

Airport Profile

Miami International Airport

Miami International Airport (MIA) is located in Miami-Dade County, Florida about eight miles northwest of downtown Miami. MIA is one of only eight U.S. large hub airports to accommodate the Airbus A380 jumbo jet. Additionally, MIA is one of the four large hub airports in the state of Florida.

MIA's location within a major metropolitan city with close highway access to most of south Florida makes it an ideal airport for tourists and locals alike. Further, the competition between four major legacy carriers (American, Delta, US Air, and United) results in opportunities for lower fares for consumers as well as diversified direct-routes. Miami is world known for its several professional sports teams, large universities, and beautiful beaches.

MIA continues to steadily increase its annual enplanement count. In fact, between 2014 and 2015, annual enplanements at MIA increased by nearly eight percent. Additionally, MIA had a large increase in annual passengers. This could potentially be attributed to MIA's increase in domestic service to 56 destinations in 2015.

2015

BY THE NUMBERS

21,852,383

Enplanements

10,498,433

Passengers

\$223.84

Average Fare

56

U.S. Cities Served

10

Intrastate
Destinations

1,517

Weekly
International
Departures



Data Explanation

For this report, three key data sources were used: *Passenger Origin-Destination Survey* from the U.S. Department of Transportation, the Official Airline Guide (OAG) and Airline Reporting Corporation (ARC). In this profile, data are combined and compared in order to identify general trends about the airport, as well as offer certain analysis on the findings. A description of these data sources is presented below. Throughout the text, the data sources will be further explained, but this section provides a general overview of the data used in the development of this Airport Air Service Profile.

Air Passenger Origin and Destination (O&D) Survey

DB1B Coupon: The Airline Origin and Destination Survey (DB1B) is a 10 percent sample of airline tickets from reporting carriers collected by the Office of Airline Information of the Bureau of Transportation Statistics. Data from this source provides coupon-specific information for each domestic itinerary of the Origin and Destination Survey.

T-100 Domestic Market: This data source contains domestic market data reported by both U.S. and foreign air carriers, including carrier, origin, destination, and service class for enplaned passengers, freight and mail when both origin and destination airports are located within the boundaries of the United States and its territories.

Official Airline Guide (OAG)

OAG data were summarized as weekly averages for the reported year. All OAG data are for direct flights and represents statistically significant samples of data.

Airline Reporting Corporation (ARC)

The data provided by this source represent a statistically significant and representative sample of airline tickets purchased with a consumer form of payment through an ARC-accredited agency, including major online travel agencies (OTAs), such as Expedia, Orbitz, and Travelocity.

The data represent a 10 percent sample, an industry standard sample size, of passengers from participating agencies. Passenger volumes represented by the data can vary significantly by individual markets, depending on several factors including, but not limited to, the following: 1) the overall composition of air travelers (leisure vs. business); 2) the presence of carriers whose distribution is more heavily weighted toward the direct vs. agency channel (e.g. low cost carriers); and 3) the presence of carriers with limited participation in the ARC settlement system (e.g. Southwest Airlines).

The data used represent passengers and zip codes from where in Florida tickets were purchased. The data include purchases from Florida zip codes only. Because the data in this document represent consumer purchases of airline tickets, there is a natural bias toward leisure and unmanaged business travel behavior and may not account for all business travel. There also may be limitations due to misrepresentation of the passenger information in instances where a person from one zip code purchased a ticket for another person in a different zip code.

Airline Reporting Corporation (ARC) did not assist in the preparation of this analysis, all analyses disclosed herein were performed by Kimley-Horn and Associates, INC., the consultant to the Florida Department of Transportation, Central Aviation Office.

Miami International Airport Air Service Summary

Introduction

Miami International Airport (MIA) was opened in 1928 and is owned by Miami-Dade County. MIA is one of the largest airports in the United States (U.S.). MIA has four runways with lengths of 8,600 feet, 9,355 feet, 10,506 feet, and 13,016 feet. With these runways, MIA serves as the second largest international airport in the United States and the largest hub to Latin America and the Caribbean. In addition to the large number of passengers MIA serves, the airport is also one of the leading freight airports in the world, having hubs for both UPS and FedEx.

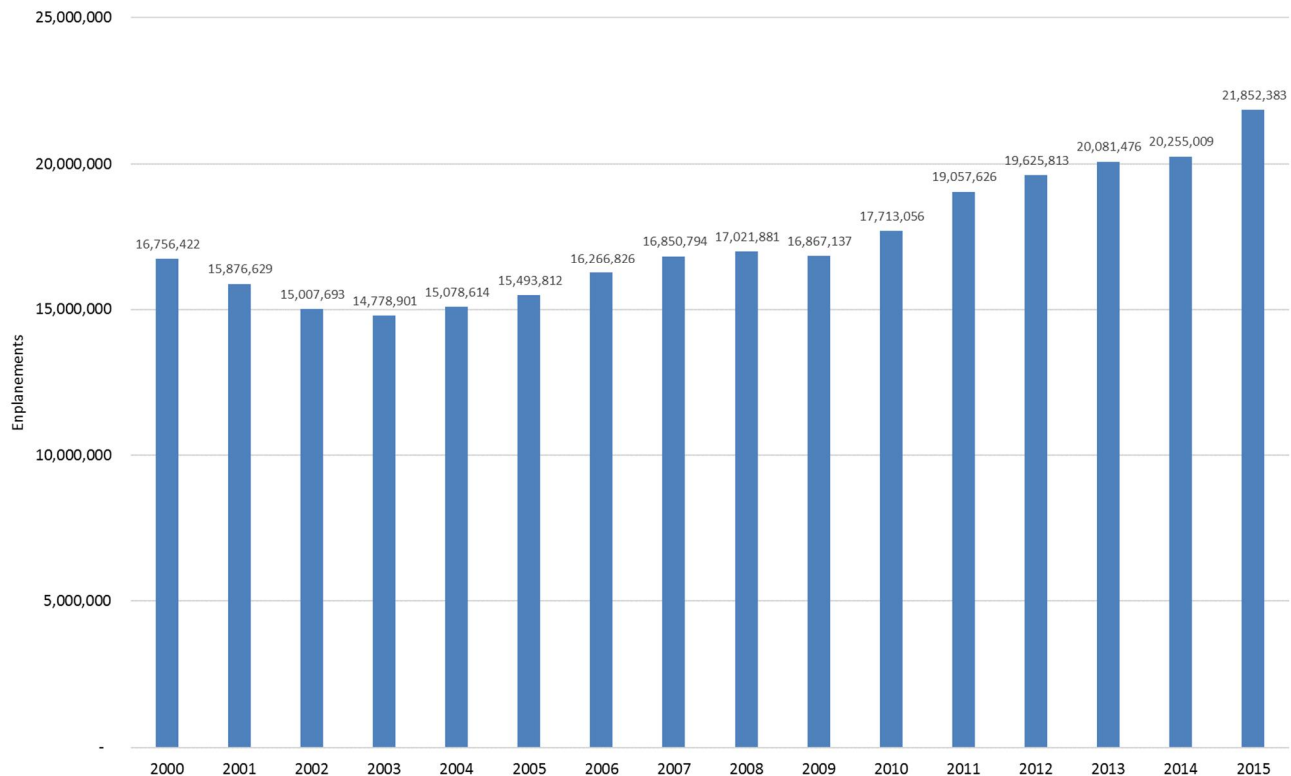
MIA is located in the Southeast Continuing Florida Aviation System Planning Process (CFASPP) region as well as FDOT District 6. Also, included in this CFASPP region are Ft. Lauderdale-Hollywood International Airport, Key West International Airport, and Palm Beach International Airport. This airport profile will illustrate statistical data about MIA including: annual enplanements, local population data, as well as many other metrics using baseline conditions reported from 2014 and 2015 data. The following statistical information will provide a description of the most recent overall performance of MIA and how that compares to previous years' performance.

More information about MIA can be found at: <http://www.miami-airport.com/>

Annual Enplanements

Figure 1 represents total annual enplanements at MIA between 2000 and 2015. This data shows a consistent growth in enplanements between 2003 and 2015. MIA had 21,852,383 enplanements in 2015 compared to 20,255,009 in 2014. This 7.89 percent growth in annual enplanements suggests increasing demand for operations at MIA.

Figure 1. Annual Enplanements¹



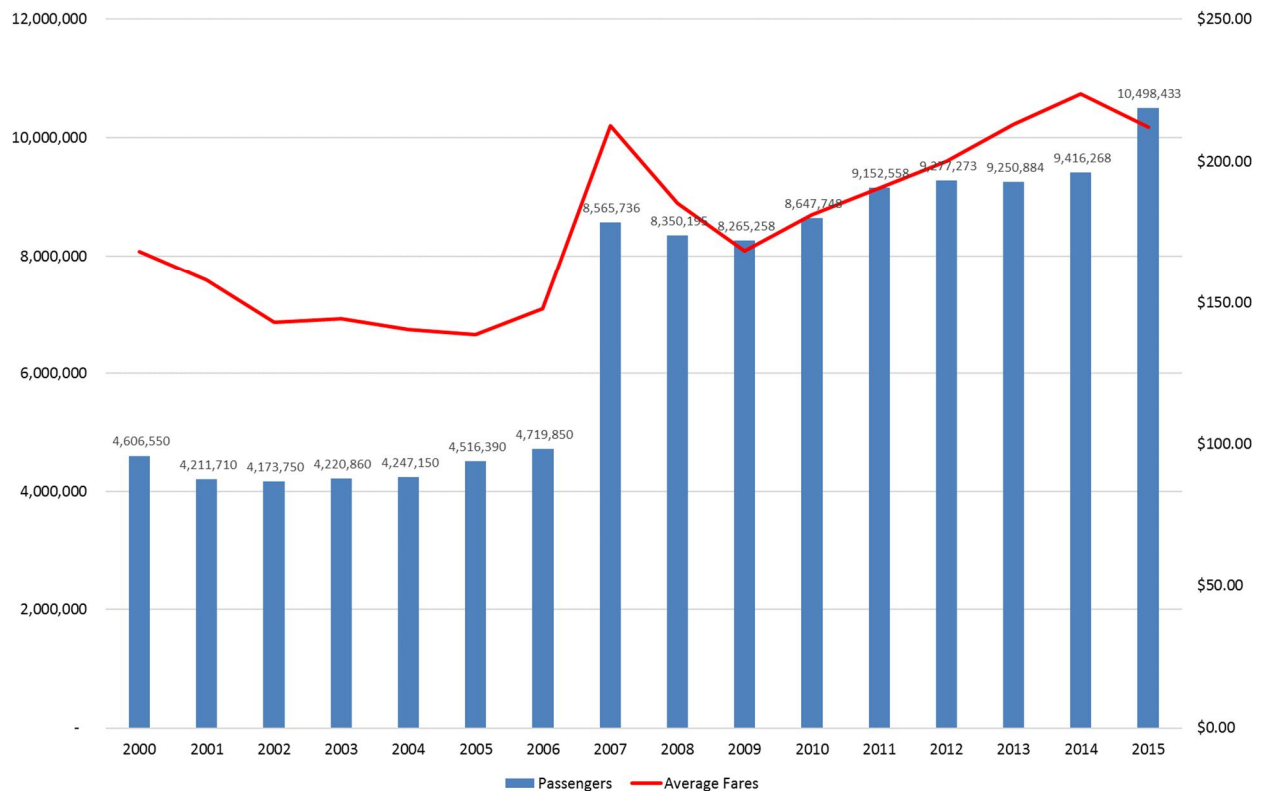
¹ Annual airport passenger traffic reports, provided by FDOT

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Passengers and Fares

MIA saw an increase in annual passengers between 2014 and 2015. In 2015 MIA had 10,498,433 annual passengers, this is roughly a one million passenger increase from the passenger count in 2014. In support of the annual passenger increase, the average fare at MIA decreased in 2015 to \$212.13. This is nearly a \$10 decrease from 2014, although still above the low point of \$138.85 in 2005. **Figure 2** displays the annual passengers and annual average fare at MIA.

Figure 2. Annual Domestic Passengers and Average Fares²



² U.S. Department of Transportation (U.S. DOT) Bureau of Transportation Statistics (BTS) O&D Survey & T-100 Domestic Market All Carriers

Destination Airports

In 2015, MIA served 56 destinations throughout the U.S. in 2015. Ten of these destinations were located within the state of Florida. Some of these locations included:

- Orlando International Airport (MCO)
- Key West International Airport (EYW)
- Jacksonville International Airport (JAX)
- Tampa International Airport (TPA)

Of flights departing from MIA, the destination receiving the most weekly flights was Hartsfield-Jackson Atlanta International Airport (ATL). ATL is known as being one of the busiest airports in the world as well as being the primary hub for Delta Air Lines. Regardless of the high number of flights bound for ATL (139 per week), MIA still served destinations all over the U.S. Some destinations of note that received a large amount of weekly service from MIA included:

- LaGuardia International Airport (LGA) – 133 average flights per week
- Chicago O'Hare International Airport (ORD) – 85 average flights per week
- Dallas/Fort Worth International Airport (DFW) – 77 average flights per week
- John F. Kennedy International Airport (JFK) – 75 average flights per week
- Los Angeles International Airport (LAX) – 65 average flights per week

These destinations represent large amounts of MIA flights that service major large hub airports across the U.S in addition to their medium and small hub counterparts. These frequent direct flight offerings make MIA an ideal airport for passengers traveling to a variety of major airports around the country. **Figure 3** displays MIA's nonstop domestic destinations.

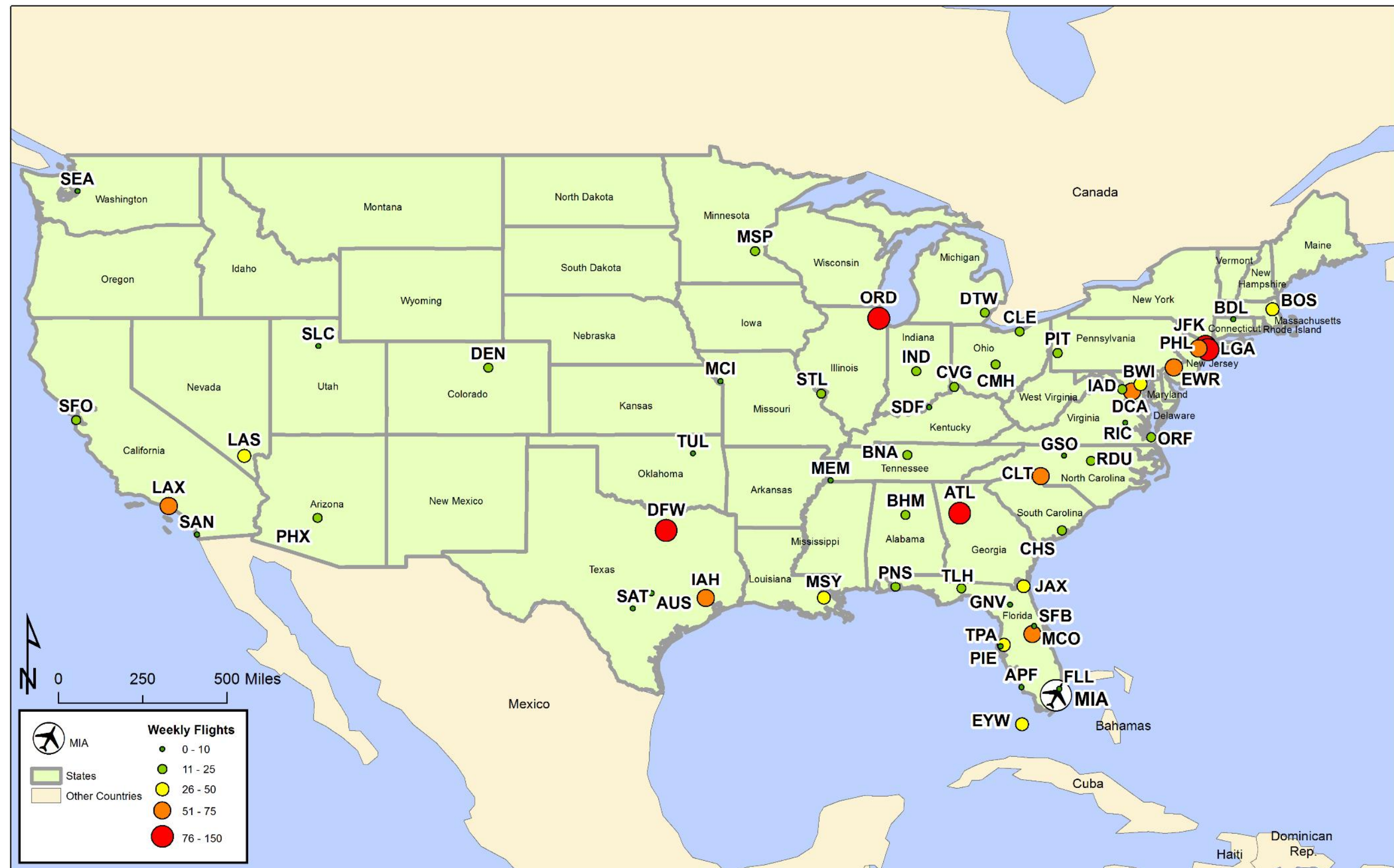
Domestic Routes

Figure 4 displays MIA's top **domestic** routes. For purposes of this study, a route is the complete path taken by passengers from the starting airport (in this case MIA) to their final domestic destination. The routes from MIA shown below had the most frequent passengers traveling on them in 2015. All of the routes were direct flights. The final destinations of the routes include:

- Hartsfield-Jackson Atlanta International Airport (ATL)
- Ronald Reagan Washington National Airport (DCA)
- Newark Liberty International Airport (EWR)
- LaGuardia Airport (LGA)
- John F. Kennedy International Airport (JFK)
- McCarran International Airport (LAS)
- Los Angeles International Airport (LAX)

This analysis represents the intention of travel of the majority of passengers flying out of MIA. It should be noted that the majority of these airports are in the Northeast region of the U.S. Therefore, the appropriate conclusion is that the majority of passengers who travel from MIA are ultimately bound for the Northeast region of the U.S. Data for the routing analysis were obtained from Airline Reporting Corporation (ARC).

Figure 3. MIA's Nonstop Domestic Destinations³



³ The Official Airline Guide (OAG)

Figure 4. Top Domestic Routes⁴

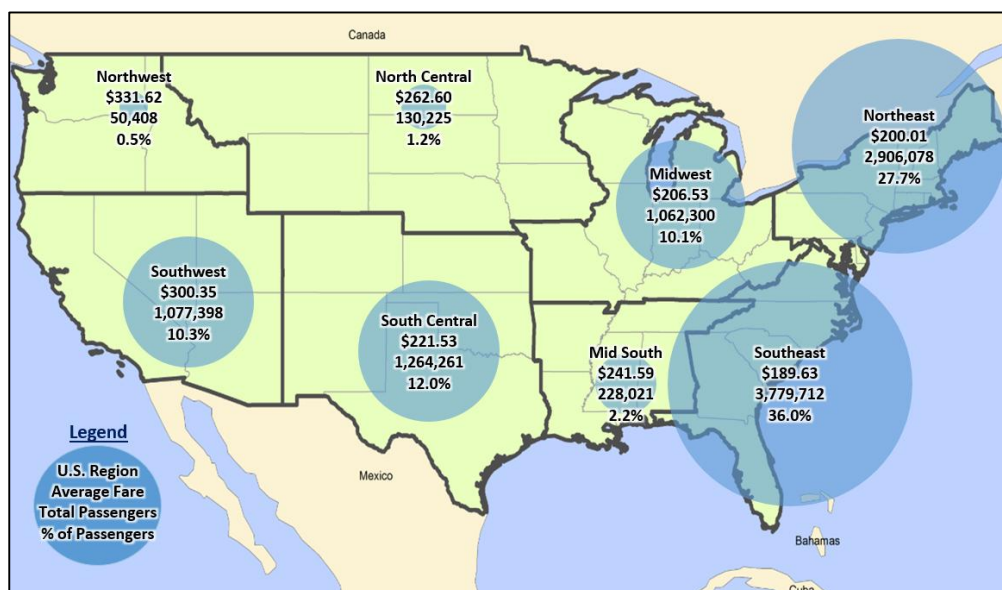


⁴ The Official Airline Guide (OAG)

Domestic Regional Analysis

Figure 5 displays the average fare, number of passengers, and percentage of total passengers departing MIA and bound for each of the eight regions of the United States. The data shows that 36.0 percent of passengers departing MIA were bound for destinations in the Southeast region. The Southeast region contains Hartsfield-Jackson Atlanta International Airport (ATL) which received a large portion of MIA's flights in 2015. It should be noted that **Figure 5** incorporates Florida airports into the southeast region, therefore adding MIA's intrastate service to the southeast percentage. The northeast region received the second most passengers from MIA in 2015 at 27.7 percent. This region contains several large hub airports including John F. Kennedy International Airport (JFK) and LaGuardia International Airport (LGA). This figure further shows the comparatively large percentage of service from MIA to the South Central (12.0 percent), the Southwest (10.3 percent), and the Midwest (10.1 percent) regions of the U.S. As discussed in previous sections, these regions contain large hub airports that received a major portion of MIA's service in 2015.

Figure 5. Domestic Passengers and Fares⁵



International Flight Departures

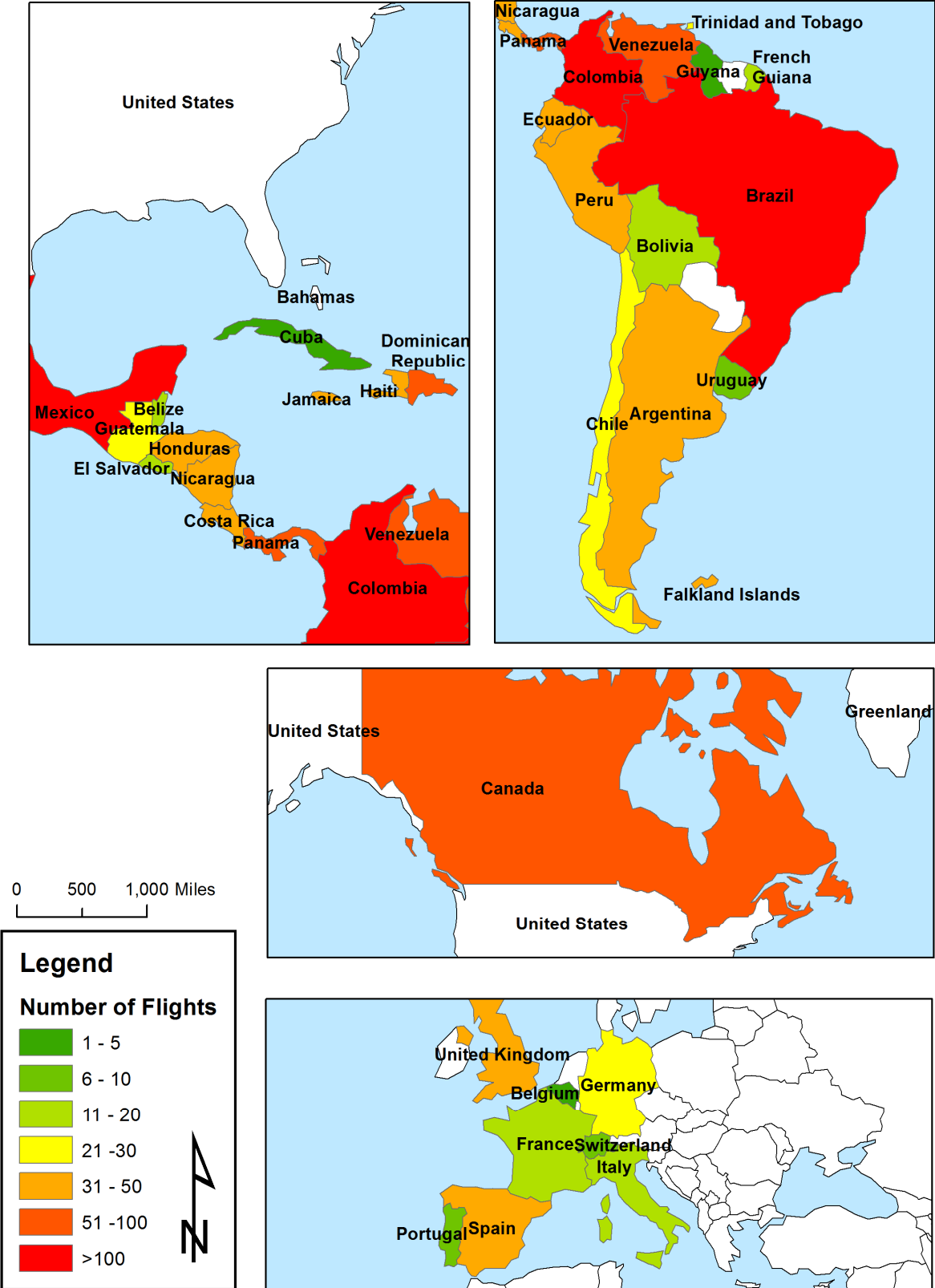
MIA is well-known as one of the primary international gateways for the U.S. **Figure 6** displays the countries MIA served as well as the average weekly frequency of which they were served. As shown, the international destinations that received the highest number of average weekly flights from MIA included:

- Mexico (145 average flights per week)
- Brazil (118 average flights per week)
- Colombia (103 average flights per week)

While many countries received weekly service from MIA, these three countries each received on average, over 100 flights a week from MIA. Following these countries, The Dominican Republic (81), Panama (61), Canada (55), and Venezuela (51) were the next most served international destinations from MIA. This data suggests MIA's focus towards serving South America as well as Latin/Central America, fulfilling its reputation as the gateway for these international destinations.

⁵ The Official Airline Guide (OAG)

Figure 6. International Destinations by Average Weekly Flights⁶



⁶ The Official Airline Guide (OAG)

Aircraft Type

Of the 56 destinations served by MIA, 37 were served by large jet aircraft, 24 by regional jet aircraft, and one by a propeller-driven aircraft. The use of large jet aircraft has a direct impact on the average seats per flight at an airport. Generally larger jet aircraft substantially increase the average seats per flights. **Figure 7** displays the aircraft types that served the 56 destinations from MIA as well as the average seats per flight on each aircraft type.

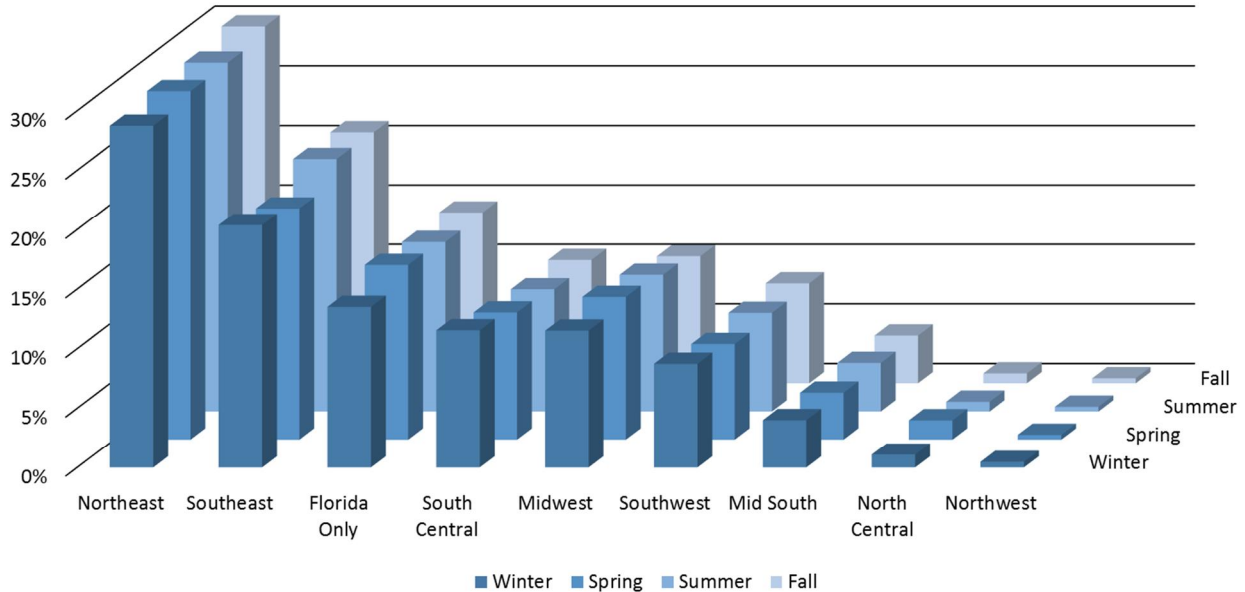
Figure 7. Aircraft Types and Average Seats per Flight⁷



Seasonal Flight Comparison

The data shown in **Figure 8** further supports the identification of major routes to the Southeast region and Northeast region for all seasons of the year. However, when Florida airports are separated from the Southeast region, there are more flights every season to the Northeast region of the U.S. This suggests that throughout the year, the Northeast receives more passengers in total than the southeast region when Florida is excluded. This can be seen in the large number of weekly flights to airports such as JFK, LGA, and EWR. Further, this highlights the contribution that MIA's intrastate service makes each season to the Southeast region's share of MIA's air service.

Figure 8. Season by Region Analysis⁸



⁷ The Official Airline Guide (OAG)

⁸ The Official Airline Guide (OAG)

Average Load Factors

Average load factors represent the number of passenger miles traveled as a proportion of available seat miles. Higher average load factors represent more total passenger boardings. The average load factor at MIA was 82.20, slightly lower than the U.S. average, 82.68, for 2015. A summary of 2014 and 2015 average load factors are shown in **Table 1**.

Table 1. Average Load Factor Analysis⁹

Year	Domestic	International	Total
Jacksonville International			
2014	83.68	80.49	81.45
2015	85.64	80.67	82.20
All U.S. Airports			
2014	84.49	81.03	82.69
2015	84.98	80.61	82.68

On-Flight Market Freight Statistics

Freight statistics represent the total number of pounds of freight, property other than mail and passenger baggage, transported by air **from** a given airport. In 2015, MIA shipped over 235 million pounds of freight, a roughly 22 million-pound increase from 2014. A summary of 2014 and 2015 on-flight market freight statistics is shown in **Table 2**.

Table 2. JAX Freight¹⁰

Year	Freight (in pounds)
2014	215,135,314
2015	237,812,995

On-Flight Market Mail Statistics

Mail statistics represent the total number of pounds of U.S. and foreign mail shipped **from** a given airport. MIA had a 26.77 percent increase in pounds of mail shipped between 2014 and 2015 with roughly three million more pounds being shipped in 2015. A summary of 2014 and 2015 on-flight market mail statistics is shown in **Table 3**.

Table 3. JAX Mail¹¹

Year	Mail (in pounds)
2014	13,337,496
2015	16,908,253

⁹ The Bureau of Transportation Statistics (BTS) T-100 Segment Data

¹⁰ The Bureau of Transportation Statistics (BTS) T-100 Table Data

¹¹ The Bureau of Transportation Statistics (BTS) T-100 Table Data

Market Leakage Study

Introduction

Florida has the highest number of large hub airports (4) of any state in the U.S. Florida also has many commercial service airports (20), which compete over the same potential passengers. There are many factors that play into the decision-making of passengers, ranging from cost to airport proximity to how direct a flight is. Because of these factors, many smaller commercial airports in Florida experience market leakage, or a loss of passengers who choose to drive further distances to airports for various reasons, such as less expensive flights or more convenient flight options. For large airports located in large metropolitan areas leakage may be a less significant factor because they still carry large numbers of passengers. Conversely for smaller airports the loss of passengers to larger airports may potentially be more significant. This analysis looks at tickets purchased in Florida zip codes to see which Florida airports may lose business due to market leakage. The market leakage study analyzes zip codes from where a ticket was purchased and subsequently which airport was departed from for that purchase. To better understand the market leakage findings, key demographic data are presented as part of the market leakage study.

Metropolitan Statistical Area (MSA)

According to the U.S. Census, an MSA is “a geographic entity based on the concept of a core area with a large population nucleus, plus adjacent communities having a higher degree of economic and social integration with that core.” Per this definition, looking at populations, employment, and other important factors at the level of an MSA, should prove beneficial in better understanding the area. MIA is one of three commercial service airports located in the Miami-Ft. Lauderdale-Pompano Beach MSA.

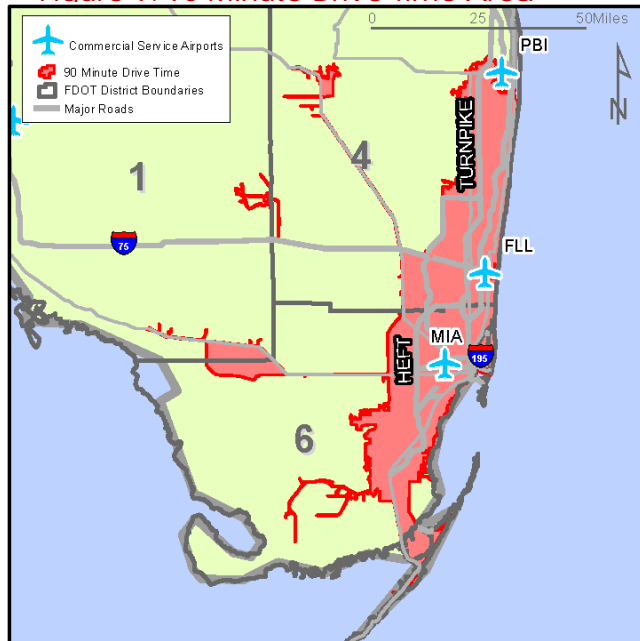
Drive Time and Population Analysis

Figure 9 displays the area around MIA that can access the airport with a 90-minute or less drive time. Further, **Table 4**

Table 4. Population Within 90 Minutes¹²

Population Trends	
2010 Total Population	5,018,537
2016 Total Population	5,318,568
2021 Total Population	5,641,357
2040 Total Population	7,057,019
2016-2021 Annual Rate of Change	1.19%
2016-2040 Percent Change	33%

Figure 9. 90 Minute Drive Time Area¹³



displays the population of that area in 2010 and 2016 as well as the projected population in the area for 2021 and 2040. The projected annual rate of change, or growth rate, between 2016 and 2021 of the population in that area is 1.19 percent. With this growth rate, this area is expected to have 33 percent growth in population by the year 2040. Therefore, by the year 2040, it is anticipated that 7,057,019 people will have a 90 minute or less drive time from their homes to MIA.

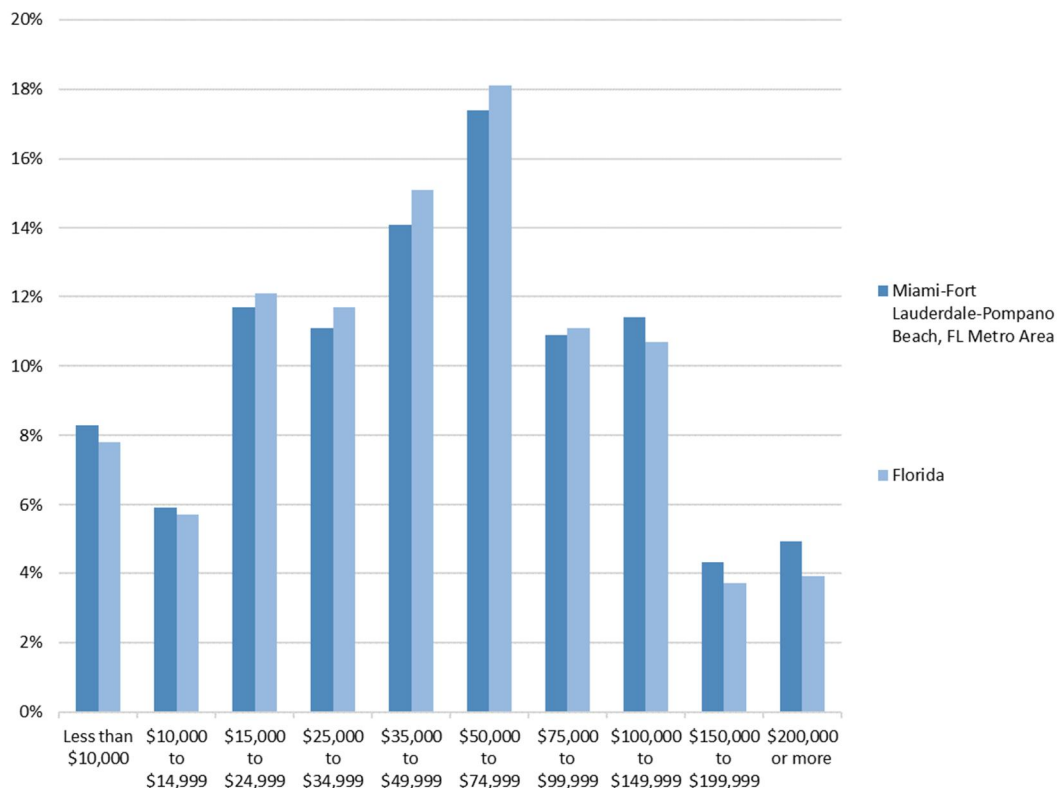
¹² U.S. Census Bureau, Census 2010 Summary – ESRI Housing Profile

¹³ U.S. Census Bureau, Census 2010 Summary – ESRI Housing Profile

Income Levels

The income distribution in the Miami-Ft. Lauderdale-Pompano Beach MSA follows relatively similar trends when compared to Florida overall. However, the MSA has a higher percentage of incomes at \$100,000 and above than the state average. The income in an area may impact the demand for air travel in an area. In an area that has a relatively high number of high income households, more people may be willing to pay more in air fare in order to have a shorter drive to the airport. In lower income areas, people are more likely to drive a greater distance for air travel in order to capture reduced fares. A summary of income data for the MSA are in **Figure 10** below. Income data for the MSA and State was derived from the US Census American Fact Finder.

Figure 10. MSA and Florida Income Comparison¹⁴

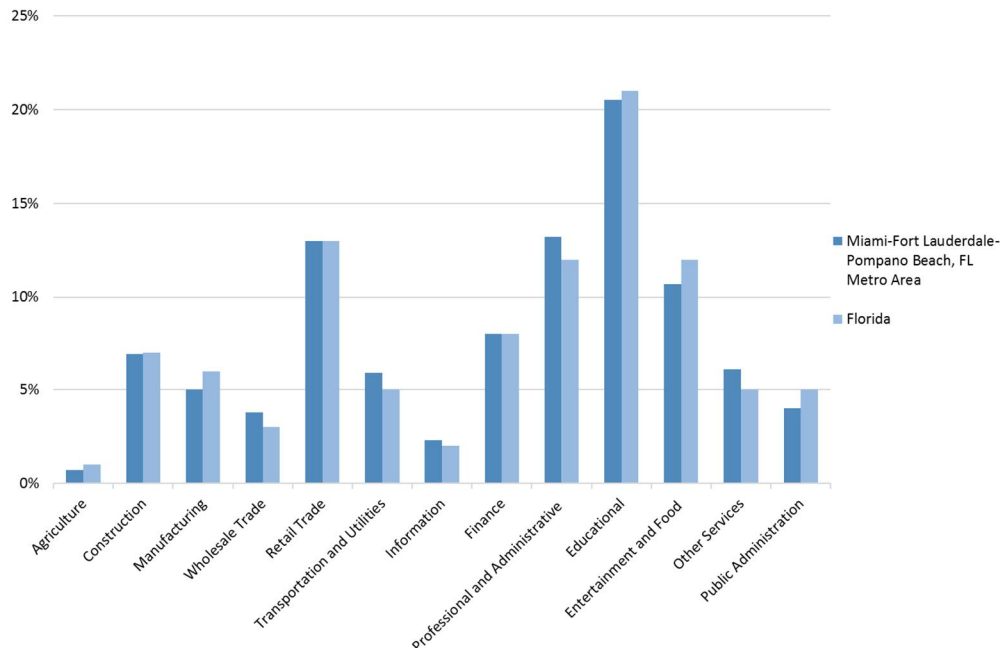


Employment

The primary types of employment located in an area may influence air travel. For areas that have a large number of companies that participate in professional and financial services, demand for local air travel will likely increase because they are less concerned about the cost of flights and more concerned about ease of access to the airport. In most cases, differences will exist between the county and the state averages, but these discrepancies are generally not large enough to impact commercial air service demand. The Miami-Ft. Lauderdale-Pompano Beach MSA has a relatively parallel relationship with Florida's employment by industry percentages. A summary of employment by industry can be seen in **Figure 11** below. As shown, the Miami-Ft. Lauderdale-Pompano Beach MSA has a high employment percentage in the professional and administrative industry compared to the rest of the state. This higher percentage could result in increased demand for local air travel and increase MIA's annual passenger count.

¹⁴ U.S. Census American Fact Finder

Figure 11. Employment by Industry¹⁵

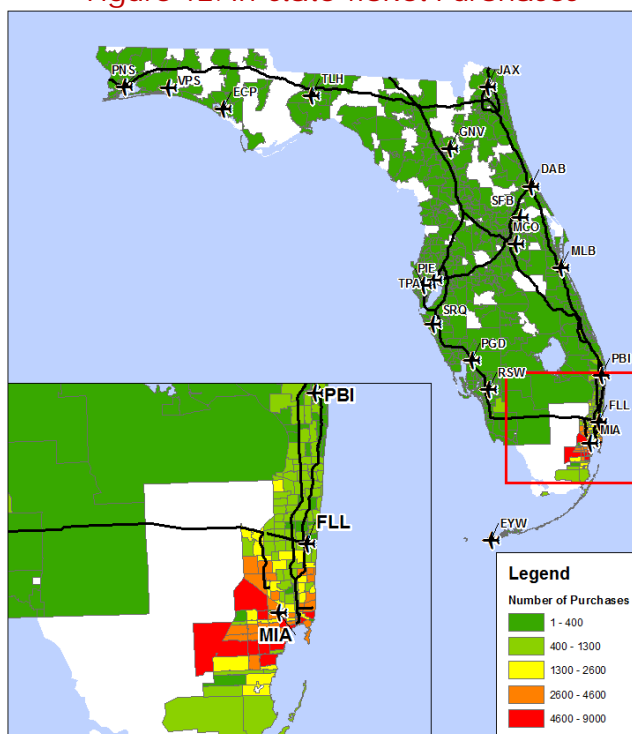


Leakage

Figure 12 displays the zip codes in Florida where tickets for flights departing from MIA were purchased. This graphic shows the purchases of tickets primarily in the area surrounding MIA. However, tickets have been purchased for MIA flights from all over the state of Florida. Some areas with noticeable aggregations of ticket purchases include Jacksonville, Tallahassee, and Tampa. The majority of tickets purchased for MIA flights were purchased from in-state locations. In fact, only 32 percent of ticket purchases were from out of state locations. The other states where ticket purchases were made included but aren't limited to:

- New York – 5%
- California – 4%
- Texas – 2%
- New Jersey – 2%

Figure 12. In-state Ticket Purchases¹⁶



¹⁵ U.S. Census American Fact Finder

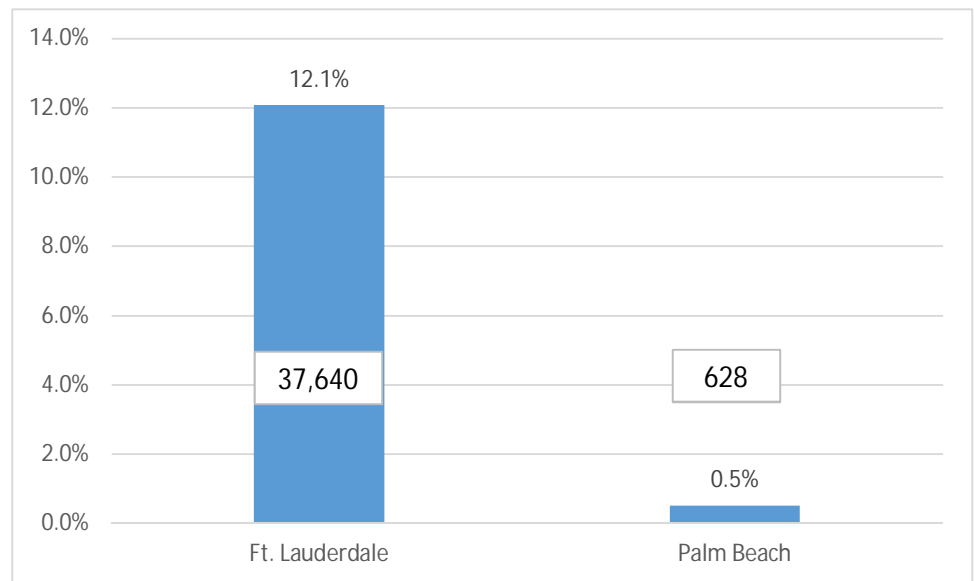
¹⁶ Airline Reporting Corporation (ARC)

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The market leakage analysis shows that Miami International Airport loses a significant number of passengers to nearby airports. It was found that 12.1 percent of passengers departing from Ft. Lauderdale- Hollywood International and 0.5 percent of passengers departing from Palm Beach International Airport were from Miami-Dade County. Although 12 percent of passengers from Ft. Lauderdale International come from Miami-Dade County, roughly the same amount comes to Miami International from Broward County. Although additional

market research would be necessary to confirm the reason for this market crossover, it is possible that it may be occurring because Ft. Lauderdale-Hollywood International provides more domestic service while Miami International serves a majority of international flights. **Figure 13** illustrates the top two airports that receive leaked passengers from Miami International Airport's main market area, Ft. Lauderdale International airport and Palm Beach International Airport. The values that are presented represent the number and percent of passengers who purchased their ticket from a Miami-Dade County zip code but flew out of an alternative airport. Data presented are from a 10 percent sample from all months of 2015.

Figure 13. In-state Ticket Purchases¹⁷
(Represented as a Percentage of the Departing Airports Total Enplanement Volumes in 2015)



¹⁷ Airline Reporting Corporation (ARC)