



The Economic Impact of Tourism on Guam

Tourism Satellite Account
Calendar Year 2016



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Highlights

- 2016 was a banner year for tourism on Guam, with visitation to Guam surpassing 1.5 million and visitor spending reaching \$1.75 billion.
- Visitor spending grew 8.5% and was strongest at hotels and on food & beverages.
- Visitor spending supported \$2.5 billion in business sales on Guam.
- Nearly 21,100 jobs, with associated income of \$617 million, were sustained by visitors in 2016.

Highlights

- These jobs represent 34% of total employment in 2016; 1-in-3 jobs on Guam is sustained by visitor spending.
- Including indirect and induced impacts, tourism on Guam generated \$260 million in taxes last year.
- In the absence of the state and local taxes generated by tourism, each Guam household would need to pay \$5,100 to maintain the current level of government services.

Visitation & Visitor Spending Results



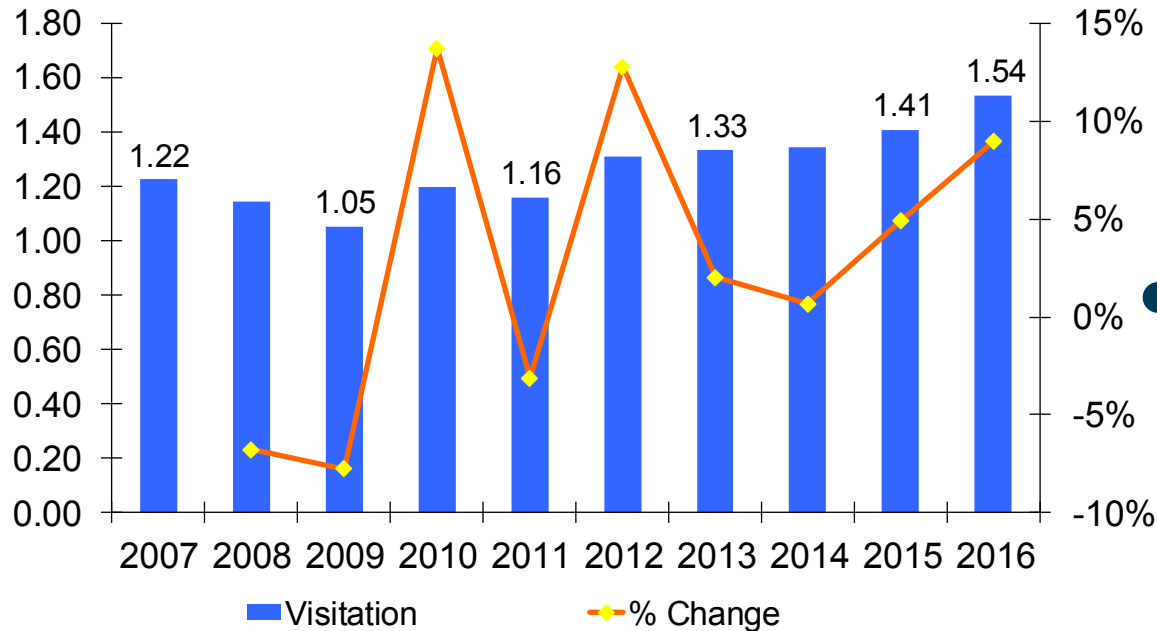
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Visitor trends

Guam Visitor Totals

Millions of Visitors



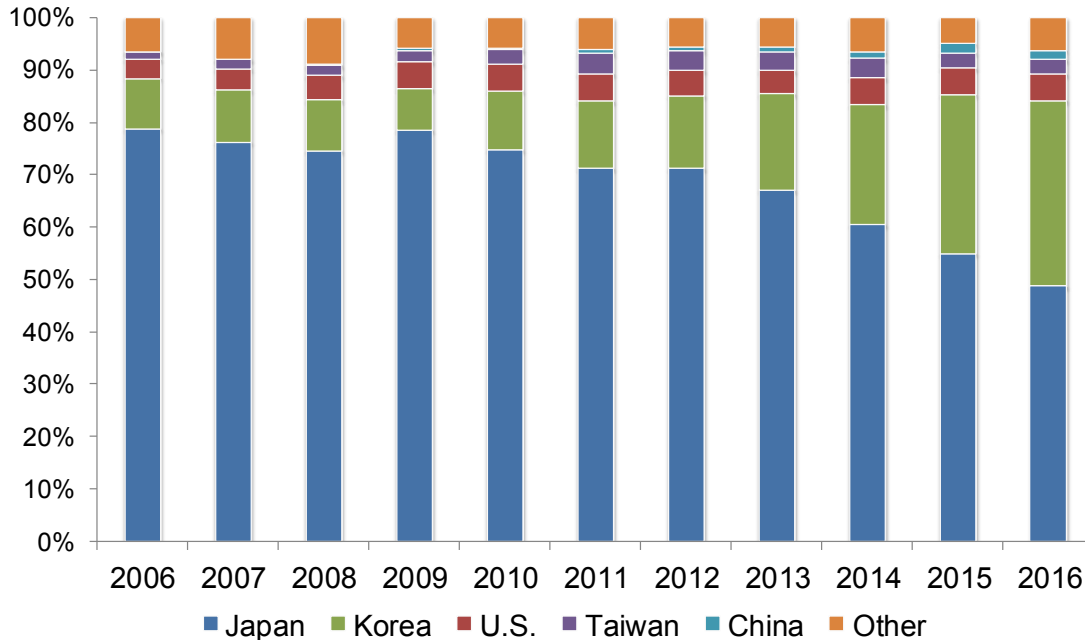
Source: GVB

- Recent years have seen a steady uptick in visitation with a 9% jump in 2016 as visitation surpassed 1.5 million.
- Visitation is up nearly 500,000 from the lows seen in 2009, with 40% of that increase in just the last three years.

Visitation by market

Guam Visitation

share of total

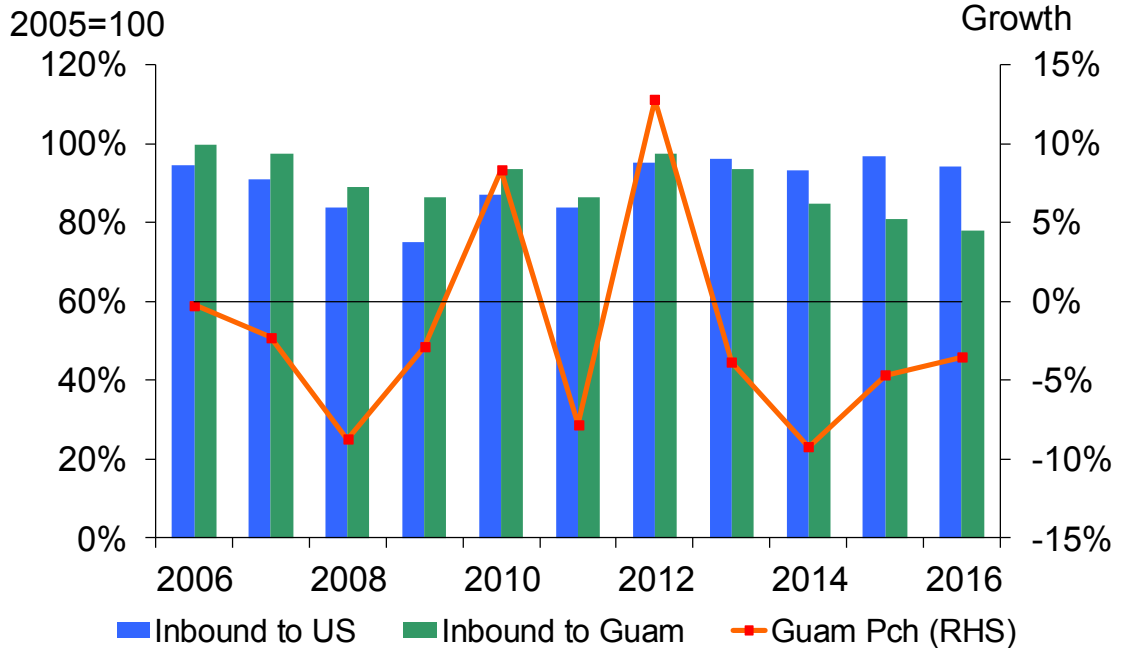


Source: Tourism Economics

- Japanese visitors remain the largest origin market, but now comprise less than half of all visitors in 2016 – down from 80% less than a decade ago.
- South Korea visitation now makes up more than 35% of all visitors.
- Domestic visitation remains around 5% of all visitors to Guam.

Perspective on the Japanese market

Visit Share and Growth - Japan

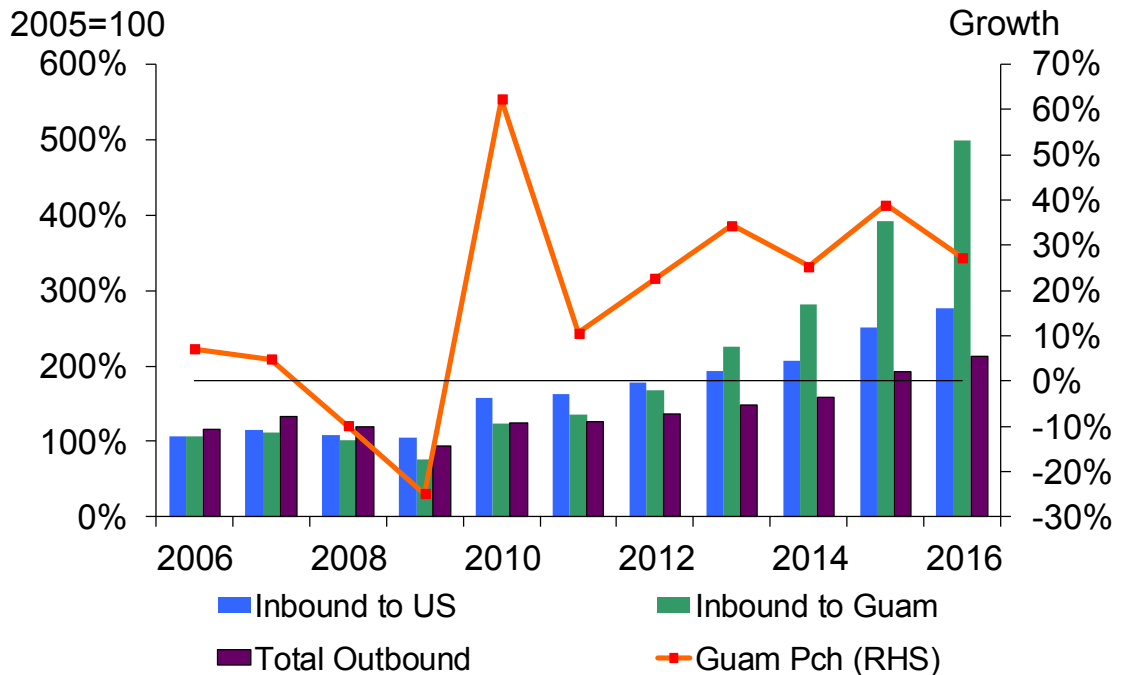


Source: Tourism Economics, GVB

- The performance of Japanese visitation to Guam has followed overall Japanese outbound travel, with declines in the last four years.
- By indexing Japanese visitation to 2005 levels, the chart shows Japan-Guam visitation has performed similarly to Japan-US visitation patterns.
- Guam's share of Japan-US visitation fell in 2016 to 21%.

Perspective on the Korean market

Visit Share and Growth - Korea



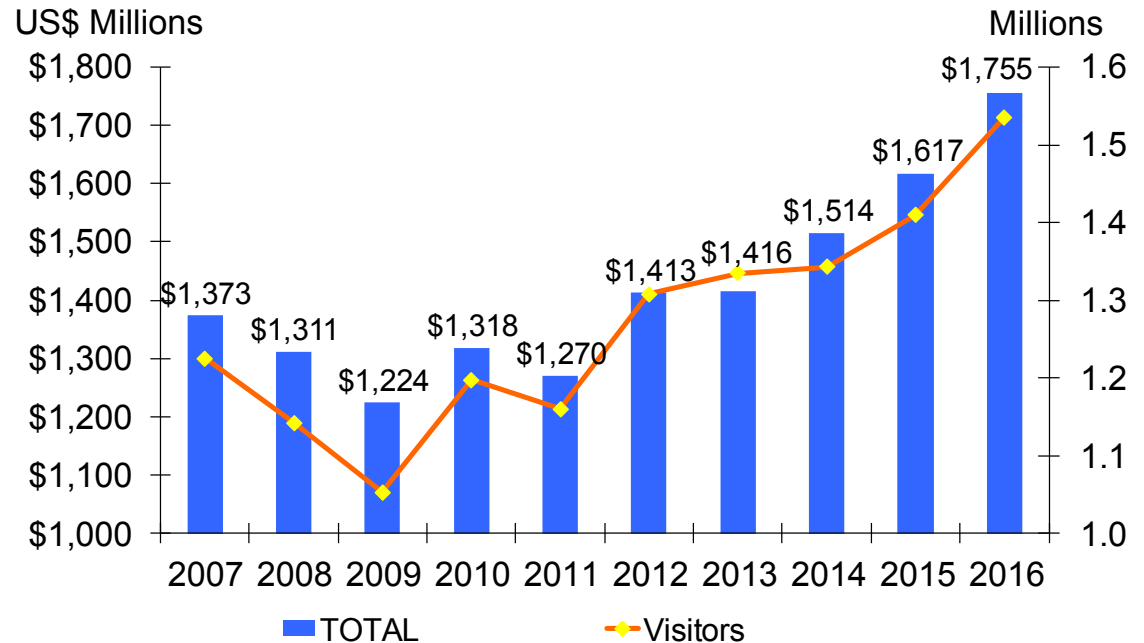
Source: Tourism Economics, GVB

- Korean visitation to Guam has grown by more than 125,000 in 2016, rising to 545,000 visitors.
- Korean visitation growth has averaged 31% over the past four years.
- Korean visitation to Guam has outperformed Korean visitation to the US – Guam’s share of Korean visitation to the US reached 28% in 2016.

Recent growth in visitor spending

- Visitor spending on Guam grew 8.5% in 2016 and surpassed \$1.75 billion.
- Visitor spending increased by nearly \$140 million over the previous year.
- Visitor spending has been on the rise since 2012, with a pause in growth in 2013.

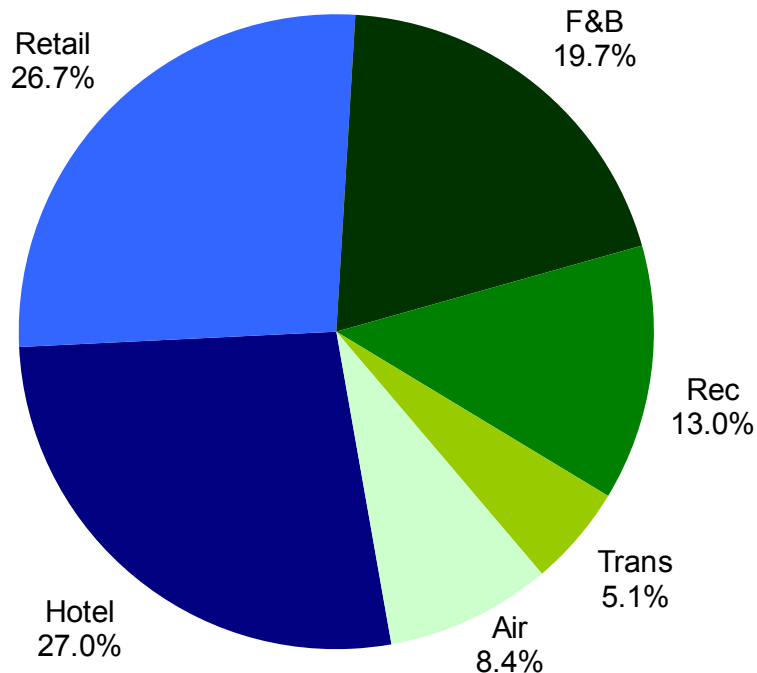
Guam Visits and Spending



Source: Tourism Economics

Visitor spending shares

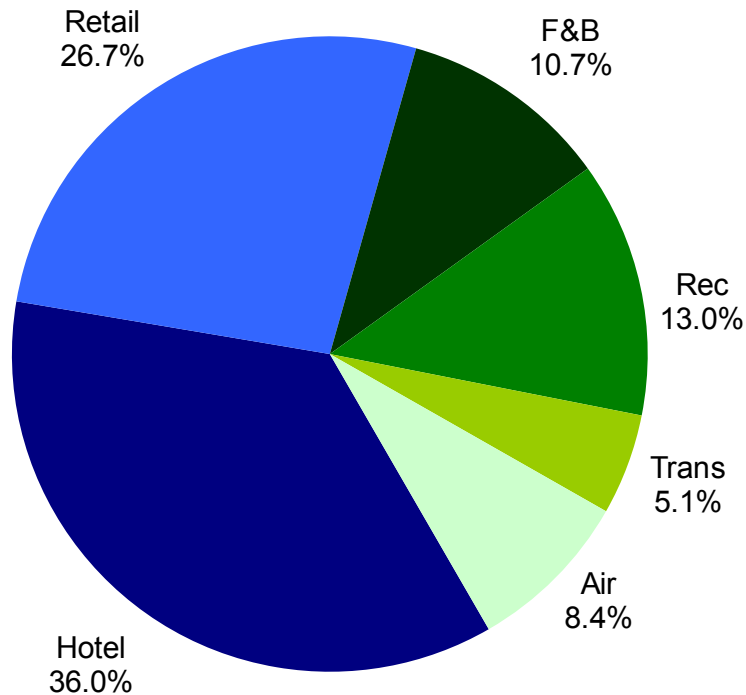
Tourism Commodity Sales By Sector



- Looking first at what visitors spent their money on on Guam in 2016, lodging surpassed shopping as the largest spending category at 27% of all visitor dollars.
- 26.7% of all visitor spending was spent shopping.
- 20 cents of every visitor dollar went to food and beverage expenditures in 2016.

Visitor spending shares

Tourism Industry Sales By Sector



- Changing the view to show at what type of businesses visitors are spending their money, data indicate that hotels and resorts on Guam see 36% of all visitor spending on the island.
- With many hotels and resorts providing some food as part of pre-paid packages, the share of visitor spending at restaurants and other food and beverage establishments is just 11%.

Visitor spending by sector

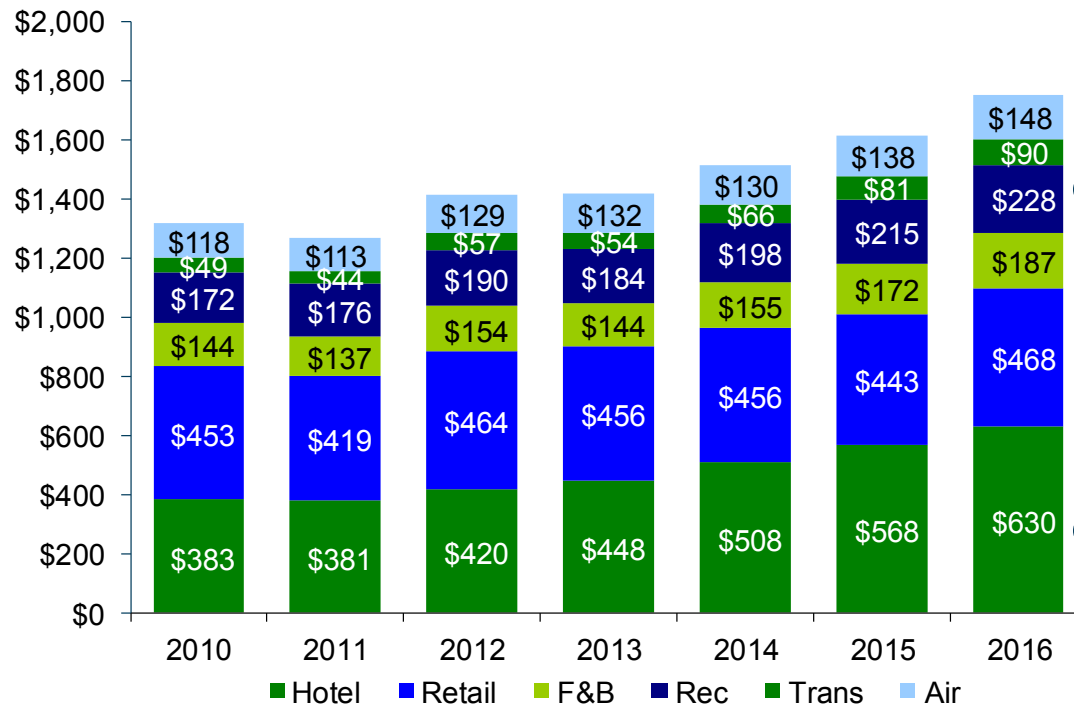
Tourism Industry Sales											
(US\$ Million)											
Sector	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Change
Hotel	\$386.8	\$398.5	\$357.2	\$383.0	\$380.6	\$420.0	\$448.0	\$508.0	\$568.2	\$630.4	11.0%
Retail	\$470.3	\$432.7	\$404.3	\$453.2	\$419.2	\$463.6	\$455.6	\$456.1	\$442.8	\$468.2	5.7%
F&B	\$182.7	\$178.7	\$162.3	\$143.9	\$136.9	\$154.2	\$144.3	\$155.1	\$172.1	\$187.3	8.8%
Rec	\$184.6	\$160.4	\$155.1	\$172.2	\$176.4	\$190.1	\$184.1	\$198.4	\$214.9	\$228.2	6.2%
Trans	\$44.1	\$44.8	\$42.5	\$49.2	\$43.5	\$57.2	\$54.1	\$66.0	\$81.3	\$90.1	10.7%
Air	\$104.9	\$95.8	\$102.6	\$116.7	\$113.1	\$127.5	\$130.1	\$130.9	\$138.0	\$150.4	9.0%
TOTAL	\$1,373.3	\$1,310.9	\$1,223.9	\$1,318.3	\$1,269.6	\$1,412.6	\$1,416.2	\$1,514.5	\$1,617.3	\$1,754.5	8.5%
% Change		-4.5%	-6.6%	7.7%	-3.7%	11.3%	0.3%	6.9%	6.8%	8.5%	

- Hoteliers have been capturing a large portion of the visitor spending increase.
- Minimal inflationary pressures have kept spending increases tied to visitation increases in the last couple of years.
- The appreciation of the dollar has hit retail sales growth in the past couple of years.

Visitor spending by industry

Guam's Tourism Industry Sales

by Year, Millions of \$

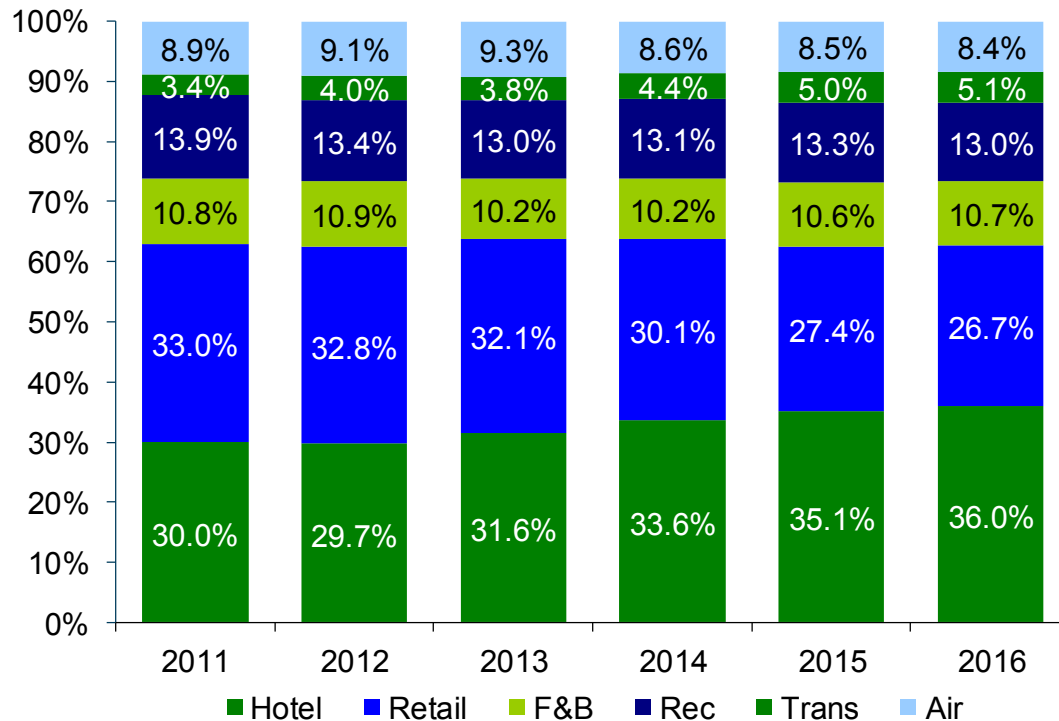


- Visitor spending on Guam has increased an average of 7.4% each year over the past three years.
- Lodging sales increased by \$62 million in 2016, representing 45% of visitor spending growth.
- Spending on gifts and souvenirs grew \$25 million in 2016.

Visitor spending by industry

Gaum's Tourism Industry Sales

by Year, Share of Total



- The share of each visitor dollar spent at lodging businesses increased over the past four years.
- Food & beverages and recreational spending shares have increased over the past three years.

Guam Tourism Industry Impacts (Direct)



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Tourism industry impacts

Core Tourism		
	Employment	GDP
Agriculture, Fishing, Mining	-	-
Construction and Utilities	-	-
Manufacturing	-	-
Wholesale Trade	-	-
Air Transport	21	\$3.2
Other Transport	321	\$17.5
Retail Trade	2,363	\$120.9
Gasoline Stations	36	\$1.8
Communications	-	-
Finance, Insurance and Real Estate	-	\$0.0
Business Services	805	\$43.5
Education and Health Care	-	-
Recreation and Entertainment	1,850	\$78.6
Lodging	6,470	\$350.2
Food & Beverage	3,231	\$76.4
Personal Services	387	\$6.7
Government	-	\$0.0
TOTAL	15,484	\$698.8

- Tourism GDP is the value added of those sectors directly interacting with travelers.
- The narrow definition of the tourism industry counts only tourism consumption, which excludes capital investment and general government support of tourism. This definition is consistent with economic accounts for other industries.
- On this basis, tourism industry GDP was \$700 million in 2016, accounting for 12.1% of total Guam GDP.

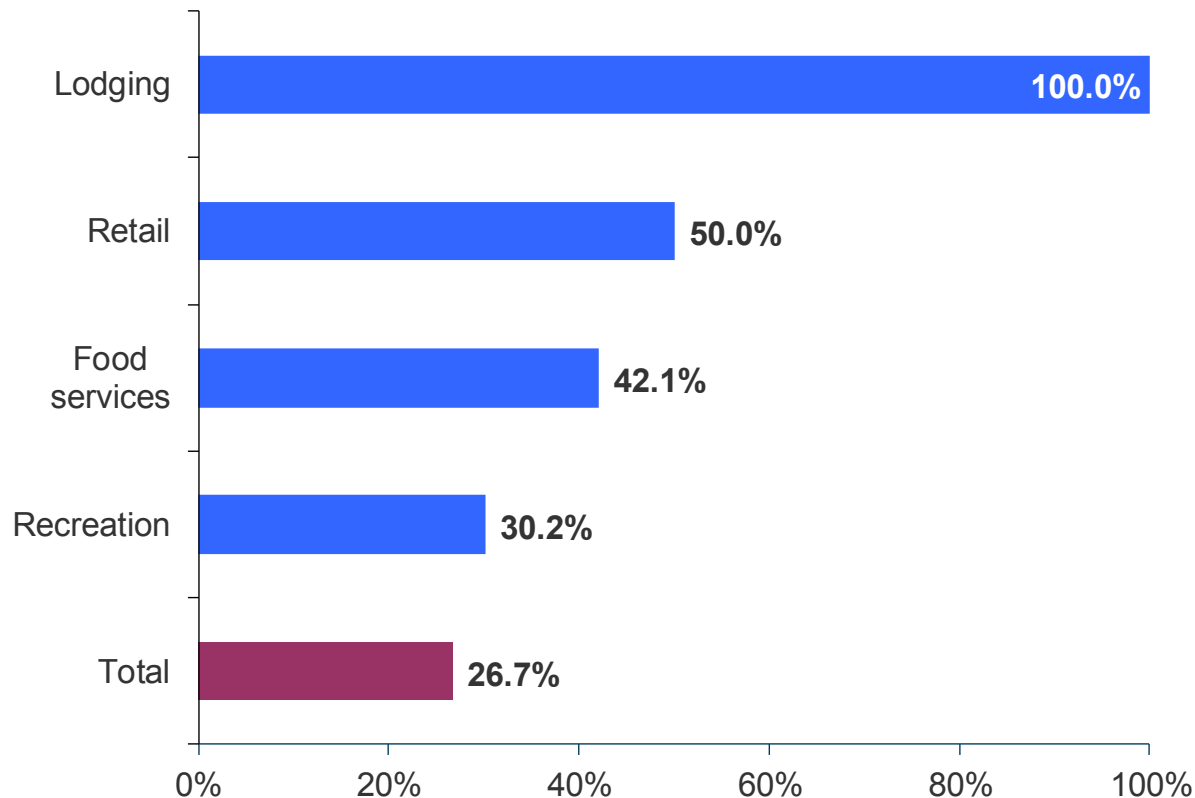
Why sales and GDP differ

- Tourism industry sales on Guam equal \$1.85 billion while GDP only measures \$700 million.
- GDP (Gross domestic product) is less than sales because it measures only the locally-produced value of goods and services consumed by visitors.
 - This includes the local labor, capital depreciation, and the profits of tourism-related companies that are based on Guam.
 - The costs of imported goods (gasoline, food or retail goods) that come from out-of-state are excluded from the GDP calculation.
 - In addition, business profits from non-local companies are also excluded. For example, Hyatt profits leave the economy.

Tourism share of key industry employment

- Tourism is a significant part of several industries – visitor spending directly supports 100% of all employment in lodging, 50% of retail employment, and 42% of food & beverages jobs.

Tourism Employment Intensity by Industry

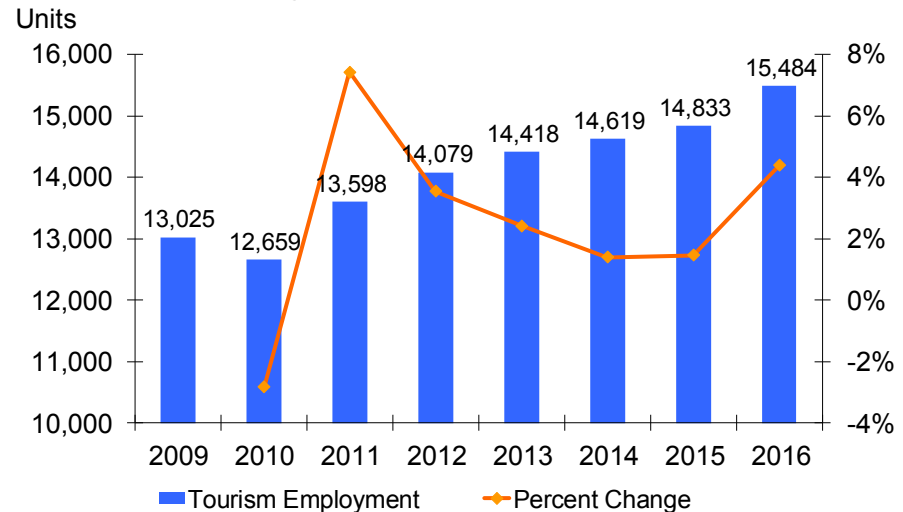


Tourism employment surging (direct)

Tourism Employment								
	2009	2010	2011	2012	2013	2014	2015	2016
Tourism Employment	13,025	12,659	13,598	14,079	14,418	14,619	14,833	15,484
Percent Change		-2.8%	7.4%	3.5%	2.4%	1.4%	1.5%	4.4%

- Tourism employment grew 4.4% and added 650 employees in 2016.
- If visitors were banned from Guam and these jobs disappeared, the unemployment rate would rise to 26.3% - up from 4.5% in 2016.

Tourism Employment

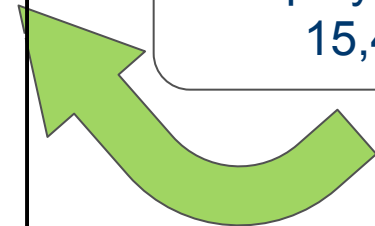


Source: Tourism Economics

Tourism employment ranks

Employment Ranking - Private Sector		
Guam		
Rank	Industry	2016
1	Accommodation and food services	13,626
2	Retail trade	10,425
3	Construction	6,366
4	Administrative and support and waste management and remediation services	4,576
5	Health care and social assistance	3,823
6	Wholesale trade	2,842
7	Transportation and warehousing	2,810
8	Professional, scientific, and technical services	2,699
9	Other services (except public administration)	2,532
10	Finance and insurance	2,259
11	Real estate and rental and leasing	2,101
12	Educational services	1,265
13	Information	1,257
14	Arts, entertainment, and recreation	1,194
15	Manufacturing	913

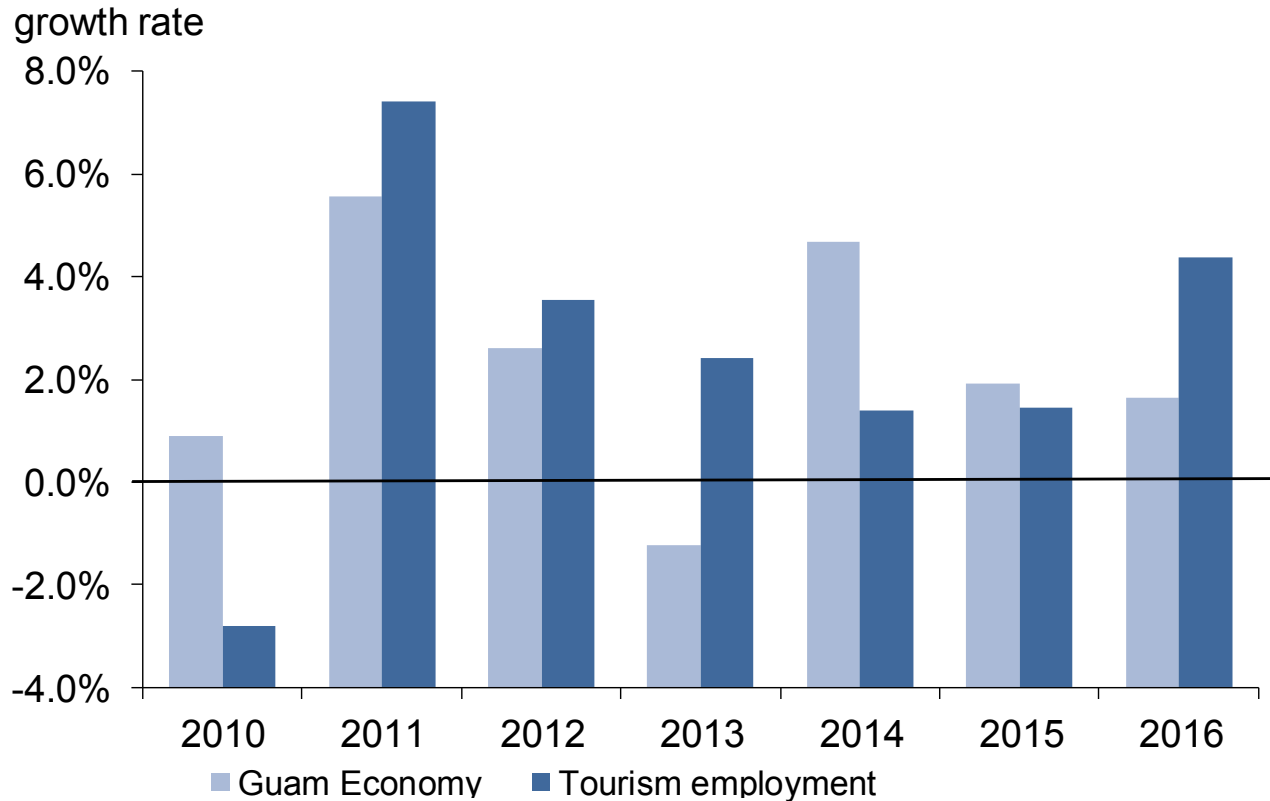
Visitor supported
employment =
15,484



- Visitor supported employment, were it an industry, would be the largest on Guam.

Tourism employment growth

Tourism employment driving growth



Source: BEA, Tourism Economics

- And not only is the tourism employment industry large, in four of the last six years, it has grown faster than the island economy, helping drive Guam's employment growth.

Total Tourism Economy



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Tourism economy sales

- The Tourism Satellite Account looks at a broader range of tourism-related expenditures.

Tourism Satellite Account					
Tourism Economy Sales					
\$ millions					
Year	Domestic Visitor	International Visitor	Gov't Support	CAPEX	Total
2016	\$88.8	\$1,665.7	\$40.9	\$58.2	\$1,853.7
2015	\$80.6	\$1,536.7	\$35.6	\$57.4	\$1,710.3
Pch chg	10.1%	8.4%	14.9%	1.5%	8.4%

- Government support for tourism includes the airport operations and GVB spending, along with other budget items in broad support of tourism.
- Capital investment (CAPEX) includes construction of hotels and attractions, as well as tourism equipment and infrastructure.
- Total tourism economy sales tallied \$1.85 billion in 2016.

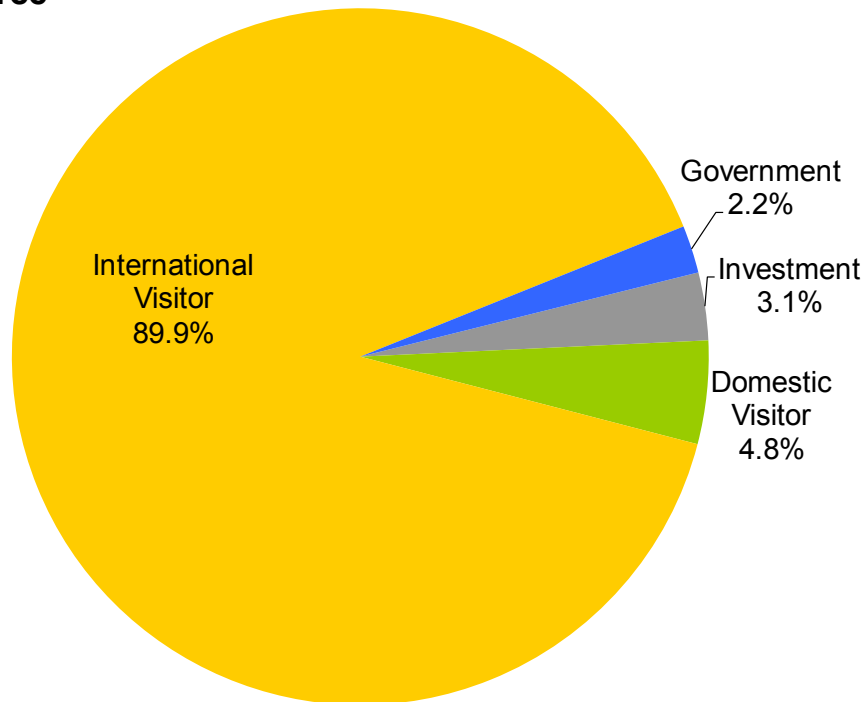
Tourism industry and economy sales

- The direct impact of tourism is driven by tourism industry sales only. This allows for apples-to-apples comparisons with other industries.
- The total economic impact of tourism includes investment in support of tourism, government spending, and non-visitor private consumption expenditures (PCE).

Tourism Sales		
2016		
	Industry	Economy
Lodging	\$630.4	\$630.4
Food	\$187.3	\$187.3
Recreation	\$228.2	\$228.2
Shopping	\$468.2	\$468.2
Air	\$150.4	\$150.4
Other Transport	\$90.1	\$90.1
Non-Visitor PCE	\$0.0	\$0.0
Investment	\$0.0	\$58.2
Government	\$0.0	\$40.9
TOTAL	\$1,754.5	\$1,853.7

Tourism economy sales by source

**Tourism Economy Sales Share
by Source**



- International visitor markets comprise the majority (90%) of tourism sales on Guam.
- Domestic visitor markets contributed 4.8% of tourism sales last year.
- Governmental spending in support of tourism contributed 2.2% of tourism sales.

Economic Impact of Visitor Spending

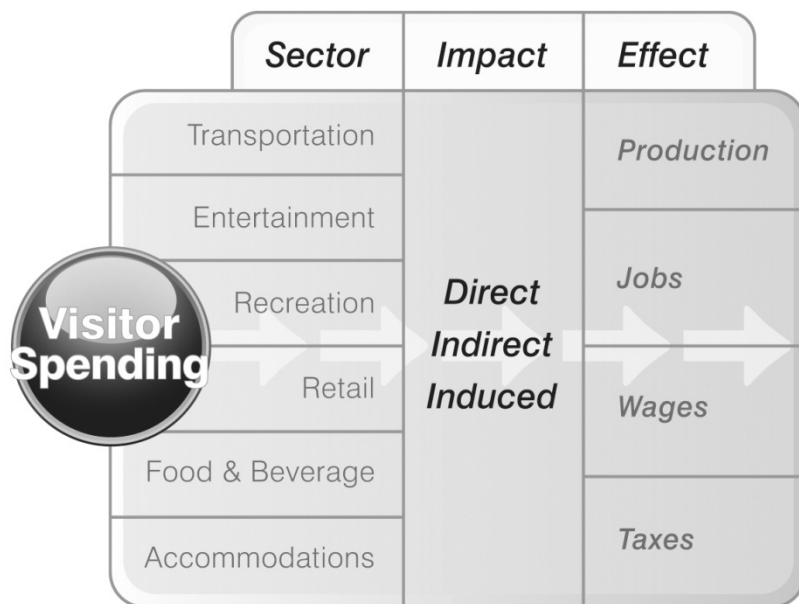


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How visitor spending generates impact

- Travelers 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.
- 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 incomes are generated either directly or indirectly by tourism, spend those incomes in the local economy.

Visitor spending impacts

- Including indirect and induced business sales, visitor spending generated \$2.5 billion in business sales in 2016.

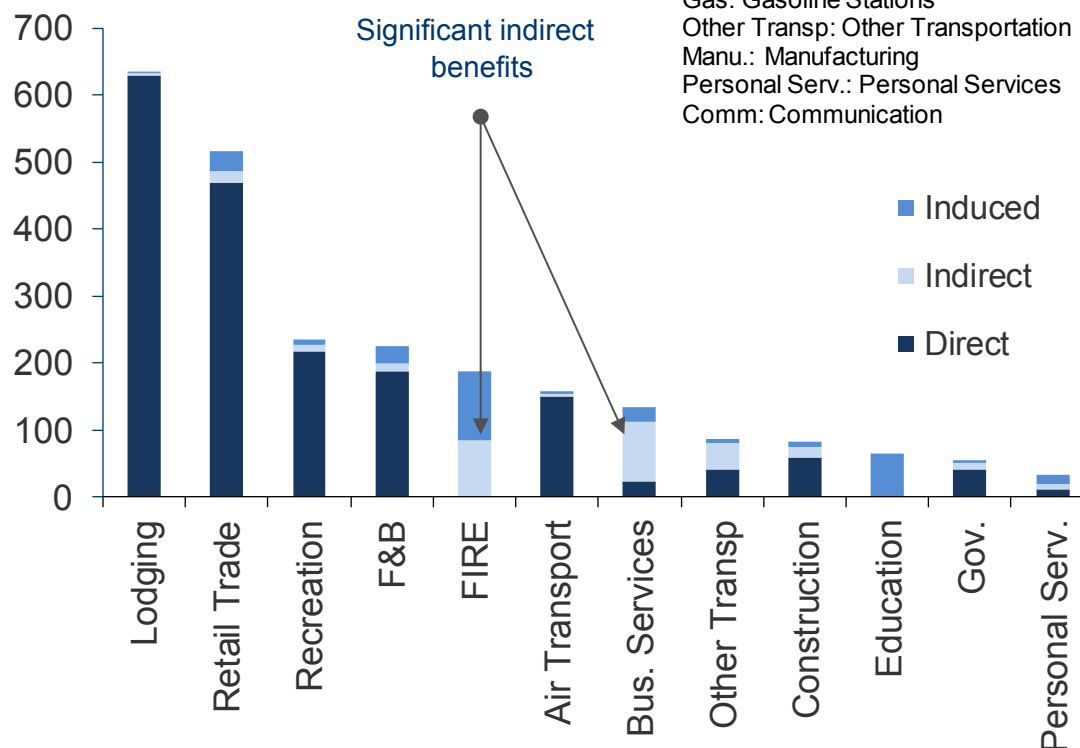
Tourism Sales				
(US\$ Million)				
	Direct	Indirect	Induced	Total
Agriculture, Fishing, Mining	-	1.4	1.3	2.7
Construction and Utilities	58.2	16.0	7.3	81.5
Manufacturing	-	4.4	2.2	6.6
Wholesale Trade	-	12.4	10.8	23.2
Air Transport	150.4	3.0	3.2	156.6
Other Transport	40.5	38.7	6.3	85.6
Retail Trade	468.2	18.7	29.9	516.8
Gasoline Stations	27.0	0.7	1.2	28.9
Communications	-	16.5	10.4	26.9
Finance, Insurance and Real Estate	-	83.2	104.4	187.6
Business Services	22.5	89.7	22.3	134.4
Education and Health Care	-	0.5	64.5	65.0
Recreation and Entertainment	216.8	9.3	9.2	235.3
Lodging	630.4	3.2	1.4	635.1
Food & Beverage	187.3	12.7	25.7	225.7
Personal Services	11.4	7.6	13.6	32.7
Government	40.9	10.0	4.0	54.9
TOTAL	1,853.7	328.1	317.7	2,499.5
Pch chg	7.8%	2.8%	2.5%	6.4%

Visitor spending impacts

- All business sectors of the Guam economy benefit from tourism activity directly and/or indirectly.
- Sectors that serve the tourism industry, such as business services, gain as suppliers to a dynamic industry.

Tourism Sales by Industry

\$ million



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

Note: Direct sales include cost of goods sold for retail

FIRE = finance, insurance and real estate

Tourism economy GDP impact

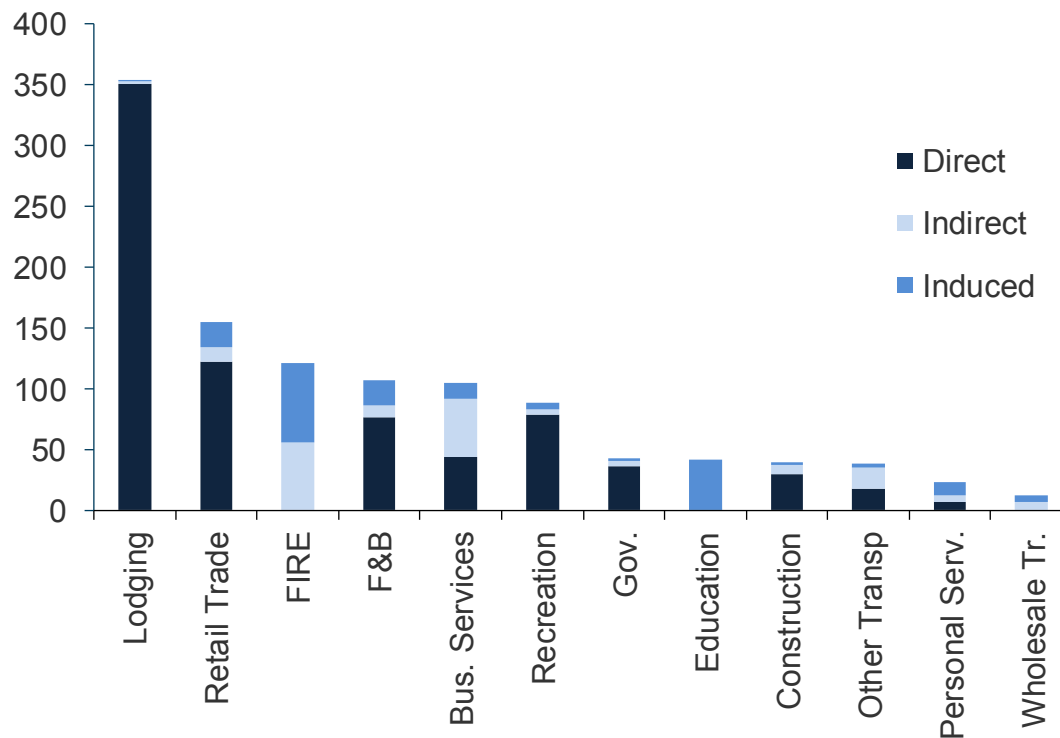
Tourism GDP (Value Added)				
(US\$ Million)				
	Direct	Indirect	Induced	Total
Agriculture, Fishing, Mining	-	0.7	1.0	1.7
Construction and Utilities	29.8	6.8	3.0	39.6
Manufacturing	-	0.8	0.3	1.1
Wholesale Trade	-	6.5	5.6	12.1
Air Transport	3.2	1.3	1.4	5.8
Other Transport	17.5	17.8	2.8	38.1
Retail Trade	121.9	11.8	20.4	154.2
Gasoline Stations	1.8	0.4	0.8	3.1
Communications	-	5.1	3.6	8.8
Finance, Insurance and Real Estate	-	55.4	65.2	120.6
Business Services	43.5	48.5	12.7	104.7
Education and Health Care	-	0.3	41.0	41.3
Recreation and Entertainment	78.6	4.4	5.0	88.0
Lodging	350.3	2.3	1.0	353.6
Food & Beverage	76.4	9.9	20.1	106.4
Personal Services	6.7	5.5	11.1	23.3
Government	36.2	4.3	1.6	42.2
TOTAL	766.0	181.8	196.7	1,144.6

Tourism economy GDP impact

- 20% of Guam's GDP is tourism-related.
- Lodging provides \$350 million in economic impact.
- Finance, Insurance & Real Estate ranks 3rd, adding \$120 million – despite not getting a dime directly from visitors.

Tourism GDP by Industry

\$ million



Tourism impact on employment (total)

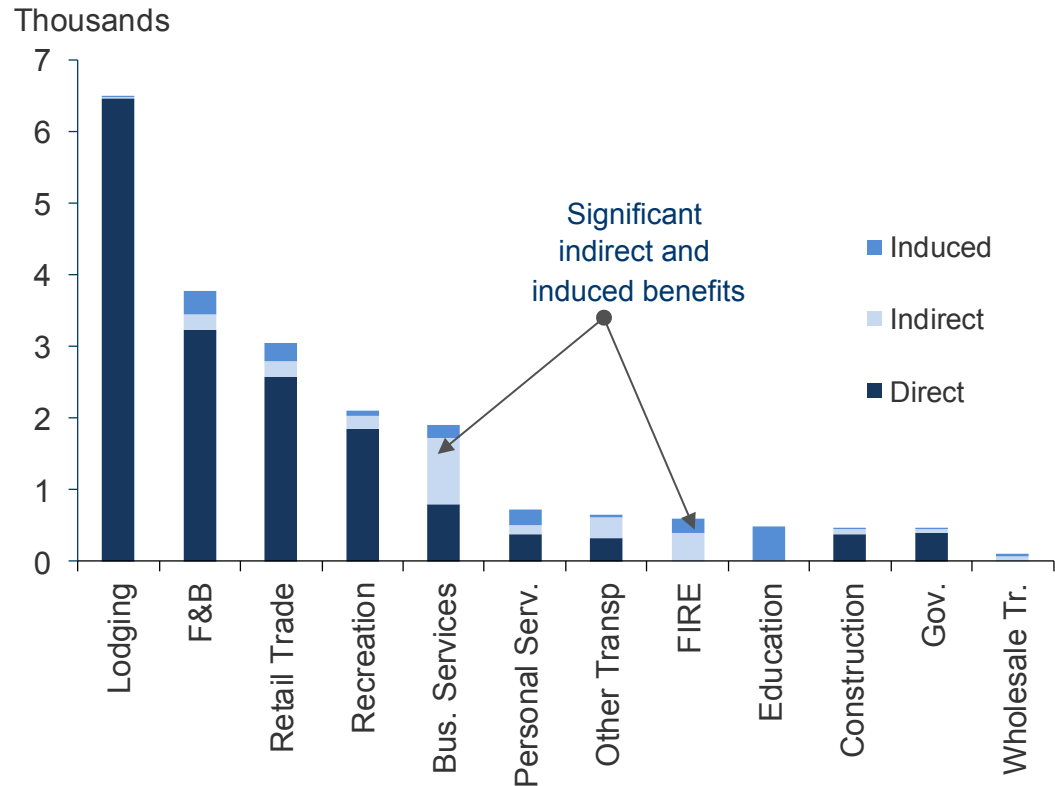
Tourism Employment				
	Direct	Indirect	Induced	Total
Agriculture, Fishing, Mining	-	27	17	44
Construction and Utilities	373	78	25	476
Manufacturing	-	20	5	25
Wholesale Trade	-	69	45	114
Air Transport	21	8	7	36
Other Transport	321	292	41	653
Retail Trade	2,569	226	250	3,045
Gasoline Stations	36	9	12	57
Communications	-	56	16	73
Finance, Insurance and Real Estate	-	395	195	590
Business Services	805	910	196	1,911
Education and Health Care	-	13	466	479
Recreation and Entertainment	1,850	177	82	2,109
Lodging	6,470	23	8	6,500
Food & Beverage	3,231	211	329	3,771
Personal Services	387	120	226	732
Government	396	63	15	474
TOTAL	16,459	2,696	1,936	21,091

- Visitor spending directly and indirectly supported 21,091 jobs, 34% of all employment on Guam last year.

Tourism impact on employment (total)

- As a labor intensive collection of services, tourism-related sectors are significant employers on Guam.
- The 21,091 tourism-supported jobs on Guam span every sector of the economy, either directly or indirectly.
- The most significant indirect impacts are in business services and finance, real estate & insurance.

Tourism Employment by Industry



Tourism personal income

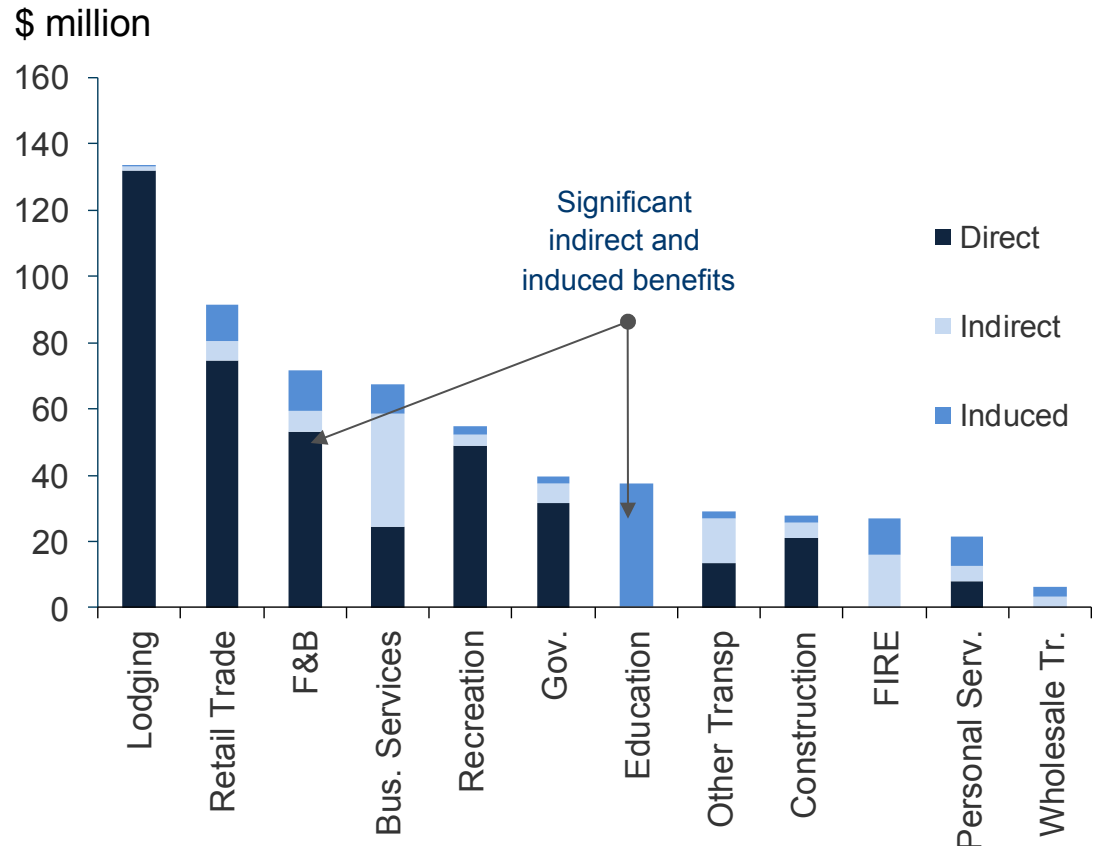
Tourism Labor Income (Compensation)				
(US\$ Million)				
	Direct	Indirect	Induced	Total
Agriculture, Fishing, Mining	-	0.5	0.6	1.0
Construction and Utilities	21.1	4.7	2.1	27.8
Manufacturing	-	0.6	0.2	0.8
Wholesale Trade	-	3.3	2.9	6.2
Air Transport	1.0	0.4	0.4	1.9
Other Transport	13.5	13.4	2.0	28.9
Retail Trade	74.7	5.7	11.1	91.4
Gasoline Stations	1.1	0.3	0.5	1.8
Communications	-	2.9	1.2	4.2
Finance, Insurance and Real Estate	-	16.1	10.8	26.9
Business Services	24.5	33.9	8.8	67.3
Education and Health Care	-	0.3	37.1	37.4
Recreation and Entertainment	48.7	3.5	2.8	55.0
Lodging	131.9	1.1	0.5	133.6
Food & Beverage	52.9	6.4	12.5	71.8
Personal Services	8.1	4.4	9.0	21.4
Government	31.4	6.2	1.9	39.5
TOTAL	408.8	103.7	104.5	617.0

- Employees on Guam earned \$617 million as a result of visitor activity in 2016.

Tourism personal income

- The larger employment numbers in F&B and recreation support significant labor income in those industries.
- Higher wages support labor income in supplier industries like business services and finance, insurance and real estate (FIRE).

Tourism Labor Income by Industry



Tourism tax generation

Traveler Generated Taxes

(US\$ Million)

Tax Type	2015	2016
Corporate	21.1	25.0
Indirect Business	32.3	32.8
Personal Income	29.4	31.7
Social Security	64.7	65.5
Hotel Occupancy Tax	37.0	40.9
Gross Receipts Tax	51.2	52.8
Special Revenues	10.2	10.9
TOTAL	246.0	259.6

- Taxes of nearly \$260 million were directly and indirectly generated by tourism in 2016.
- Each household on Guam would need to be taxed an additional \$5,100 to replace the tourism taxes received by state and local governments.

2016 Wrap-up

- Visitor spending on Guam grew 8.5% in 2016, reaching \$1.75 billion with a total impact on business sales of \$2.5 billion.
- 1-in-3 jobs on the Island of Guam is supported by visitor spending.
- Visitor supported employment growth is outpacing island employment growth.
- Total state and local tax revenue supported by tourism activity reached \$260 million.

Tourism in context



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Fun facts

- Visitor spending of \$1.75 billion is similar in size to the populations of China and the United States – two of the three largest countries by population in the world.
- The height of a \$1.75 billion pile of \$1 bills is nearly 120 miles – which would span the length of Guam 4 times.
- \$1.75 billion means that, on average, more than \$200,000 was spent by visitors on Guam every hour.
- \$630 million was spent by visitors to Guam at hotels – or about \$315 per brown snake on Guam (estimated population of 2 million).
- Each visitor on Guam spends, on average, \$1,140.

Fun facts

- Visitors directly supported 15,484 jobs – more than double the number of US troops on Guam (about 7,000).
- Were all 15,484 jobs directly supported by visitor spending to disappear, the unemployment rate would jump to 26.3% from the 4.5% rate seen in 2016.
- \$74,000 in visitor spending supports one direct job on Guam – which means that it takes the spending of about 65 visitors to support a job.
- Thought of another way, each A320 that lands on Guam can bring about 180 people – enough to support two-and-a-half jobs on the island assuming all on-board passengers are visitors.
- Were the \$260 million in tax revenues split among Guam households, each household would receive a check for \$5,100.

Methodology and Background



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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 country's national accounts 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...

Methods and data sources

- Domestic visitor expenditure estimates are provided by DKSA representative survey of US travelers. These are broken out by sectors (lodging, transport at destination, food & beverage, retail, and recreation), by purpose (business and leisure), and by length of stay (day and overnight).
- Tourism Economics then adjusts these levels of spending based on a range of known measures of tourism activity:
 - Industry data on employment, wages, GDP, and sales (source: BEA, BLS, Census)
 - STR data on hotel revenues
 - Bed tax receipts (various)
 - Gross receipts tax by industry (Guam Department of Revenue)
 - Overseas visitor spending (source: NTTO, TE)
 - Canada visitor spending (source: Statistics Canada, TE)
 - Spending on air travel which accrues to all airports and locally-based airlines
 - Gasoline purchases by visitors (source: TE calculation)

Methods and data sources

- An IMPLAN model was compiled for the Guam using Kauai County, Hawaii as its base. This 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.
- All results are benchmarked and cross-checked and adjusted based on the following:
 - US Bureau of Labor Statistics and Bureau of Economic Analysis (employment and wages by industry)
 - US Census (business sales by industry)
- The source of the employment and wage data is the Regional Economic Information System (REIS), Bureau of Economic Analysis, U.S. Department of Commerce. All employment rankings are based on Bureau of Labor Statistics (ES202/QCEW) data.

Definitions

- **Direct Impact:** The economic impact – including jobs and income – from the initial sales made by travelers. Examples include sales made by travelers at lodging properties, souvenir shops, restaurants, gas stations, amusement parks, museums, etc.
- **Indirect Impact:** The economic impact from the production, employment, and income occurring in other businesses/industries that supply the businesses making initial/direct sales to travelers. Examples include a restaurant’s food supplier or a hotel’s laundry service.
- **Induced Impact:** The economic impact from the spending by households in the local economy as the result of the earnings from a business that directly or indirectly interacts with travelers. Examples include a hotel desk clerk using the wages he earned to pay for his groceries or the accountant who works for a company that supplies napkins to a restaurant frequented by travelers using her wages to purchase flowers from her local florist.

About Tourism Economics

- Tourism Economics, headquartered in Philadelphia, is an Oxford Economics company dedicated to providing high value, robust, and relevant analyses of the tourism sector that reflects the dynamics of local and global economies. By combining quantitative methods with industry knowledge, Tourism Economics designs custom market strategies, project feasibility analysis, tourism forecasting models, tourism policy analysis, and economic impact studies.
- Our staff have worked with over 200 destinations to quantify the economic value of tourism, forecast demand, guide strategy, or evaluate tourism policies.
- 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 is founded on a reputation for high quality, quantitative analysis and evidence-based advice. For this, it draws on its own staff of 150 highly-experienced professional economists; a dedicated data analysis team; global modeling tools; close links with Oxford University, and a range of partner institutions in Europe, the US and in the United Nations Project Link.
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