

Economic Impacts of Travel, 2017p

Greater Fort Lauderdale, Florida

June 2018

Prepared for

Greater Fort Lauderdale
Broward County, Florida

Key Findings

- Direct Visitor Spending in 2017 surpassed \$7.6 billion, increasing 7.1%.
- Employment from visitor spending exceeded 59,000 jobs, and rose 3.1%.
- Tax revenue from visitor spending generated local and state tax revenue of \$453 million in 2017, increasing 7.8%.
- The tax revenue per household generated by travel direct spending was \$570.
- Commercial lodging sales amounted to \$1.3 billion in 2017. An increase of 9.5 percent for the year.
- International visitor spending accounts for 32% of total spending.
- Visitor air arrivals on domestic airlines were up 8.2 percent for the year, compared to a 7.2 percent increase the preceding year. The Fort Lauderdale/Hollywood International according to Sojern's destination report: "A Focus on Florida," is the most south after airport in Florida. New international service from Emirates, British Airways, and Norwegian are expanding access to the county for visitors from throughout the world.

Executive Summary

This report highlights total visitor economic impact. It includes visitor spending impact from both international visitors and domestic visitors combined.

This report provides detailed travel impact estimates for the Greater Fort Lauderdale area from 2015 to 2017p. For purposes of this analysis, the Greater Fort Lauderdale area is defined as Broward County. The estimates for 2017 are preliminary (p). These estimates were produced using the Regional Travel Impact Model (RTIM) developed by Dean Runyan Associates. Visitor data used in this model is derived from various sources however in particular the report utilizes Travel Market Insights Inc for international visitor data as it is comparable to the Florida and is considered to be based on the official visitor arrivals from the US Department of Commerce and Bureau of Economic Analysis.. Domestic data also has multiple source inputs, however, DKS is the primary source for domestic visitor data specific to Fort Lauderdale. The estimates are comparable to the U.S. Travel and Tourism Satellite Accounts produced by the U.S. Bureau of Economic Analysis.

- **Spending.** Direct travel spending (\$7.6 billion in 2017) in the Greater Fort Lauderdale area increased by 7.1 percent for the year in current dollars. In real (inflation-adjusted) dollars, the increase was 7.0 percent.
- **Employment.** Travel-generated employment (59,450 jobs in 2017) increased by 0.3 percent for the year. The average annual rate of employment growth over the past three years has been 3.1 percent.
- **Tax Revenue.** Travel generated local and state tax revenue (\$435.3 million in 2017) increased by 7.8 percent for the year. The tax revenue per household generated by travel direct spending was \$570.
- **Travel Activity.** Visitor air arrivals on domestic airlines were up 8.2 percent for the year, compared to a 7.2 percent increase the preceding year. Domestic visitor air travel to Greater Fort Lauderdale has grown at an average annual rate of 4 percent since 2010. Commercial lodging sales amounted to \$1.3 billion in 2017. An increase of 9.5 percent for the year.

RECENT TRAVEL TRENDS IN THE GREATER FORT LAUDERDALE AREA

Total direct travel spending in the Greater Fort Lauderdale area was \$7.6 billion in 2017. This represents a 7.0 percent increase over the preceding year in current dollars. Travel-generated employment increased by 0.3 percent a modest increase following a 6 percent increase in 2016. Non-transportation spending increased 8.7 percent following a 1.5 percent increase in 2016.

Greater Fort Lauderdale Travel Impacts, 2015-2017p

	2015	2016	2017p	Avg. Annual Chg.	
				16-17p	15-17p
Spending (\$Billions)					
Total (\$ Real)	7.0	7.1	7.6	7.0%	4.0%
Total (\$ Current)	7.0	7.1	7.6	7.1%	4.0%
Other	1.1	1.1	1.2	4.4%	6.0%
Visitor	5.9	5.9	6.4	7.6%	3.7%
Non-transportation	4.2	4.3	4.6	8.7%	5.1%
Transportation	1.8	1.7	1.8	4.9%	0.2%
Earnings (\$Billions)					
Earnings (\$ Current)	1.7	1.8	1.9	4.6%	5.5%
Employment (Jobs)					
Employment	55,910	59,280	59,450	0.3%	3.1%
Tax Revenue (\$Millions)					
Total	404.2	403.6	435.3	7.9%	3.8%
Local	105.6	105.0	113.3	7.8%	3.6%
State	298.6	298.6	322.0	7.9%	3.8%

Other spending includes resident air travel, travel arrangement and reservation services, and convention and trade show organizers.

Non- transportation visitor spending includes accomodations, food services, retail, food stores, and arts, entertainment & recreation.

Visitor transportation spending includes motor fuel, auto rental, other local ground transportation and one-way airfares.

Earnings include wages & salaries, earned benefits and proprietor income.

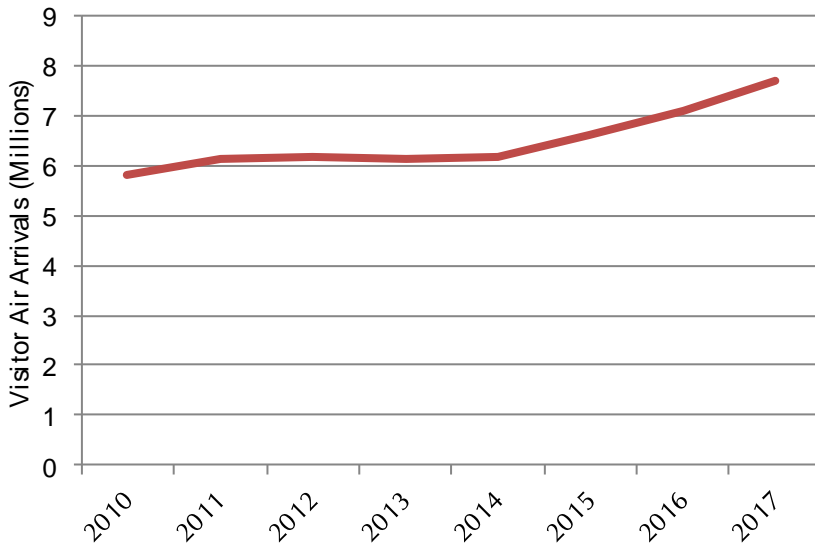
Employment includes all full and part-time employment of payroll employees and proprietors.

Local tax revenue includes lodging taxes, motor fuel taxes, and airport passenger facility charges paid by visitors.

State tax revenue includes sales, motor fuel, auto rental, and income tax payments attributable to travel industry businesses.

Note: Estimates for 2017p are preliminary. The percentage change for 2015-2017p refers to the average annual percentage change.

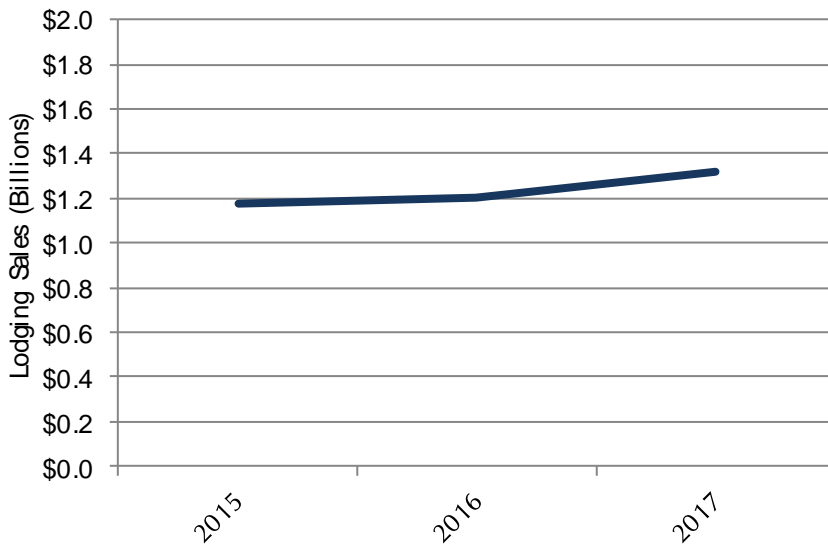
Visitor Arrivals on Domestic Flights, 2010-2017p



Visitor air arrivals to the Greater Fort Lauderdale area were 7.7 million in 2017, an annual increase of 8 percent. Since 2010, domestic air visitors have grown at an annual average rate of 4 percent. International air arrivals increased adding new access.

Sources: U.S. Department of Transportation Origin and Destination Survey and Dean Runyan Associates.

Lodging Sales, 2015-2017p

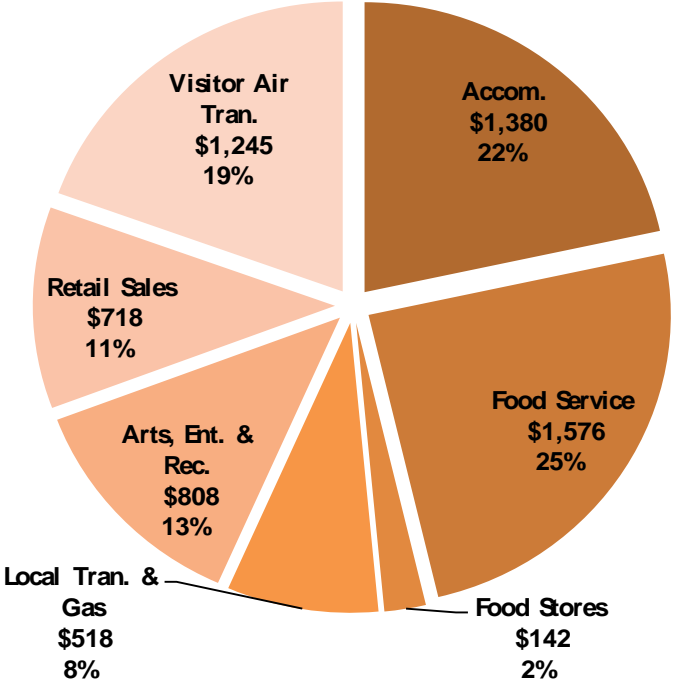


Commercial lodging sales in the Greater Fort Lauderdale area amounted to \$1.3 Billion in 2017, an increase of 9.5 percent over 2016. Commercial lodging includes hotel/motel, short term vacation rentals, camping, and timeshares.

Sources: Dean Runyan Associates, STR Inc., Broward County Finance and Administrative Services Department.

DETAILED TRAVEL IMPACTS

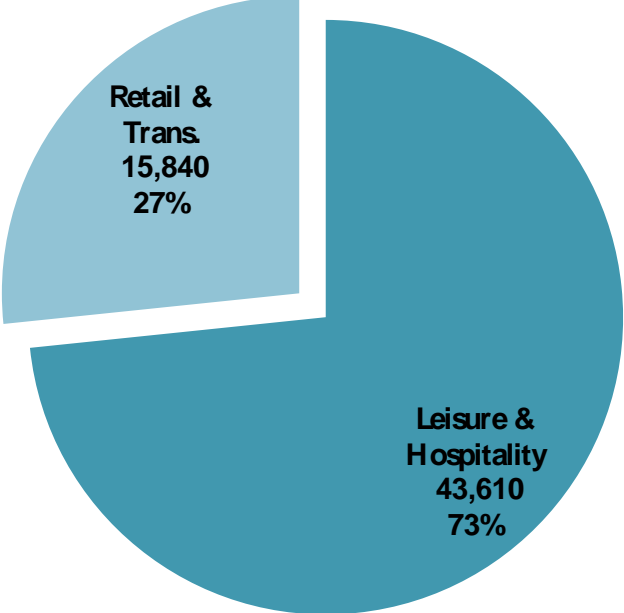
Visitor Spending by Type of Commodity
(Millions)



Spending & Employment. Nearly one-half of all visitor spending was on accommodations and food service in 2017. The leisure and hospitality sector total (lodging; food services; and arts, entertainment and recreation) accounted for 62 percent of visitor spending. Visitor air spending accounted for half of transportation spending.

The leisure and hospitality sector accounts for a much higher proportion of employment (73 percent) because it is more labor-intensive and service-oriented.

Travel-Generated Employment by Industry Sector



Tax Revenue. Travel spending in the Greater Fort Lauderdale area generated \$113.3 million in local tax revenues in 2017. Local taxes include lodging taxes, county motor fuel taxes, and passenger facility charges for visitors traveling by air to Fort Lauderdale International Airport.

Greater Fort Lauderdale Travel Impacts, 2015-2017p

	2015	2016	2017p
Total Direct Travel Spending (\$Billion)			
Visitor Spending	5.9	5.9	6.4
Other Travel*	1.1	1.1	1.2
Total Direct Spending	7.0	7.1	7.6
Visitor Spending by Type of Traveler Accomodation (\$Billion)			
Hotel, Motel	2.3	2.3	2.6
Private Home	0.4	0.4	0.5
Shared Lodging	0.5	0.5	0.5
Other Overnight	0.6	0.6	0.6
Day Travel	0.9	0.9	1.0
Subtotal	4.7	4.7	5.1
Visitor Air Tran.	1.2	1.2	1.2
Visitor Spending	5.9	5.9	6.4
Visitor Spending by Commodity Purchased (\$Billion)			
Accommodations	1.2	1.3	1.4
Food Service	1.4	1.4	1.6
Food Stores	0.1	0.1	0.1
Local Tran. & Gas	0.5	0.5	0.5
Arts, Ent. & Rec.	0.7	0.7	0.8
Retail Sales	0.7	0.7	0.7
Visitor Air Tran.	1.2	1.2	1.2
Visitor Spending	5.9	5.9	6.4
Industry Earnings Generated by Travel Spending (\$Million)			
Accom. & Food Serv.	716.5	739.7	753.1
Arts, Ent. & Rec.	207.2	205.1	208.4
Retail**	90.5	92.6	95.6
Ground Tran.	56.5	58.3	58.9
Visitor Air Tran.	323.4	338.2	372.4
Other Travel*	305.3	374.3	403.2
Total Direct Earnings	1,699.4	1,808.2	1,891.5
Industry Employment Generated by Travel Spending (Jobs)			
Accom. & Food Serv.	27,240	28,010	28,070
Arts, Ent. & Rec.	14,990	15,780	15,540
Retail**	2,860	2,920	2,910
Ground Tran.	1,650	1,670	1,660
Visitor Air Tran.	4,180	4,660	4,960
Other Travel*	4,990	6,240	6,310
Total Direct Employment	55,910	59,280	59,450
Government Revenue Generated by Travel Spending (\$Million)			
Local Tax Receipts	105.6	105.0	113.3
State Tax Receipts	298.6	298.6	322.0
Total Direct Gov't Revenue	404.2	403.6	435.3

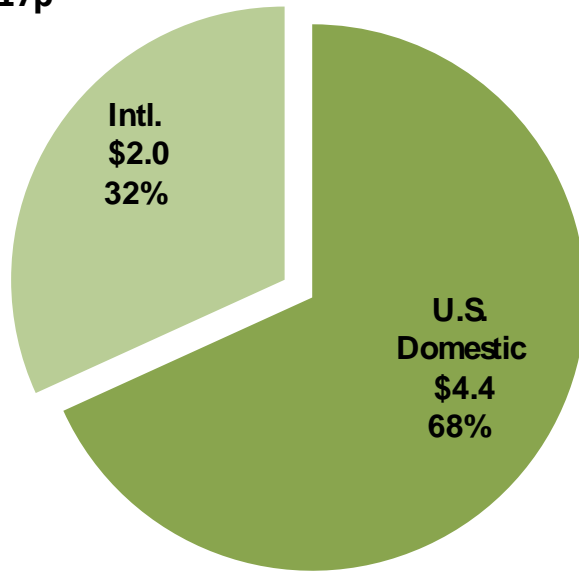
Details may not add to totals due to rounding.

* Other Travel includes resident air travel and ground transportation impacts for travel to other destinations, travel arrangement & reservation services, and convention & trade show organizers

** Retail includes gasoline.

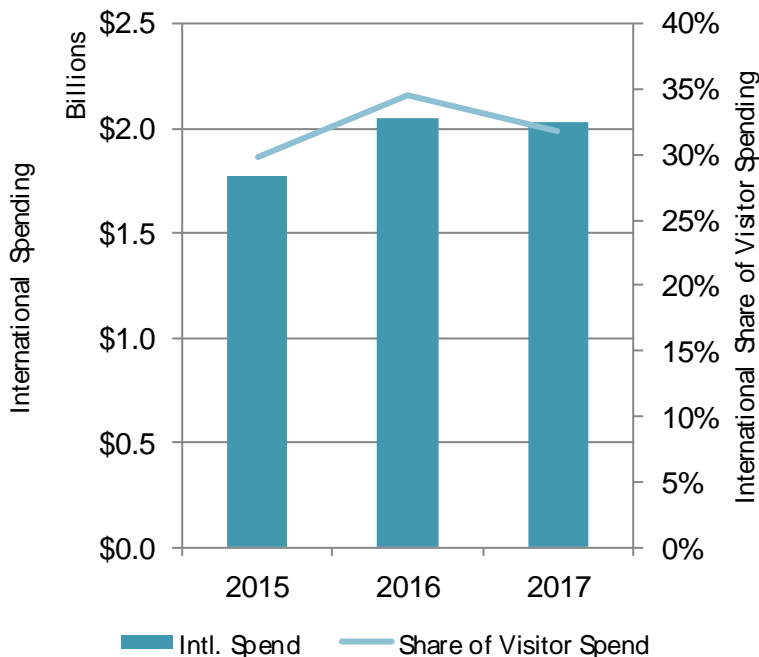
VISITOR ORIGIN

Visitor Spending by Origin of Visitor, 2017p



About one-fourth of all visitor spending in the Greater Fort Lauderdale area was generated by international visitors in 2017. International visitors spent \$2.0 billion. This figure does not include airfare to the United States.

International Visitor Spending in Greater Fort Lauderdale



Preliminary international visitors spending to the U.S. was down due to the stronger dollar. In 2016 the international share of total spend for Fort Lauderdale grew about 5 percent, while in 2017 the international share of total spend was not a high due to the strong U.S. dollar and growth in domestic spend.

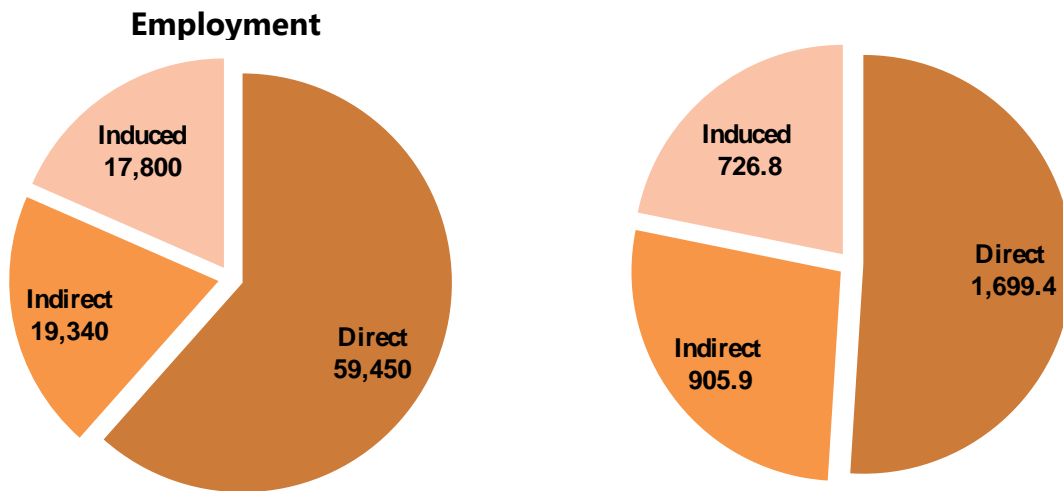
Sources: Travel Market Insights, Dean Runyan Associates.

SECONDARY IMPACTS

Travel spending within Greater Fort Lauderdale brings money into many neighborhoods in the form of business receipts. Portions of these receipts are spent within the state for labor and supplies. Employees, in turn, spend a portion of their earnings on goods and services in the state. This re-spending of travel-related revenues creates *indirect and induced impacts*. To summarize:

- **Direct** impacts represent the employment and earnings attributable to travel expenditures made directly by travelers to businesses throughout the state.
- **Indirect** impacts represent the employment and earnings associated with industries that supply goods and services to the direct businesses (i.e., those that receive money directly from travelers throughout the state).
- **Induced** impacts represent the employment and earnings that result from purchases for food, housing, transportation, recreation, and other goods and services made by travel industry employees, and the employees of the indirectly affected industries.

Total Employment and Earnings Generated by Travel Spending, 2017p



Sources: Dean Runyan Associates and Implan Group LLC. Details may not add to totals due to rounding. The employment multiplier is 1.62 (96,590/59,450). The earnings multiplier is 1.96 (3,332.1/1,699.4).

The impacts in this section are presented in terms of the employment and earnings of eleven major industry groups. These industry groups are similar, but not identical to the business service (or commodity) categories presented elsewhere in this report. (The specific industries that comprise these major groups are listed in Appendix D.) Direct travel impacts, such as those discussed in the first part of this section and the regional and county impacts presented elsewhere in this report are found in the following industry groups:

- **Accommodations & Food Services**
- **Arts, Entertainment, and Recreation**
- **Trade**
- **Transportation**

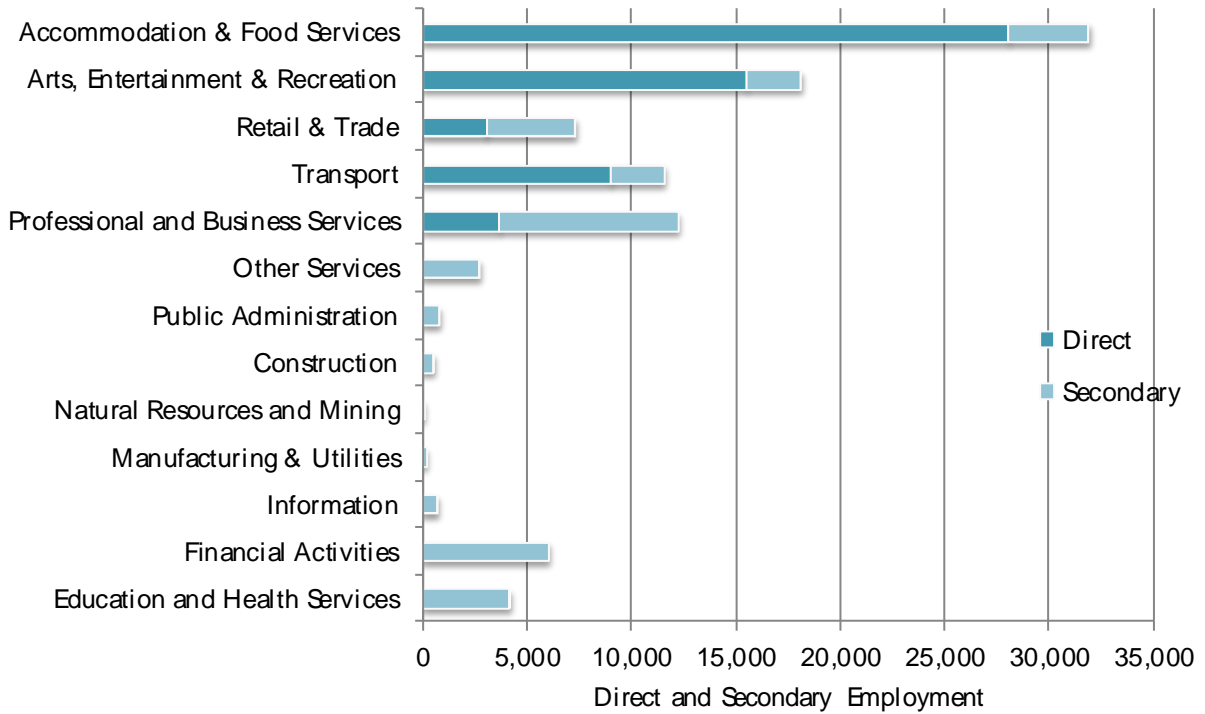
As is indicated in the following tables and graphs, the total direct employment and earnings of these four industry groups is identical to the total direct employment and earnings shown in the first part of this section. The only difference is that these industry groups represent industry groupings (firms) rather than commodity or business service groupings.

The indirect and induced impacts of travel spending are found in all thirteen industry groupings shown in the following tables and graphs. To summarize the primary secondary impacts:

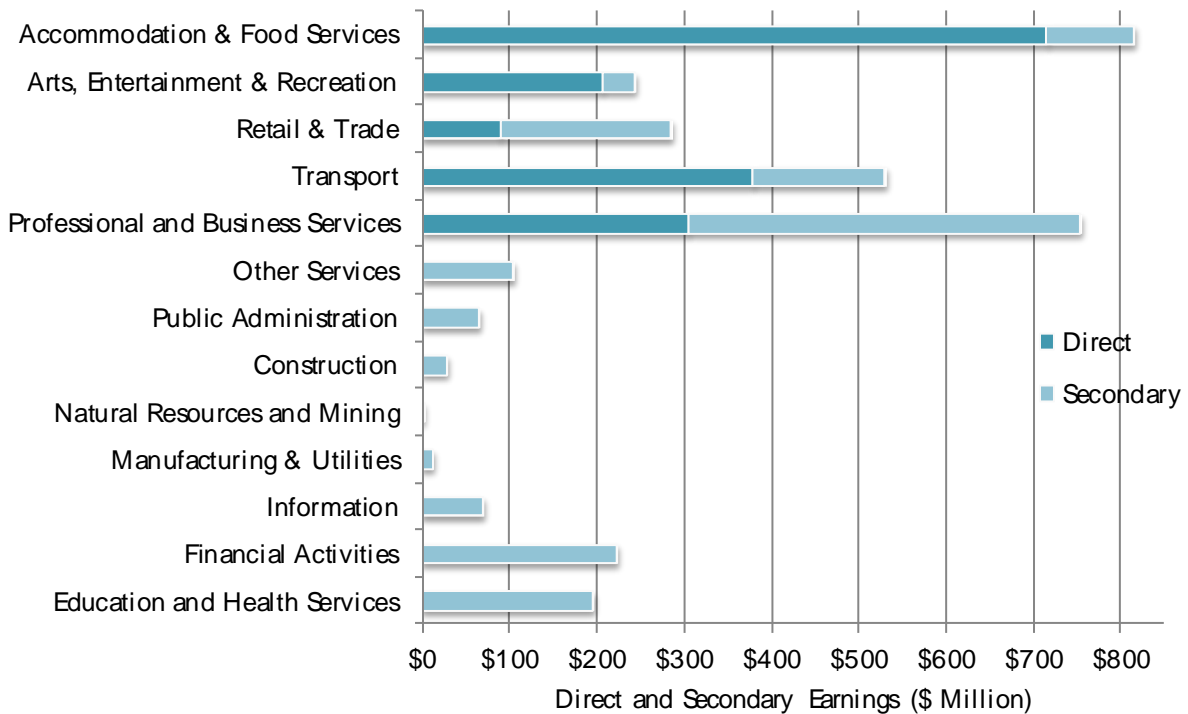
- **Professional & Business Services** (8,550 jobs and \$449 million earnings). A variety of administrative services (e.g., accounting and advertising) are utilized by travel businesses (indirect effect). Employees of these firms also purchase professional services (induced effect).
- **Education and Health Services** (4,210 jobs and \$196 million earnings). The secondary effects are primarily induced, such as employees of travel-related businesses use of medical services.
- **Financial Activities** (6,060 jobs and \$196 million earnings). Both businesses and individuals make use of banking and insurance institutions.
- **Other Services** (2,750 jobs and \$105 million earnings). Employees of travel-related businesses purchase services from various providers, such as dry cleaners and repair shops.

It should be emphasized that the estimates of indirect and induced impacts reported here apply to the entire county of Broward and do not necessarily reflect economic patterns for individual cities, or sub-regions within the county. While total economic impacts can be calculated on a city or sub-region level, such a detailed analysis is not included in this study. In general, geographic areas with lower levels of aggregate economic activity will have smaller secondary impacts within those same geographic boundaries.

Direct and Secondary Employment Generated by Travel Spending, 2017p



Direct and Secondary Earnings Generated by Travel Spending, 2017p



Sources: Dean Runyan Associates and Implan Group, LLC. Industrv Groups are defined in Appendix D.

Direct and Secondary Travel-Generated Employment, 2017p

Industry Group	Direct	Secondary		Total	Grand Total
		Indirect	Induced		
Accommodation & Food Services	28,070	1,570	2,260	3,830	31,900
Arts, Entertainment & Recreation	15,540	2,140	450	2,590	18,130
Retail & Trade	3,080	820	3,430	4,250	7,330
Transport	9,060	2,150	380	2,530	11,590
Professional and Business Services	3,710	6,470	2,080	8,550	12,260
Other Services		680	2,070	2,750	2,750
Public Administration		590	240	830	830
Construction		340	220	560	560
Natural Resources and Mining		20	10	30	30
Manufacturing & Utilities		140	60	200	200
Information		510	230	740	740
Financial Activities		3,690	2,370	6,060	6,060
Education and Health Services		220	3,990	4,210	4,210
All Industries	59,450	19,340	17,800	37,140	96,590

Direct and Secondary Travel-Generated Earnings, 2017p

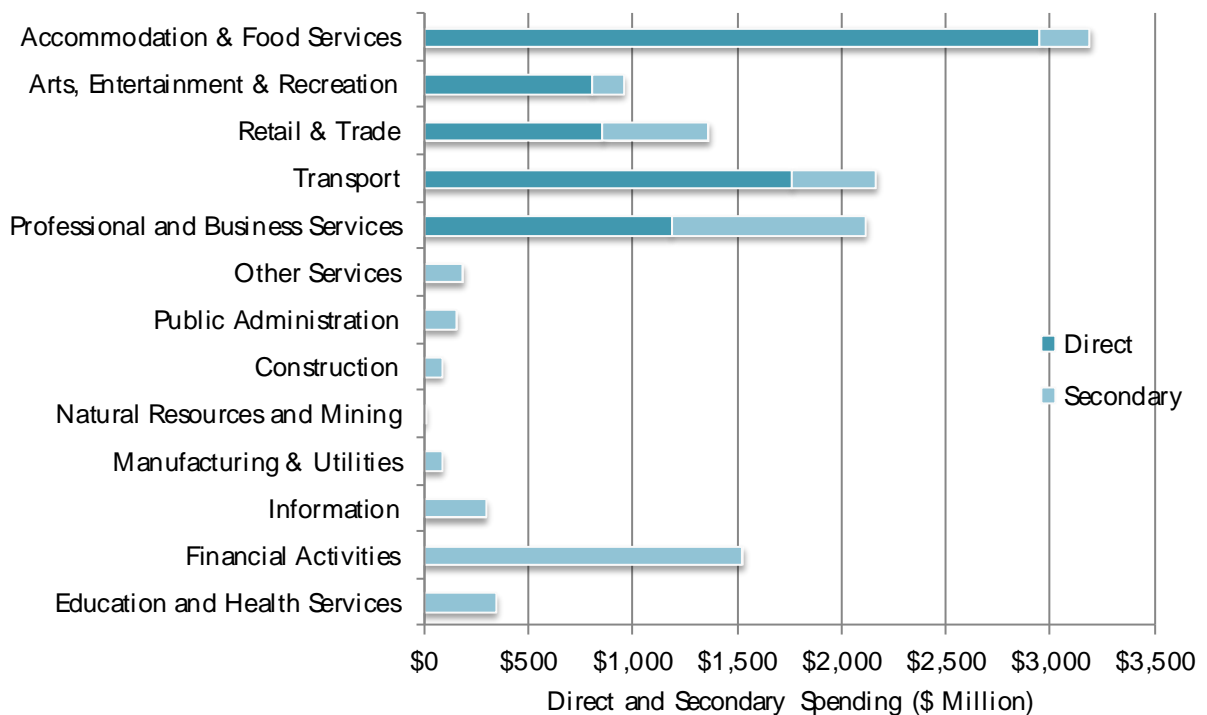
(\$Million)

Industry Group	Direct	Secondary		Total	Grand Total
		Indirect	Induced		
Accommodation & Food Services	716.5	43.3	55.2	98.5	815.0
Arts, Entertainment & Recreation	207.2	27.6	9.3	37.0	244.2
Retail & Trade	90.5	55.1	140.5	195.6	286.1
Transport	379.9	131.5	19.5	150.9	530.8
Professional and Business Services	305.3	346.6	102.4	449.0	754.3
Other Services		33.3	71.8	105.0	105.0
Public Administration		47.7	18.0	65.7	65.7
Construction		17.6	11.2	28.8	28.8
Natural Resources and Mining		0.1	0.1	0.2	0.2
Manufacturing & Utilities		8.4	4.1	12.5	12.5
Information		49.6	20.5	70.1	70.1
Financial Activities		140.1	83.2	223.3	223.3
Education and Health Services		5.1	190.9	196.0	196.0
All Industries	1,699.4	905.9	726.8	1,632.8	3,332.1

Direct and Secondary Travel-Generated Spending, 2017p
(\$Million)

Industry Group	Direct	Secondary		Total	Grand Total
		Indirect	Induced		
Accommodation & Food Services	2,957	84	148	232	3,189
Arts, Entertainment & Recreation	808	116	33	149	957
Retail & Trade	859	149	357	505	1,365
Transport	1,763	339	62	402	2,164
Professional and Business Services	1,187	721	207	928	2,115
Other Services		68	120	188	188
Public Administration		106	53	159	159
Construction		53	35	88	88
Natural Resources and Mining		2	0	2	2
Manufacturing & Utilities		55	34	88	88
Information		190	108	298	298
Financial Activities		749	779	1,529	1,529
Education and Health Services		8	338	347	347
All Industries	7,574	2,639	2,275	4,914	12,489

Direct and Secondary Travel Spending, 2017p
(\$Million)



TAX REVENUE & TRAVEL SHARE OF EMPLOYMENT

State and Local Travel-Generated Tax Revenue per Household 2015-2017p Calendar Year

Year	Local	State	Total	Households (Thousands)	Tax Revenue per Household
2015	\$105.6	\$298.6	\$404.2	738.5	\$550
2016	\$105.0	\$298.6	\$403.6	747.3	\$540
2017	\$113.3	\$322.0	\$435.3	757.6	\$570

Sources: Dean Runyan Associates and the Census Bureau.

Travel Generated Employment & Earnings, 2016

	Employment (Thousand)			Earnings (\$Billion)		
	Total	Travel	Percent Travel	Total	Travel	Percent Travel
Greater Fort Lauderdale	1,185.6	59.3	5.0%	57.5	1.8	3.1%

Sources: Dean Runyan Associates and the Bureau of Economic Analysis. At the time of this report the most current data available was for 2016.

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APPENDICES

APPENDIX A	2017 TRAVEL IMPACT ESTIMATES
APPENDIX B	KEY TERMS AND DEFINITIONS
APPENDIX C	REGIONAL TRAVEL IMPACT MODEL
APPENDIX D	TRAVEL INDUSTRY ACCOUNTS
APPENDIX E	INDUSTRY GROUPS

2017 TRAVEL IMPACT ESTIMATES

This appendix provides a brief overview of the methodology, terminology and limitations of the travel impact and visitor volume estimates.

DIRECT IMPACTS

The estimates of the direct impacts associated with traveler spending in Greater Fort Lauderdale were produced using the Regional Travel Impact Model (RTIM) developed by Dean Runyan Associates. The input data used to detail the economic impacts of the Greater Fort Lauderdale travel industry were gathered from various local, state and federal sources.

Travel impacts consist of estimates of travel spending and the employment, earnings, and state and local taxes generated by this spending. These estimates are also broken out by type of traveler accommodation and by the type of business in which the expenditures occur.

GROUND TRANSPORTATION ESTIMATES

County and regional level estimates of destination or visitor spending include only a portion of the ground transportation expenditures for travel that occur in the county. The remaining portion is included in “other travel” as it represents transportation costs for travel to another destination within Greater Fort Lauderdale. State level estimates of visitor spending include all of these expenditures for ground transportation.

SECONDARY (INDIRECT AND INDUCED) IMPACTS

Direct impacts are reported for all counties within Greater Fort Lauderdale. Secondary employment and earnings impacts over and above direct impacts are reported at the county level only for the year 2017. These indirect and induced impacts are generated from the direct impacts produced by the RTIM, discussed above, and an input-output model of the Greater Fort Lauderdale economy prepared by the Implan Group, LLC. Indirect impacts represent the purchases of goods and services from other firms by businesses that directly receive expenditures from travelers. Hotels, for example, purchase maintenance services from independent contractors. Induced impacts represent the purchase of goods and services by employees whose earnings are in part derived from travel expenditures. The sum of the direct, indirect and induced impacts equals the total impact of all spending by visitors in the state. The “multiplier” refers to the ratio of the total impacts to the direct impacts for employment or earnings. A description of the methodology used to estimate secondary impacts can be found in the Appendix.

PRELIMINARY ESTIMATES

Preliminary estimates for 2017 were prepared at the state, regional and county level. These estimates take advantage of the most current available data. However, because full-year data was not available in all cases, these estimates are subject to subsequent revision as additional information relating to travel and its economic impact in 2017 becomes available.

INTERPRETATION OF IMPACT ESTIMATES

Users of this report should be aware of several issues regarding the interpretation of the impact estimates contained herein:

- The estimates contained in this report are based on the most current data available and supersede all previous estimates of travel impacts.
- The estimates in this report are expressed in *current* dollars unless otherwise noted.
- The employment estimates in this report are estimates of the total number of full and part-time jobs directly generated by travel spending, rather than the number of individuals employed. Both payroll and self-employment are included in these estimates. Caution should therefore be used in comparing these estimates with other employment data series.
- In general, estimates of small geographic areas (e.g., rural counties) are less reliable than estimates for regions or metropolitan counties. Trend analysis and comparisons of counties with relatively low levels of travel related economic activity should therefore be interpreted cautiously.
- The estimates of travel impacts published in this report will necessarily differ somewhat from estimates generated from different models, methodologies and data sources. Nonetheless, it should be emphasized that all credible estimates of direct travel impacts at the state level, including those of Dean Runyan Associates, are of similar magnitude.

KEY TERMS AND DEFINITIONS

Commodity: A classification of a product or service, such as lodging or food service. An establishment or industry may produce more than one commodity.

Direct Impacts: Employment, earnings and tax receipts *directly* generated by travel spending, as distinguished from secondary and total impacts.

Earnings: Earnings include wage and salary disbursements, other earned income or benefits, and proprietor income. Only the earnings attributable to travel expenditures are included.

Employment: Industry employment (jobs) associated with travel-generated earnings. Includes both full-time and part-time positions, and salaried or self-employed individuals. Employment is reported as an average for a time period, typically annual. (Unless otherwise noted, the employment estimates refer to establishment or industry employment at place of work, not the employment status or residence of the individual.)

Federal Taxes: Federal taxes include the motor fuel excise tax, airline ticket taxes, and personal income and payroll taxes.

Industry: A classification of business or government establishments based on their primary technological process. (See NAICS Appendix table.)

Local Taxes: Lodging, and motor fuel taxes imposed by cities, and the county in Greater Fort Lauderdale. These taxes are levied on sales to visitors. Passenger Facility Charges attributable to visitors (a fee imposed on airline tickets) are included.

Other spending: Other spending includes spending by residents on ground and air transportation for travel to other destinations, spending on travel arrangement services, and convention/ trade shows.

Private Home: Unpaid overnight accommodations of friends and relatives.

Receipts: Travel expenditures less the sales and excise taxes paid by the consumer.

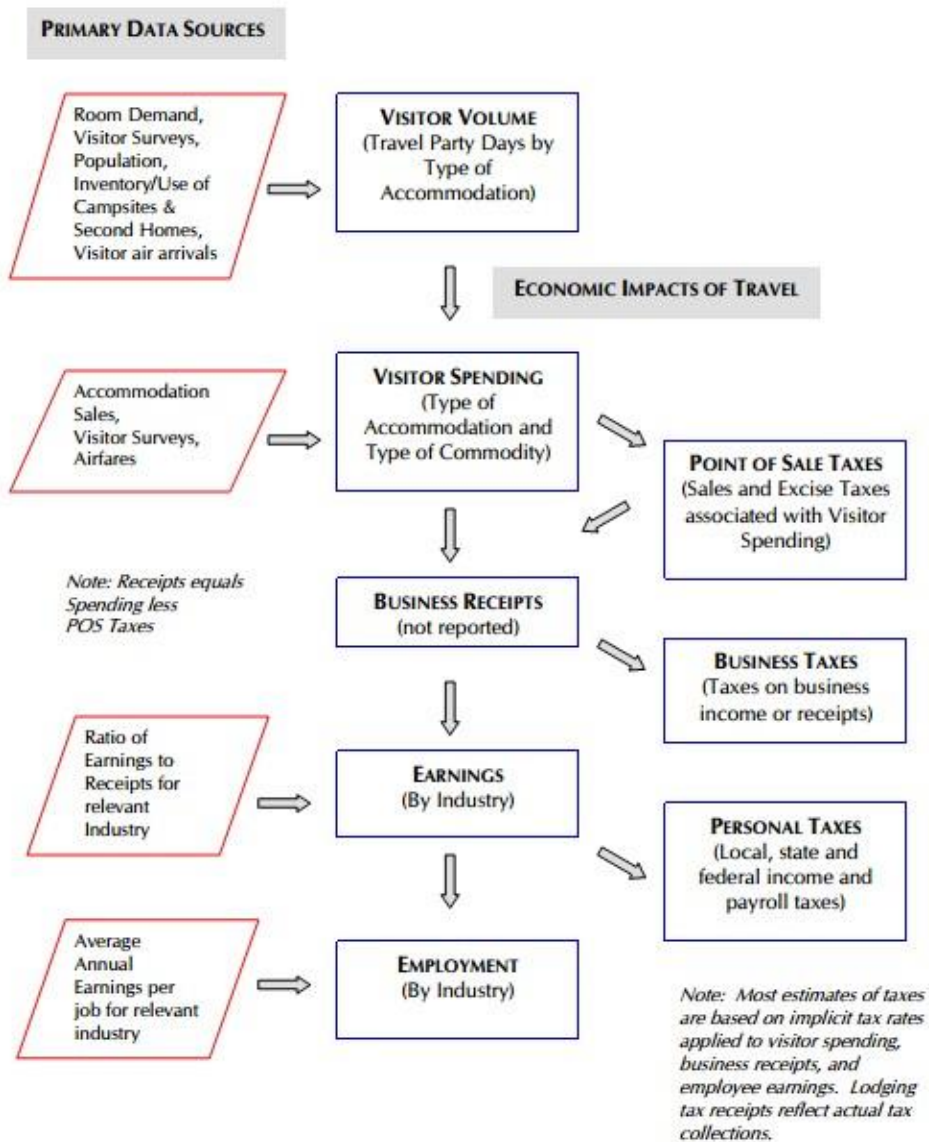
State Taxes: Lodging, sales, motor fuel, and business income taxes imposed by the state of Florida. These taxes are levied on sales to visitors.

Total Impacts: The sum of Direct and Secondary impacts.

Travel spending: The sum of visitor and other spending related to travel.

Visitor spending: All spending on goods & services by visitors at the destination. Also referred to as destination spending.

REGIONAL TRAVEL IMPACT MODEL



TRAVEL INDUSTRY ACCOUNTS: A COMPARISON OF THE REGIONAL TRAVEL IMPACT MODEL AND TRAVEL & TOURISM SATELLITE ACCOUNTS

An economic account is a method for displaying inter-related information about a set of economic activities. A travel industry account is a method to report different types of related information about the purchase of goods and services by visitors. The Bureau of Economic Analysis (BEA), which now provides annual and quarterly estimates of travel and tourism at the national level, describes a Travel and Tourism Satellite Account (TTSA) as “present(ing) a rearrangement of information from the National Income and Product Accounts, from the industry accounts, and from other sources so that travel and tourism activities can be analyzed more completely than is possible in the structure of the traditional national economic accounts.”¹ Similarly, the RTIM has been developed by Dean Runyan Associates to estimate travel spending, earnings, employment, and tax receipts at the state, county, and regional levels. These initial findings can, in turn, be used as input data for deriving estimates of other economic measures, such as value-added and indirect effects.

This appendix provides an overview of the Regional Travel Impact Model (RTIM) and travel and tourism satellite accounts (TTsAs). Although there is no single or absolute form of a TTSA, the one developed by the Bureau of Economic Analysis (BEA) will be the basis of the analysis here. The definitions, framework, and estimating methods used for the U.S. BEA TTSA follow, as closely as is practicable, the guidelines for similar travel satellite accounts that were developed by the World Tourism Organization (WTO) and the Organization for Economic Co-operation and Development (OECD).

The primary focus is on the direct impacts of visitor spending. Visitors are defined as persons that stay overnight away from home, or travel more than fifty miles one-way on a non-routine trip. Only the expenditures related to specific trips are counted as visitor spending. Other travel related expenditures such as the consumption of durable goods (e.g., recreational vehicles or sporting equipment) or the purchase of vacation homes are not considered.

While such a definition of the travel industry (i.e., the trip related expenditures of visitors) is conservative, it is also in keeping with the notion of the travel industry as being an export-oriented industry for specific local communities. That is, visitors are important to regions because they inject money into the local economy. This focus on the export-oriented nature of the travel industry for local communities becomes blurred if the industry is defined so as to include non-trip related expenditures.

¹ Peter D. Kuhbach, Mark A. Planting, and Erich H. Strassner, “U.S. Travel and Tourism Satellite Accounts for 1998-2003,” *Survey of Current Business* 84 (September 2004): 43-59.

PRIMARY CONCEPTS, CATEGORIES & DATA REQUIREMENTS

There are three primary types of information that are measured and/or estimated in a travel industry account. The first is a measure of the **travel industry** in terms of both the characteristics of the business firms that sell travel goods and services and the characteristics of consumers that purchase travel industry goods and services. The second is a measure of the **demand segments** that consume travel industry goods and services. For example, the distinction between business and leisure travel is a measure of demand segments. The third is a measure of the **components of economic output** associated with the travel industry. The employee earnings generated by visitor spending is one such component. Travel-generated tax receipts are another. These three categories of information represent different aspects of the accounting ledger – they represent different ways of viewing or analyzing the travel industry.

The bulk of this paper will discuss these three types of information in terms of their conceptual foundations, the data requirements, and some of the more salient issues that users of this information should be aware of. There will also be some discussion of **indirect and induced effects** in that these effects can be reasonably estimated from the direct travel industry accounts. These secondary (versus direct) effects describe the relationship of the travel industry to other sectors of the larger economy.

The intent of this discussion will be to provide a general overview of the process of constructing travel industry accounts and the underlying similarity between the RTIM and a TTSA. More technical issues are generally placed in footnotes.

TRAVEL INDUSTRY

Defining the travel industry is probably the most critical and data intensive effort involved in developing a travel industry account. It is an exercise in matching supply (sellers of goods and services) with demand (the travelers that purchase those particular goods and services). It is complicated by the fact that no single industrial classification scheme provides a valid measure of the travel industry.² There are only three significant industrial classifications (Accommodations [NAICS 721], Scheduled Passenger Air Transportation [NAICS 481111] and Travel Arrangement and Reservation Services [NAICS 5615]) that *primarily* sell travel industry goods and services.³ Firms in other industries (retail, recreation, transportation) provide goods and services to both travelers and other types of consumers.

Because of this, most satellite accounts, as well as the RTIM, incorporate at least some information about the expenditures of visitors in order to define the supply of

² The North American Industrial Classification System (NAICS) is the current standard in the United States.

³ Even these industries are not purely travel. For example, the accommodations industry provides services to local residents (food service and meeting rooms). Passenger airlines also ship cargo on the same planes that carry passengers. Fortunately, it is usually possible to make adjustments for these non-travel components through the use of additional data.

visitor industry firms. For example, if there is an estimate of visitor-days and an estimate of how much the average visitor spends on food services per day, then an estimate of visitor spending on food services can be calculated. In most cases, this will be only a fraction of all food service sales in that residents are a larger market for most restaurants.⁴

The industry sectors that are usually matched to visitor spending in this way are: accommodations (NAICS 721), food service (722), arts, entertainment and recreation (71), and retail trade (44-45). A portion of transportation business is also part of the travel industry for obvious reasons.

In the case of the transportation sector, the definition and measurement of the travel industry component is more complicated because most transportation spending by visitors involves travel to and from the destination, rather than travel at or within the destination market. This is not an issue if the geographic scope of the travel industry market includes the origin and destination of travel. National travel industry accounts thus include all domestic passenger air transportation in the travel industry. The issue is more complicated at the state or regional level, however.

Suppose, for example, that the focus of a travel industry account is the state of Florida. How should the purchase of a round trip airline ticket by a Chicago resident traveling to Orlando be treated in that only some of the economic impact of this spending will occur in Orlando? A reasonable approach would be to allocate only a portion of this spending (and related payroll, taxes, etc.) to Orlando and ignore the remainder for the purpose of creating a travel industry account for Florida. However, if this procedure were followed for every state, the sum of the state accounts would be less than the national travel account. The state accounts would be additive if outbound air travel from each state were included. However, this is methodologically inconsistent with the construction of a national account, which does not include outbound travel as a component of domestic tourism demand. The approach used in the RTIM is to make a distinction between the *visitor industry*, that includes only visitor demand, and the *travel industry*, which includes visitor demand and that portion of outbound travel that can be attributed to the resident economy. For example, the passenger air transportation employment in Greater Fort Lauderdale can be divided between three groups of travelers: inbound, outbound, and pass-through. Only that employment attributable to inbound travel is part of the Greater Fort Lauderdale *visitor industry*. Employment attributable to outbound and pass-through travelers is included with the larger *travel industry*.⁵

⁴ The proportion can vary enormously among regions and localities, however. In many popular visitor destinations, the primary market for food service will be visitors. It should also be noted that even with reliable visitor survey data, there is still the issue of how to translate spending on food service *commodities* to the supply of food service by *industry*. As indicated in the footnote above, food service is also supplied by the accommodation industry.

⁵ The same issue arises with travel agencies and reservation services (NAICS 5615). Most of these services are probably related to outbound travel and are treated as such in the RTIM.

The following two tables display the specific industries that are included in the travel industry for the BEA's national TTSA and the RTIM. Although not identical, the industries are equivalent with only a few exceptions.⁶

**Bureau of Economic Analysis Tourism Industries
Distribution of Travel-Generated Compensation
in United States, 2007**

Accommodation & Food Services	38.1%
Traveler accommodations	21.5%
Food services and drinking places	16.6%
Transportation	23.3%
Air transportation	15.4%
Rail transportation	0.4%
Water transportation	1.2%
Interurban bus transportation	0.3%
Interurban charter bus transportation	0.2%
Urban transit systems & other tran.	1.7%
Taxi service	1.0%
Automotive equipment rental & leasing	2.0%
Automotive repair services	0.8%
Parking lots and garages	0.2%
Toll highways	0.1%
Recreation	11.2%
Scenic and sightseeing transportation	0.4%
Motion pictures and performing arts	1.1%
Spectator sports	2.3%
Participant sports	2.4%
Gambling	3.0%
All other recreation and entertainment	2.0%
Retail & Nondurable Goods Production	16.2%
Petroleum refineries	0.6%
Industries producing nondurable PCE commodities, excluding petroleum refineries	4.4%
Wholesale trade & tran. services	4.2%
Gasoline service stations	1.3%
Retail trade services, excluding gasoline service stations	5.8%
Travel Arrangement	7.3%
All other industries	2.2%
Total Tourism Compensation	100.0%

Source: Adapted from Eric S. Griffith and Steven L. Zemanek, "U.S. Travel and Tourism Satellite Accounts for 2005-2008," Survey of Current Business (June 2009): 37, table 6.

⁶ The major exception is that the BEA includes the production of consumer non-durables that are sold through retail outlets. This is not a major component and would be even less so at the level of the state.

RTIM Travel Impact Industries Matched to NAICS

Travel Impact Industry	NAICS Industry (code)
Accommodation & Food Services	Accommodation (721) Food Services and Drinking Places (722)
Arts, Entertainment & Recreation	Performing Arts, Spectator Sports (711) Museums (712) Amusement, Gambling (713) Scenic and Sightseeing Transportation (487)
Retail	Food & Beverage Stores (445) Gasoline Stations (447) Clothing and Clothing Accessories Stores (448) Sporting Goods, Hobby, Book, and Music Stores (451) General Merchandise Stores (452) Miscellaneous Store Retailers (453)
Ground Transportation	Interurban and rural bus transportation (4852) Taxi and Limousine Service (4853) Charter Bus Industry (4855) Passenger Car Rental (532111) Parking Lots and Garages (812930)
Air Transportation	Scheduled Air Passenger Transportation (481111) Support Activities for Air Transportation (4881)
Administrative/Support Services	Travel Arrangement and Reservation Services (5615) Convention and Trade Show Organizers (56192)

Source: Dean Runyan Associates

DEMAND SEGMENTS

The distinction between inbound and outbound travel has already been discussed in the previous section and in terms of the concepts of the *visitor industry* and the *travel industry*. Three other types of demand segments that are related exclusively to the *visitor industry* will be discussed here. The first two demand categories are reported by the BEA in their national TTSA. They are: ***leisure versus business travel***, and ***resident versus non-resident travel***. The third demand category is typically reported in the RTIM: ***type of traveler accommodation***. These three demand categories will be discussed in turn.

The distinction between ***leisure versus business travel*** is useful for several reasons. Economists like to distinguish between personal consumption expenditures on the one hand and business expenditures on the other. Indeed, this distinction is central for the National Income and Product Accounts (NIPAs). Those in the travel industry are more likely to be interested in this distinction because leisure travelers represent a more “marketable” segment because their travel choices are less determined by economic and business factors. Furthermore, business and leisure travelers tend to have different spending profiles. The availability of this information in either a state or regional TTSA or RTIM is essentially dependent on the availability of survey data (as it is at the national level). It should be noted, however, that such estimates are considerably less reliable for smaller geographic areas because of the limitations of survey data. Even at the state level, year-to-year changes in the composition of this demand segment should be interpreted in conjunction with other data.

The distinction between ***resident versus non-resident travel*** is fundamental to a national TTSA because it mirrors the distinction between the domestic economy and international transactions. Non-resident travel in the United States is considered an export in the official international transaction accounts.⁷ The distinction is obviously also important because it is based on different political, legal, and currency regimes – factors that in themselves influence travel behavior. At the level of the state or region, the distinction between resident and nonresident travel is less important, although it is often reported.⁸ There are at least two reasons why this distinction is less useful at state and regional levels.

First, there is considerably less of an economic rationale for distinguishing resident and non-resident travel at the level of the state, or any other political jurisdiction within the United States, than there is at the national level. States do not maintain interstate trade balance sheets that chart the flow of goods and services across state boundaries. From an economic point of view, the administration of the tax system is the primary, if only, reason for this distinction. In the case of travel and tourism,

⁷ Conversely, the spending of U.S. visitors in other countries is treated as an import in the international transaction accounts.

⁸ The issues discussed with regard to the reliability of survey data for leisure versus business travel also applies to this category

the evaluation of the tax impacts of resident versus nonresident travel might also be important.⁹

Second, travel is behaviorally defined by length of distance from home (usually at least 50 miles one-way), trip purpose (non-routine), and/or the use of an overnight accommodation away from home. Rarely is domestic travel defined by virtue of crossing a geographic boundary.¹⁰ The operators of tourist attractions in local communities are generally less interested in the origin of visitors than in the revenue that they generate for their businesses. In terms of the economic impacts at the *local* level, the distinction between in-state residents, out-of-state residents and international visitors may not be relevant other than for the purpose of marketing.

However, other geographic characteristics of the visitor (e.g., distance traveled, the specific area of origin) are generally more useful measures of the visitor market than whether the visitor is a resident or nonresident.

Finally, the distinction among different ***types of traveler accommodations*** is generally reported in the RTIM. Typically, these categories are:

- Visitors who stay in hotels, motels, B&Bs., and similar lodging facilities
- Visitors who stay at campsites
- Visitors who stay in the private homes of friends or relatives
- Visitors who stay in vacation or second homes
- Visitors who do not stay in overnight accommodations on their trip away from home (day visitors).

These distinctions can be useful because estimates of economic impacts are often used for different purposes. The total of all accommodation types, of course, is an estimate of the total magnitude of the visitor industry. Visitors who stay in commercial lodging such as hotels and motels are most likely to have the greatest economic impact on a person-day basis. These visitors are also more likely to be influenced by marketing efforts. In urban areas, a large proportion will represent business travel. In other words, the type of accommodation category can be used in conjunction with other types of data to analyze the market characteristics of visitors.

⁹ Nonresident visitors who pay taxes in their destination state represent an unambiguous gain for the state. This effect is less clear for resident travelers within the state.

¹⁰ In essence, state level travel impact estimates really represent an aggregation of smaller geographic units, such as counties or regions. Populous states with large landmasses (e.g., California or Texas) will have a higher proportion of resident travel than small states (e.g., Rhode Island or Delaware).

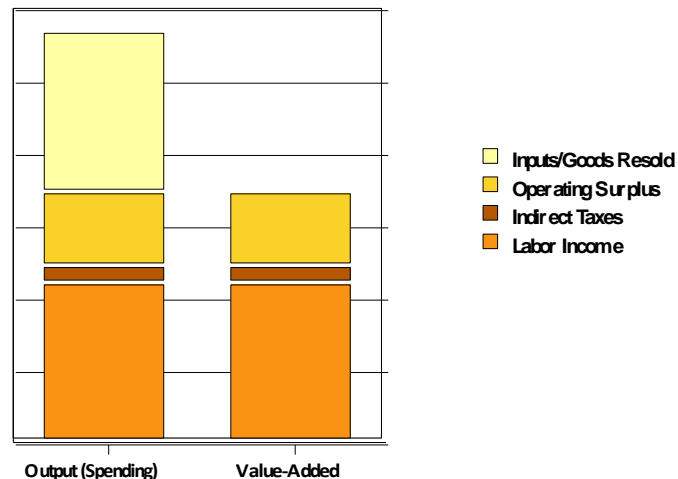
COMPONENTS OF INDUSTRY OUTPUT

Because both the RTIM and the TTSA are empirically linked to NAICS industry accounts, it is possible to provide estimates of different components of economic output. The major economic components most often estimated are:¹¹

- Travel spending (Gross Output)
- Value-added (Gross Product)
- Earnings (labor income)
- Indirect business taxes (sales, excise, property taxes & fees).

The relationship of these components is shown below. As indicated, the value-added of a particular industry (the bar on the right) is equal to gross output (travel spending) minus the intermediate inputs used by travel industry businesses to produce the good or service. Restaurants, for example, prepare and serve the food products that are purchased from suppliers. Airlines purchase or lease airplanes from other firms. These intermediate inputs are not counted as part of the value-added of the travel industry. They are counted as value-added in other industries (e.g., agriculture, aerospace manufacturing).

Components of Industry Output



The distinction between gross output and value-added is probably even more important at the state or regional level. This is because the intermediate inputs that are purchased from other industries are even more likely to be purchased from businesses located in different regions or states. For example, the economic impact

¹¹ There are some small differences between the BEA TTSA and the RTIM in what these components include. The BEA allocates proprietor income to Operating Surplus, the RTIM allocates it to Labor Income. The RTIM does not have an estimate of property taxes in indirect taxes. Overall, property taxes on businesses are a relatively small proportion of indirect taxes.

of air passenger travel in the state of Hawaii should not include the purchase of airplanes manufactured in other parts of the world. Travel industry value-added is a more meaningful measure of the true economic impact of visitor spending in Hawaii because a portion of the economic impact of visitor spending in the state will actually occur elsewhere.¹²

Value-added can also be viewed in terms of the distribution or payout of industry receipts, exclusive of those paid to other firms for intermediate inputs. Some of the receipts are distributed to labor as wages, benefits, and proprietor income. Some receipts are paid to government as indirect taxes. These taxes are called “indirect” because most of them are actually paid by consumers in the form of sales or excise taxes.¹³ The remainder leaves gross operating surplus. Out of gross operating surplus various payments are made in the form of dividends, interest, and other payments, or retained by the firm. The sum of these three broad categories of payments is equal to travel industry value-added. To summarize:

$$\begin{aligned} \text{Value-added} &= \text{Spending less intermediate goods \& services, or} \\ \text{Value-added} &= \text{Labor Income plus indirect business taxes plus gross} \\ &\quad \text{operating surplus.} \end{aligned}$$

The RTIM is similar to the TTSA in that it also provides estimates of these components of economic output. Travel spending, earnings, and tax impacts are generally provided at the state or regional level. Value-added is generally reported at the state-level only (sometimes referred to as Travel Industry Gross State Product). At the level of the state, travel industry value-added or GSP is an important measure

– more economically meaningful than travel spending.¹⁴ For smaller geographic areas, however, the rationale for reporting value-added is less clear. First, there are real data limitations and data costs in deriving these estimates. Second, ***the most important components of value added for the travel industry are earnings and tax receipts.*** Because the travel industry is relatively labor intensive and because a large proportion of travel industry goods and services are subject to excise and sales taxes, these two components of value-added (labor income and indirect taxes) are relatively high for the travel industry. The local effects of gross operating surplus are generally less important and certainly much more difficult to assess than are earnings and tax impacts. The relevance of earnings and tax receipts is also in keeping the export-oriented emphasis of the travel industry: earnings and tax receipts are more likely to stay in the local economy than is operating surplus.

¹² It should also be noted the value of the intermediate inputs used by travel industry firms will not necessarily disappear if the travel industry stops buying them. Aerospace firms will shift their production to other users (e.g., military). Agriculture will seek new markets for their products.

¹³ Other taxes included here are property taxes, business franchise taxes, and other fees. Income taxes are not included, because they are paid out of operating surplus.

¹⁴ It is also possible to compare different industries with respect to their value-added. It is more difficult and less useful to compare industries on the basis of sales.

INDIRECT, INDUCED AND SECONDARY EFFECTS

To this point, the discussion of travel industry accounts has referred only to the direct output components. That is, the ripple effects of the re-spending of travel industry receipts throughout the larger economy have not been analyzed. The structure of both the TTSA and the RTIM permit such analysis.

- **Indirect** effects refer to the intermediate inputs used to produce the final product or service, providing that those inputs are themselves produced within the designated geographic area.
- **Induced** effects refer to the purchase of goods and services by *employees* that are attributable to direct and indirect impacts. These induced impacts are derived from economic data that describe the purchasing patterns of households. For example, employees of all the designated export-oriented industries will spend their income on food, household durables, health care, and so on.
- The sum of indirect and induced impacts is sometimes referred to as the **secondary** effect. These secondary impacts may be as great or greater than the direct impact alone.
- The ratio of the total effects (direct plus either indirect, induced, or secondary) to the direct effects is the **multiplier**.

The BEA reports the **indirect** components of economic output. This is equivalent to domestic travel spending less the goods and services imported from abroad to meet domestic demand. For travel, these imports would include souvenirs manufactured in China and petroleum extracted in Saudi Arabia. The indirect output multiplier for 2002 was 1.76. The ratio of domestic travel spending to travel industry value-added was 1.88. The difference reflects the intermediate inputs for travel imported from abroad.

At the state level, these indirect output multipliers are typically lower because relatively more of the intermediate inputs are purchased from outside of the state. At the county or metropolitan level, the multipliers are generally even lower for the same reason. Furthermore, the estimates are usually less reliable because of the data limitations of the regional input-output model used to estimate the indirect effects.

The BEA does not report **induced** effects – the effect of household spending of the direct and indirect labor income. Typically, these induced effects will be larger than the indirect effects at the state or regional level, in part because they are based on both the direct and indirect components.¹⁵ As with indirect effects, the induced effects will also tend to be lower for smaller economic areas and the reliability of the estimates will be less.

¹⁵ The induced effects can be estimated with the Implan model maintained by the Minnesota Implan Group.

Secondary effects should be interpreted cautiously. These effects describe the relationship of economic transactions at a point in time. These relationships will not necessarily remain constant with a change in direct economic output. This is because all economic resources have alternative uses. Because of this, it is often difficult to determine the effect of an increase or decrease in visitor spending on the larger economic system over time.

THE REGIONAL TRAVEL IMPACT MODEL AND TRAVEL & TOURISM SATELLITE ACCOUNTS COMPARED

This appendix has provided an overview of Dean Runyan Associates RTIM and the Bureau of Economic Analysis' domestic TTSA. These travel industry accounts are similar in terms of how they define the travel industry and the measures of the industry that are reported. The differences stem largely from their different levels of analysis – the BEA provides estimates at the national level only, while the RTIM's are typically constructed on a state or regional level. Because of this geographic focus, the RTIM provides a distinction between the visitor industry and the travel industry. The RTIM also provides measures of all of the components of economic output and secondary effects at the state or large region level. At smaller units of analysis, however, the emphasis is on earnings and tax receipts generated by travel spending as these are the most reliable and meaningful measures of the economic impact of travel at the local level.

Industry Groups

Accomm. & Food Serv.

Eating & Drinking
Hotels and Lodging Places

Agric. & Food Proc.

Agricultural- Forestry- Fishery Services
Animal and Marine Fats and Oils
Blended and Prepared Flour
Bottled and Canned Soft Drinks & Water
Bread- Cake- and Related Products
Canned and Cured Sea Foods
Canned Fruits and Vegetables
Canned Specialties
Cattle Feedlots
Cereal Preparations
Cheese- Natural and Processed
Chewing and Smoking Tobacco
Chewing Gum
Chocolate and Cocoa Products
Cigarettes
Cigars
Commercial Fishing
Condensed and Evaporated Milk
Confectionery Products
Cookies and Crackers
Cotton
Cottonseed Oil Mills
Creamery Butter
Dairy Farm Products
Dehydrated Food Products
Distilled Liquor- Except Brandy
Dog- Cat- and Other Pet Food
Feed Grains
Flavoring Extracts and Syrups- N.E.C.
Flour and Other Grain Mill Products
Fluid Milk
Food Grains
Food Preparations- N.E.C
Forest Products
Forestry Products
Frozen Fruits- Juices and Vegetables
Frozen Specialties
Fruits
Grass Seeds

Agric. & Food Proc.

Greenhouse and Nursery Products
Hay and Pasture
Hogs- Pigs and Swine
Ice Cream and Frozen Desserts
Landscape and Horticultural Services
Macaroni and Spaghetti
Malt
Malt Beverages
Manufactured Ice
Meat Packing Plants
Miscellaneous Crops
Miscellaneous Livestock
Oil Bearing Crops
Other Meat Animal Products
Pickles- Sauces- and Salad Dressings
Potato Chips & Similar Snacks
Poultry and Eggs
Poultry Processing
Prepared Feeds- N.E.C
Prepared Fresh Or Frozen Fish Or Seafood
Ranch Fed Cattle
Range Fed Cattle
Rice Milling
Roasted Coffee
Salted and Roasted Nuts & Seeds
Sausages and Other Prepared Meats
Sheep- Lambs and Goats
Shortening and Cooking Oils
Soybean Oil Mills
Sugar
Sugar Crops
Tobacco
Tobacco Stemming and Redrying
Tree Nuts
Vegetable Oil Mills- N.E.C
Vegetables
Wet Corn Milling
Wines- Brandy- and Brandy Spirits

Arts, Entertain., Rec.

Amusement and Recreation Services- N.E.C.
Bowling Alleys and Pool Halls
Commercial Sports Except Racing
Membership Sports and Recreation Clubs
Motion Pictures
Other Nonprofit Organizations
Racing and Track Operation
Theatrical Producers- Bands Etc.
Water Transportation

Construction

- Maintenance and Repair Oil and Gas Wells
- Maintenance and Repair Other Facilities
- Maintenance and Repair- Residential
- New Farm Structures
- New Government Facilities
- New Highways and Streets
- New Industrial and Commercial Buildings
- New Mineral Extraction Facilities
- New Residential Structures
- New Utility Structures

Finance, Real Estate

- Banking
- Credit Agencies
- Insurance Agents and Brokers
- Insurance Carriers
- Owner-occupied Dwellings
- Real Estate
- Security and Commodity Brokers

Government

- Commodity Credit Corporation
- Federal Electric Utilities
- Federal Government - Military
- Federal Government - Non-Military
- Local Government Passenger Transit
- Other Federal Government Enterprises
- Other State and Local Govt Enterprises
- State & Local Government - Education
- State & Local Government - Non-Education
- State and Local Electric Utilities
- U.S. Postal Service

Misc. Manf.

*Includes all utilities, mining and manufacturing industries
not elsewhere classified*

Misc. Services

- Advertising
- Beauty and Barber Shops
- Computer and Data Processing Services
- Detective and Protective Services
- Domestic Services
- Electrical Repair Service
- Equipment Rental and Leasing
- Funeral Service and Crematories
- Laundry- Cleaning and Shoe Repair
- Miscellaneous Personal Services
- Miscellaneous Repair Shops
- Other Business Services
- Personnel Supply Services
- Photofinishing- Commercial Photography
- Portrait and Photographic Studios
- Services To Buildings
- Watch- Clock- Jewelry and Furniture Repair

Prof. Services

Accounting- Auditing and Bookkeeping Business
Associations
Child Day Care Services Colleges-
Universities- Schools Doctors and
Dentists
Elementary and Secondary Schools
Engineering- Architectural Services
Hospitals
Job Trainings & Related Services
Labor and Civic Organizations Legal
Services
Management and Consulting Services
Nursing and Protective Care
Other Educational Services
Other Medical and Health Services Religious
Organizations
Research- Development & Testing Services
Residential Care
Social Services- N.E.C.

Retail Trade

Apparel & Accessory Stores
Building Materials & Gardening
Food Stores
Furniture & Home Furnishings Stores
General Merchandise Stores Miscellaneous
Retail
Wholesale Trade

Transportation

Air Transportation
Arrangement Of Passenger Transportation
Automobile Parking and Car Wash Automobile
Rental and Leasing Automobile Repair and
Services Automotive Dealers & Service
Stations Local- Interurban Passenger Transit
Motor Freight Transport and Warehousing
Railroads and Related Services Transportation
Services