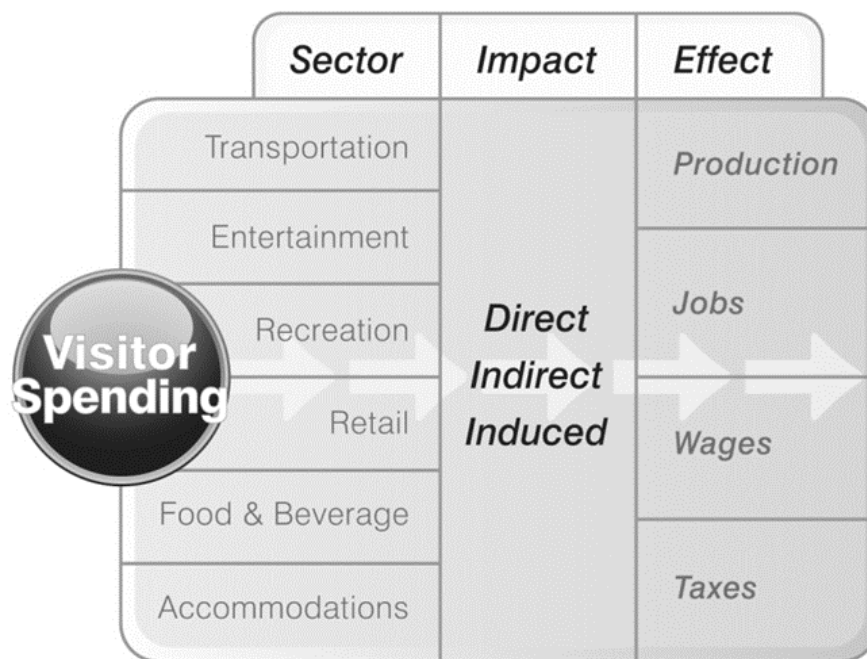
- Visitor volume and expenditures by category (lodging, retail, public transportation, automobile transportation, food service, entertainment/recreation, travel arrangement) from Longwoods International, DK Shifflet, and the US Travel Industry;
- BEA and BLS data on employment by industry;
- BEA and BLS data on wages by industry;
- Lodging revenue and average daily rates (Smith Travel Research) – state and county detail;
- Savannah Department of Revenue data on lodging taxes;
- US Census data on seasonal second homes by county;
- Aviation-related spending for visitors based on airport and passenger data; and
- Capital investment data from Georgia's Tourism Satellite Account

This comprehensive set of data provides a holistic view of visitor activity that is constrained by known measurements. These datasets complement and crosscheck one another.

Our analysis of tourism's impact on Savannah starts with this spending but also considers the downstream effects of this injection of spending into the local economy. To determine the total economic impact of tourism in Savannah, we input tourism spending into a model of the Savannah economy created in IMPLAN. This model calculates three distinct types of impact: direct, indirect, and induced.

Tourism creates **direct** economic value within a discreet group of sectors (e.g. recreation, transportation). This supports a relative proportion of jobs, wages, taxes, and GDP within each sector. Each directly affected sector also purchases goods and services as inputs (e.g. food wholesalers, utilities) into production. These impacts are called **indirect impacts**. Lastly, the **induced impact** is generated when employees whose wages are generated either directly or indirectly by tourism, spend those wages in the local economy (Fig. 11).

**Fig. 11: How tourism spending flows through the economy and generates economic benefits**



We calculate the impacts on business sales, jobs, wages, and taxes on all three levels of impact.

**FISCAL IMPACT METHODOLOGY**

Part of IMPLAN’s modeling process it to create tax impacts at the federal, state, county, and city levels. These impacts are specific to both the region of study (i.e. Savannah) and the industries being impacted. We review the initial output of the model and compare these results to Savannah’s Comprehensive Annual Financial Report (CAFR), Savannah’s adopted 2017 budget, and key indicators on the local economy from the BEA to ensure that the output is logical given known tax revenue and economic data. This examination indicated that the hotel/motel tax and automotive rental tax were not properly accounted for and that user fees were severely underestimated, so we created customized estimates here.

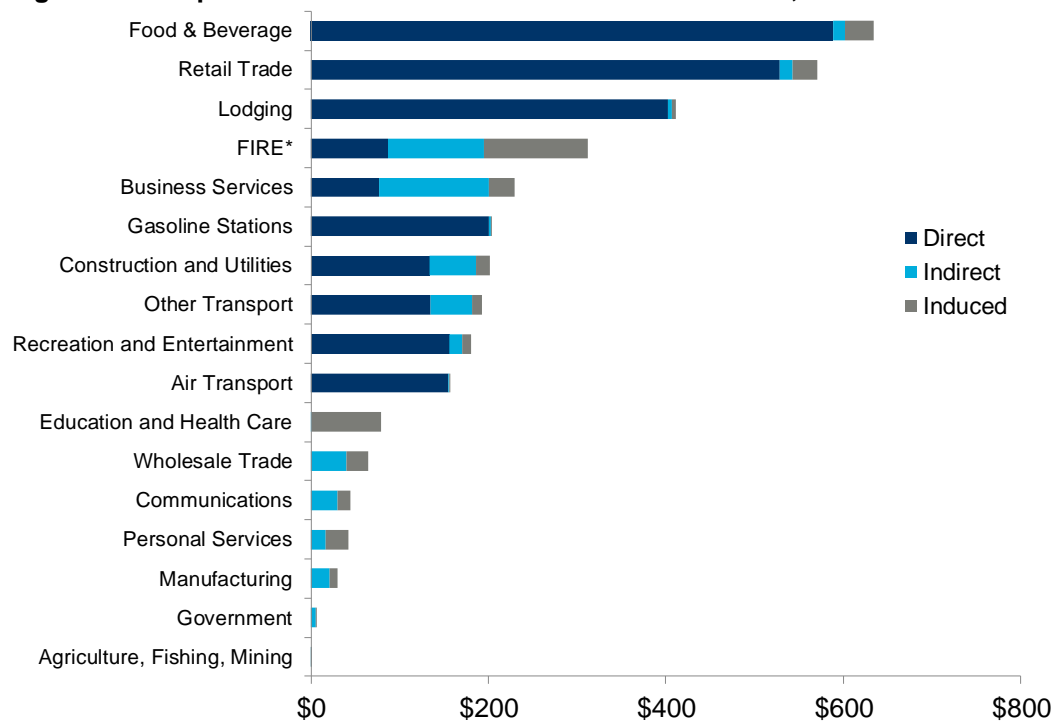
# APPENDIX 3: ADDITIONAL ECONOMIC IMPACT ANALYSIS

**Table 21: The impact of tourism on business sales in Savannah, 2016, millions**

<b>Tourism industry generated business sales, millions</b>				
	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
<b>Agriculture, Fishing, Mining</b>	-	\$0.1	\$0.1	<b>\$0.2</b>
<b>Construction and Utilities</b>	\$133.8	\$51.8	\$16.3	<b>\$201.8</b>
<b>Manufacturing</b>	-	\$20.9	\$8.4	<b>\$29.3</b>
<b>Wholesale Trade</b>	-	\$40.4	\$23.6	<b>\$64.0</b>
<b>Air Transport</b>	\$155.0	\$1.2	\$1.1	<b>\$157.3</b>
<b>Other Transport</b>	\$135.2	\$46.3	\$10.7	<b>\$192.2</b>
<b>Retail Trade</b>	\$528.7	\$14.4	\$27.9	<b>\$571.0</b>
<b>Gasoline Stations</b>	\$200.9	\$1.4	\$2.0	<b>\$204.3</b>
<b>Communications</b>	-	\$30.1	\$14.3	<b>\$44.4</b>
<b>Finance, Insurance and Real Estate</b>	\$87.0	\$107.6	\$116.9	<b>\$311.6</b>
<b>Business Services</b>	\$76.2	\$124.6	\$28.1	<b>\$228.9</b>
<b>Education and Health Care</b>	-	\$1.1	\$77.3	<b>\$78.4</b>
<b>Recreation and Entertainment</b>	\$155.5	\$14.5	\$9.8	<b>\$179.8</b>
<b>Lodging</b>	\$402.5	\$3.9	\$4.6	<b>\$411.0</b>
<b>Food &amp; Beverage</b>	\$588.9	\$13.1	\$32.5	<b>\$634.5</b>
<b>Personal Services</b>	-	\$16.0	\$26.4	<b>\$42.4</b>
<b>Government</b>	-	\$4.9	\$0.8	<b>\$5.7</b>
<b>TOTAL</b>	<b>\$2,463.7</b>	<b>\$492.5</b>	<b>\$400.8</b>	<b>\$3,356.9</b>

Source: Tourism Economics

**Fig. 12: The impact of tourism on business sales in Savannah, 2016**



\*Finance, insurance and real estate

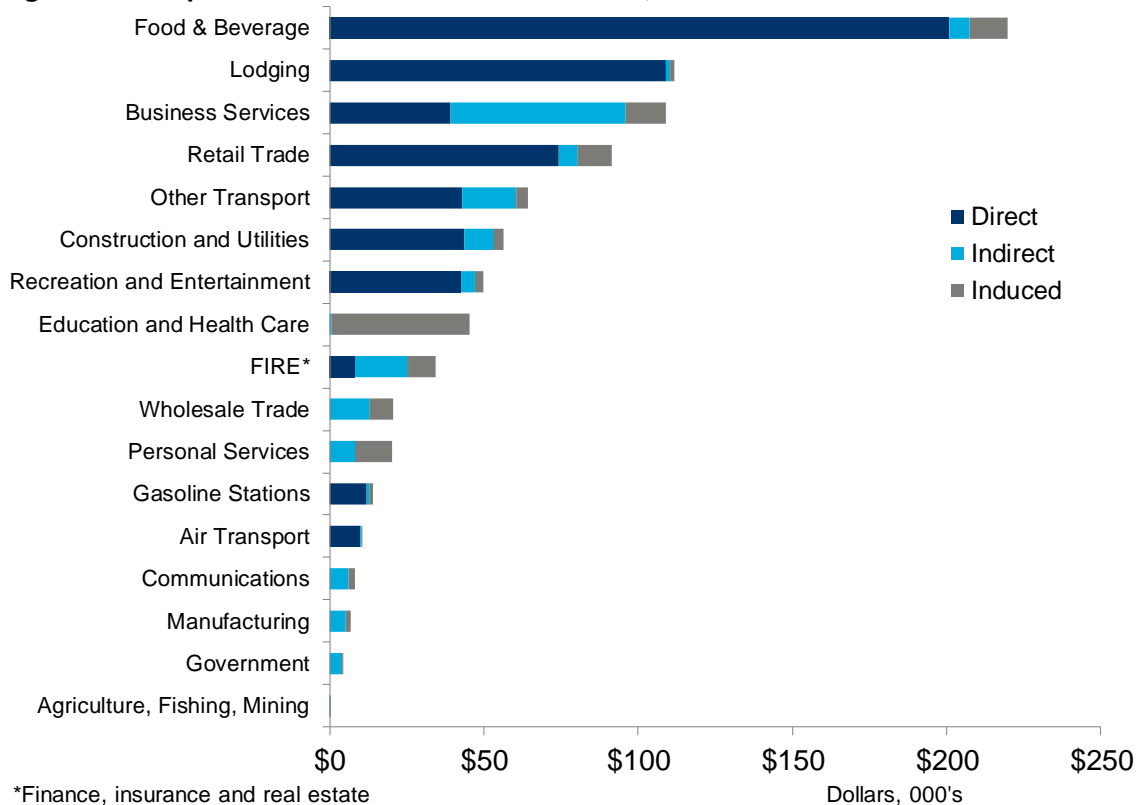
Source: Tourism Economics

**Table 22: The impact of tourism on local income in Savannah, 2016, millions**

<b>Tourism industry generated income, millions</b>				
	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
Agriculture, Fishing, Mining	-	\$0	\$0	<b>\$0</b>
Construction and Utilities	\$44	\$10	\$3	<b>\$56</b>
Manufacturing	-	\$5	\$2	<b>\$7</b>
Wholesale Trade	-	\$13	\$8	<b>\$20</b>
Air Transport	\$10	\$0	\$0	<b>\$10</b>
Other Transport	\$43	\$17	\$4	<b>\$64</b>
Retail Trade	\$74	\$6	\$11	<b>\$91</b>
Gasoline Stations	\$12	\$1	\$1	<b>\$14</b>
Communications	-	\$6	\$2	<b>\$8</b>
Finance, Insurance and Real Estate	\$8	\$17	\$9	<b>\$34</b>
Business Services	\$39	\$57	\$13	<b>\$109</b>
Education and Health Care	-	\$1	\$45	<b>\$45</b>
Recreation and Entertainment	\$43	\$4	\$3	<b>\$50</b>
Lodging	\$109	\$1	\$1	<b>\$112</b>
Food & Beverage	\$201	\$6	\$13	<b>\$220</b>
Personal Services	-	\$8	\$12	<b>\$20</b>
Government	-	\$4	\$0	<b>\$4</b>
<b>TOTAL</b>	<b>\$583</b>	<b>\$157</b>	<b>\$127</b>	<b>\$866</b>

Source: Tourism Economics

**Fig. 13: The impact of tourism income in Savannah, 2016**



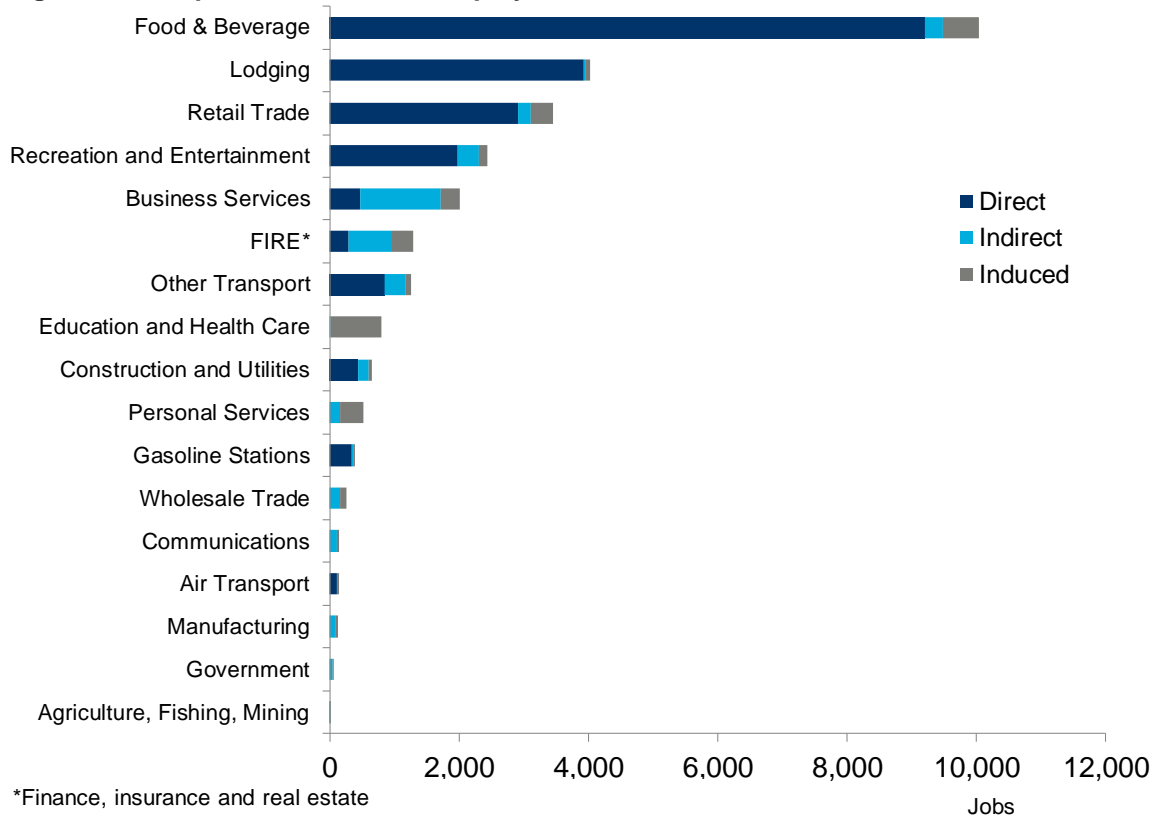


**Table 23: The impact of tourism on local employment in Savannah, 2016, millions**

<b>Tourism industry generated employment</b>				
	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
<b>Agriculture, Fishing, Mining</b>	-	1	1	<b>2</b>
<b>Construction and Utilities</b>	445	159	48	<b>651</b>
<b>Manufacturing</b>	-	90	34	<b>124</b>
<b>Wholesale Trade</b>	-	164	96	<b>260</b>
<b>Air Transport</b>	120	3	3	<b>126</b>
<b>Other Transport</b>	849	333	71	<b>1,254</b>
<b>Retail Trade</b>	2,922	187	339	<b>3,448</b>
<b>Gasoline Stations</b>	345	22	31	<b>399</b>
<b>Communications</b>	-	111	38	<b>149</b>
<b>Finance, Insurance and Real Estate</b>	284	676	331	<b>1,291</b>
<b>Business Services</b>	480	1,237	301	<b>2,017</b>
<b>Education and Health Care</b>	-	19	779	<b>798</b>
<b>Recreation and Entertainment</b>	1,976	329	134	<b>2,439</b>
<b>Lodging</b>	3,931	41	50	<b>4,022</b>
<b>Food &amp; Beverage</b>	9,210	274	557	<b>10,041</b>
<b>Personal Services</b>	-	168	347	<b>515</b>
<b>Government</b>	-	44	6	<b>51</b>
<b>TOTAL</b>	<b>20,561</b>	<b>3,860</b>	<b>3,165</b>	<b>27,586</b>

Source: Tourism Economics

**Fig. 14: The impact of tourism on employment in Savannah, 2016**



Source: Tourism Economics

# APPENDIX 4: ADDITIONAL FISCAL ANALYSIS

This appendix provides additional analysis on the fiscal impacts of tourism in which enterprise funds are ignored. The enterprise funds involve programs which are largely self-sustaining as they generate revenue by selling services such as water, sewer and parking. These changes are reflected in a reduction of "user fees" in Table 24 (analogous to Table 12 in the main text) and a conversion of "Total expenditures" to "Total non-enterprise expenditures" in Table 25 (analogous to Table 17 in the main text). These changes alter the final estimate of the impacts of the city's finances.

After removing user fee revenue accruing to the enterprise funds, we find that tourism generates a total of \$71.9 million of revenue for the City of Savannah. The vast majority of this revenue comes from taxes and a relatively small share comes from user fees.

**Table 24: Revenue generated for the City of Savannah by the tourism industry, 2016**

Tax	Direct	Indirect/induced	Total
Property taxes	\$15.4	\$5.7	<b>\$21.1</b>
Sales and business taxes	\$12.2	\$3.7	<b>\$15.9</b>
Selective taxes*	\$20.7	\$0.1	<b>\$20.8</b>
User fees**	\$0.1	\$0.03	<b>\$0.2</b>
Other	\$10.0	\$3.9	<b>\$14.0</b>
<b>Total</b>	<b>\$58.4</b>	<b>\$13.5</b>	<b>\$71.9</b>

Sources: IMPLAN; Tourism Economics

\*includes hotel and auto rental tax

\*\*includes items such as leisure service facility rental

The City of Savannah has a total of \$201 million non-enterprise expenses. After performing the same calculations as outlined in section 4.3, we calculate tourism's share of these expenses as \$18.6 million.

**Table 25 Tourism's share of services, overhead and other expenses, 2016**

City of Savannah expenses	
Total non-enterprise expenditures	\$201.0
Tourism funds	- \$10.0
Police funds	- \$68.8
<b>Overhead and other expenses</b>	<b>\$122.1</b>
Tourism's share of Savannah economy	
Total Savannah employment	134,661
Direct tourism employment	÷ 20,561
<b>Tourism's share of economy</b>	<b>15.3%</b>
Tourism's share of services, overhead, and other expenses	
Services, overhead, and other expenses	\$122.1
Tourism's share of economy	x 15.3%
<b>Tourism's share of expenses</b>	<b>\$18.6</b>

Sources: Tourism Economics; City of Savannah; BEA; Census Bureau

Total fiscal expenses associated with tourism equals \$32.9 million (see section 4.3 for calculations of "Tourism dedicated expenses" and "Police expenses").

**Table 26 Total fiscal expenses associated with tourism (millions), 2016**

Tourism dedicated expenses	\$10.0
Police expenses	\$4.3
Overhead and other expenses	\$18.6
<b>Total</b>	<b>\$32.9</b>

Source: Tourism Economics

The City of Savannah government receives \$71.9 million of revenue supported by tourism, and the City of Savannah government spends \$32.9 million on promoting and supporting tourism. The City of Savannah therefore receives a net benefit of \$40.0 million, or a benefit of \$265 per resident (Table 20). For every dollar spent supporting the tourism industry, the City of Savannah gains \$2.18 in revenue.

**Table 27 Cost benefit analysis for the City of Savannah**

Government revenue supported by tourism	\$71,921,000
City of Savannah expenses on tourism	\$32,942,000
Net benefit	\$38,979,000
Net benefit per resident	\$265
<b>Benefit-to-cost ratio</b>	<b>2.18</b>

Source: Tourism Economics

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