Florida Department of Transportation-Aviation and Spaceports Office

2016
AIR SERVICE STUDY

FDOT

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Data Explanation

For this report, two key data sources were used: *Passenger Origin-Destination Survey* from the U.S. Department of Transportation and the Official Airline Guide (OAG). In this document, data are combined and compared in order to identify general trends about Florida's commercial service airports, 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 Study.

Because this report was completed in the middle of 2016, data is presented from the years 2014 and 2015. Data collected from the U.S. Department of transportation is from 2014, this is because of a lag in reporting periods, providing 2014 as the latest full year of data when developing this study.

Data from OAG is available on a more frequent timeframe, therefore, data for calendar year 2015 was available. Below is a summary of the data presented and the years that it is presented for.

U.S DOT Data – 2014	Official Airline Guide Data – 2015
[1]Outbound Origin and Destination (O&D) Passengers [1]Average Domestic One-Way Fares, D1B1 [1]Total Enplanements	[2]Weekly Flight Departures [2]Weekly Departing Seats [2]U.S. Cities Served [2]Airlines Served [2]Weekly International Departures [2]Intrastate Departures and Destinations

[1.] *U.S. DOT, Air Passenger O&D Survey, Reconciled to Schedule T-100*
[2]. *Official Airline Guide (OAG), Schedules Analyzer*

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.

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INTRODUCTION

The 2016 Florida Air Service Study is a collection of data that builds on previous years of studies to present accurate and detailed Air Service information regarding Florida's 20 commercial service airports. This study is being presented to the Florida Department of Transportation (FDOT) Aviation and Spaceports Office (ASO), The FDOT District Offices, and Florida's commercial service airports as a compendium of the most current air service data and statistics to assist in planning and development projects at their airports. The majority of the data included in this report is sorted by the seven FDOT Districts, which can be seen in **Figure 1**.

Figure 1: Commercial Service Airports by FDOT District

The collection of information presented in this report can be used by readers to gain a better understanding of the position and importance of Florida's diverse and growing aviation industry. As a leader in national tourism, Florida continues to maintain a fully functional, efficient, and safe air transportation network. This report aims to display the operational success that Florida aviation continues to have.

The multitude of data presented in this report has been formatted to promote easy understanding through creative graphics and modern statistical representation. However, the data is accurate and representative of actual Florida aviation operations.

This report utilizes airport codes to represent airports in multiple scenarios. A list of the Florida airports in study with corresponding airport codes is provided in **Table 1**.

Table 1: Airport Identifier Codes

District 1	
Punta Gorda	PGD
Sarasota-Bradenton	SRQ
Southwest Florida	RSW
District 2	
Gainesville	GNV
Jacksonville	JAX
Northeast Florida	SGJ
District 3	
Northwest Florida Beaches	ECP
Northwest Florida Regional	VPS
Pensacola	PNS
Tallahassee	TLH

District 4	
Ft. Lauderdale	FLL
Palm Beach	PBI
District 5	
Daytona Beach	DAB
Melbourne	MLB
Orlando	MCO
Orlando-Sanford	SFB
District 6	
Key West	EYW
Miami	MIA
District 7	
St. Pete-Clearwater	PIE
Tampa	TPA

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ANALYSIS OF SCHEDULED COMMERCIAL AIR SERVICE IN FLORIDA

This report provides an update to the overview of Florida's scheduled commercial airline service using 2014 and 2015 data. The original report was based on conditions that characterized Florida's commercial air service airports in the summer of 2000. Subsequently, an update to the original study was prepared to contrast and compare commercial airline service at Florida airports in the summer of 2001. A supplemental update was made after September 11, 2001 (9/11) to reflect changes to Florida's commercial airline service following the terrorist attacks in New York, NY and Washington, DC. That supplement noted changes in air service at Florida's airports between the summer and fall of 2001. Additional updates were prepared in the summers of 2003, 2005, 2007, 2008, 2011, and 2014 to address ongoing changes in Florida's commercial air service.

With data from the prior studies and new information presented in this report, the Florida Department of Transportation (FDOT) can benchmark changes in the State's commercial airline service.

Based on availability, different sources were used to obtain data for use in this analysis, with some data representing calendar year and some weekly. The data sources and elements are identified in **Table 2**.

Table 2: Data Sources

2014	2015
[1]Outbound Origin and Destination (O&D) Passengers [1]Average Domestic One-Way Fares, D1B1 [1]Total Enplanements	[2]Weekly Flight Departures [2]Weekly Departing Seats [2]U.S. Cities Served [2]Airlines Served [2]Weekly International Departures [2]Intrastate Departures and Destinations

[1.] *U.S. DOT, Air Passenger O&D Survey, Reconciled to Schedule T-100*
[2.] *Official Airline Guide (OAG), Schedules Analyzer*

The focus of this report is highlighting changes that occurred in Florida's commercial airline service environment from the summer of 2013 through the summer of 2015. These changes reflect the impact of the airline industry evolution as well as the economy of the statewide and airport-specific air service environment. Historical data from previous reports has been analyzed and integrated for reference. Historical data from previous reports is included in a separate document, titled: *Historical Appendices*. This document can be found on the FDOT website: www.dot.state.fl.us/aviation/fas_studies.shtm.

Trends and Conditions in Aviation

> Trends and Conditions in the global and national aviation industries have a direct impact on Florida's aviation industry and the airports within it. This section identifies current trends that have a direct effect on Florida aviation. Some trends have more of an effect on some airports when compared to others. Adaptation to trends is vital for Florida airports in their development.

TRENDS AND CONDITIONS IN AVIATION

The inception of commercial aviation took place in Florida on January 1, 1914. On this date, St. Petersburg Mayor A.C. Pheil boarded Thomas Benoist's bi-wing seaplane for a flight across Tampa Bay arriving in Tampa. The 18-mile trip only took 23 minutes which was comparatively better than the two-hour boat ride. Benoist's "Tampa Air Boat Line" began operating two flights a day at a fee of $5.00 per one-way ticket, and thus the commercial aviation industry was born. As technology and demand developed together, a variety of trends and conditions (some short-term and others long-term) on the global, national, and state scale influenced and shaped the commercial aviation industry of present-day Florida.

There are numerous aviation trends that have emerged since the previous Air Service Study that have the potential to impact global, national, and Florida specific commercial air service offerings. These trends include a wide variety of topic areas that each have the potential to have a significant effect. The bearing of these trends will be felt at a global, national, and Florida-specific level. However, some trends, such as statewide demographic changes, will be realized in Florida only.

The following pages provide a summary of the commercial service trends that are likely to affect service in the future. These trends are divided into five specific categories: Regulatory Impacts, Demographic and Social Impacts, Economic Impacts, Technological Impacts, and Airline Impacts. Within each of these primary impact categories, a variety of trends are presented as they are anticipated to affect global, national, and Florida specific air service trends.

Regulatory Impacts

Open Skies Agreements – Global Impacts

Open Skies is an international policy that liberalizes the rules and regulations of the international aviation industry to create a free-market environment for the airline industry. The creation of Open Skies agreements goes all the way back to 1944 when, under the Chicago Convention of 1944, the initial "freedoms of the air" were established which provided the basis for bilateral commercial air service agreements. However, actual policies concerning Open Skies did not actually take effect in the U.S. until 1992, when the first ever Open Skies air services agreement was signed with the Netherlands. Since then, the U.S. has entered into Open Skies Agreements with over 100 countries world-wide. Currently, over 70-percent of international departures from the United States now fly to Open Skies partner countries.[1]

The U.S. Department of State identifies multiple benefits of Open Skies agreements including:

- ⊙ Substantial economic benefits
- ⊙ Expansion of cooperative marketing arrangements
- ⊙ Improved flexibility for airline operators

- ⊙ Provisions committing governments to observe high standards of safety and security
- ⊙ Countless worldwide cultural links

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[1] https://www.state.gov/e/eb/rls/fs/2017/267131.htm

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However, as Open Skies agreements developed between the U.S. and foreign countries, some domestic airlines believe the agreement is doing more harm than good. In 2015, American Airlines, Delta Air Lines, and United Airlines formed the Partnership for Open and Fair Skies, urging the U.S. government to confront the United Arab Emirates (U.A.E.) and Qatar governments over subsidies they say have been received by Emirates Airline, Qatar Airways, and Etihad Airways, giving the Gulf carriers an unfair advantage. In short, the Partnership for Open and Fair Skies is asking the U.S. government to place a temporary block on new U.S.-bound services by these three U.A.E. and Qatar airlines. According to the Partnership, "There are more than $42 billion in unprecedented subsidies that are keeping the Gulf airlines afloat and harming American aviation jobs."[2]

In opposition to the Partnership for Open and Fair Skies, FedEx, Atlas Air Worldwide, JetBlue Airways, and Hawaiian Airlines formed the U.S. Airlines for Open Skies Coalition. This Coalition urges the U.S. to honor its Open Skies commitments, which "opens markets for U.S. carriers, promotes competition on international and domestic routes, and facilitates U.S. exports." According to a study by the Brookings Institution, existing Open Skies Agreements generate approximately $4 billion in annual savings for passengers on U.S. to international routes. If the U.S. were to negotiate new agreements with other large markets, these savings could be doubled to $8 billion. The Coalition suggests that Open Skies promotes U.S. trade, jobs, and economic growth, siting the 140,000 foreign tourists brought to the U.S. on Gulf carriers in 2014, generating over $2 billion in economic output.[3]

Effects on Air Service

If Open Skies remains unaltered:

- Increasing competition both internationally and domestically may continue to result in decreased fares for passengers and further consolidation of major carriers
- Decreasing fares may further result in increased demand and decreased capacity at airports, especially airports serving international destinations

If Open Skies is altered as requested by the Partnership for Open and Fair Skies:

- Decreased competition in the United States may result in higher fares for passengers and a slower growth rate of demand for air travel
- Fair Skies could reduce tourism to the U.S. and lessen revenue for major airports.

Customs and Immigration – Global Impacts

Preclearance/Staffing

U.S. Customs and Border Protection (CBP) welcomes more than one-million passengers arriving to the United States every day and is committed to facilitating legitimate travel while maintaining the highest standards of security and border protection.[4] Preclearance is a CBP system that allows for required immigration, customs, and agriculture inspections of international air passengers to occur on foreign soil prior to boarding a direct flight to the United States. Currently, preclearance of air passengers occurs at 15 locations in six foreign countries: Canada, Ireland, the United Arab Emirates, Bermuda, Aruba, and the Bahamas. Over 600 CBP officers and agriculture specialists are deployed to foreign airports, processing over 16-million U.S.-bound passengers per year. In Fiscal Year 2013, 29-percent of all commercial aircraft, and 18-percent of all commercial air travelers arriving in the United States were precleared. CBP intends to significantly expand the preclearance program toward the goal of preclearing 33-percent of all U.S.-bound air travelers by 2024.[5] CBP identifies the benefits of the future growth in prescreening for airports as: higher passenger volumes, increased service offerings, more sales opportunities, and consistent

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[3] http://aviationblog.dallasnews.com/2015/08/four-u-s-airlines-side-with-gulf-carriers-against-american-airlines-delta-air-lines-and-united-airlines-in-open-skies-battle.html/
[4] https://www.dhs.gov/news/2016/01/21/united-states-begins-implementation-changes-visa-waiver-program
[5] https://www.cbp.gov/sites/default/files/documents/Final%20Preclearance%20Guidance_092014.pdf

service delivery. The expansion of precleared countries can play a major role in airport throughput and capacity. As airport capacity will be testing the limit in the near future, the development of preclearance programs could play a crucial role in airport efficiency.

Visa Waiver Program (VWP)

The U.S. recently began implementing changes under the *Visa Waiver Program (VWP) Improvement and Terrorist Travel Prevention Act of 2015* (the Act). Under the Act, nationals of VWP countries who have traveled to or been present in Iran, Iraq, Sudan, or Syria on or after March 1, 2011 or nationals of VWP countries who are also nationals of Iran, Iraq, Sudan, or Syria, are no longer eligible to travel or be admitted to the United States under the VWP. Under the new law, travelers with dual nationality of one of these four countries will have their current Electronic System for Travel Authorities (ESTAs) revoked. Whether ESTA applicants will receive a waiver will be determined on a case-by-case basis.[15] Revocation of ESTAs will result in less international traffic from the countries listed, but is an effort to increase aviation safety on a global scale.

Automated Passport Control (APC)

Automated Passport Control (APC) is a U.S. Customs and Border Protection (CBP) program that expedites the entry process for U.S., Canadian, and eligible Visa Waiver Program international travelers by providing an automated process through CBP's Primary Inspection area. Travelers use self-service kiosks to submit their Customs declaration form and biographic information. APC is a free service, does not require pre-registration or membership, and maintains the highest levels of protection when it comes to the handling of personal data or information.

During the early implementation of APC, airports experienced significant decreases in CBP wait times. In March of 2015, JFK airport reported a 66-percent decrease from the 30.7-minute average wait time in March 2013 to 18.6-minutes. **Table 3** shows the ranking of U.S. airports with the six largest-percent decreases in overall average wait time from using automated passport control kiosks for March 2015 compared to March 2013[6].

Table 3: Ranking of U.S. Airports–Six Largest % Decreases in Wait Time

Rank	Airport/Terminal	Avg. Wait Time March 2013 (Minutes)	Avg. Wait Time March 2014 (Minutes)	Avg. Wait Time March 2015 (Minutes)	% Decrease	Months Kiosks Were Implemented
1	New York JFK Airport	30.7		18.5	65.90%	October 2013
2	Dallas/Fort Worth Terminal D	23.6		11.4	51.60%	January 2014
3	Houston George Bush Intercontinental Airport Terminal IAB	26.1		14.1	45.90%	January 2014
4	Miami International Airport North Terminal	37.1		22.1	40.40%	November 2013
5	Chicago Midway Airport Main Terminal	12.7		7.7	39.30%	March 2014
6	Chicago O'Hare Airport Terminal 5	21.4		13.6	36.40%	July 2013
7	Tampa International Airport Airside F Terminal		16.3	10.4	36.20%	August 2014

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[6] https://skift.com/2015/03/30/automated-passport-kiosks-havent-lived-up-to-their-hype-so-far/

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Effects on Air Service

Preclearance
- More precleared countries could result in increased efficiency and airport capacity
- Passenger throughput increases may result due to more streamlined security process
- Increase in tourism to the U.S. as entry becomes more efficient

Visa Waiver Program (VWP) Improvement and Terrorist Travel Prevention Act of 2015 (the Act)

- Reduction in foreign traffic from multiple Middle East destinations
- Less revenue for airports from passengers in those countries affected by the Act

Automated Passenger Control (APC)
- Reduction of passenger wait time resulting in increased passenger throughput
- Passenger satisfaction increase due to streamlined security processes
- Increased air travel security

Passenger Facility Charges (PFCs) – National Impacts

PFCs are federally authorized fees paid by passengers at the time of ticket purchase to help pay for capital development at commercial service airports. Initiated in 1990 with the first collections in 1992, PFCs were originally capped at $3.00 per enplaned passenger per flight segment with a maximum of two PFCs charged on a one-way trip. PFCs were raised to $4.50 in 2000; however, this cap has remained in place with no adjustments for inflation. In 2013, approximately $2.8 billion in PFCs were collected.

U.S. airports have been proposing an increase in the PFC cap due to the lack of adjustment since 2000. In 2015, airports collectively proposed an increase from $4.50 per flight segment to $8.50 per flight segment. Airlines, which collect the PFCs at the time of purchase and remit the fees to airports, oppose an increase due to their perceived potential reduction of passenger demand as a result. In response, some airports suggested alternative PFC collection methods such as airport kiosks or online/mobile payments that could allow the PFC cap to be raised without adversely impacting demand. Stakeholders disagreed with the suggested collection alternative saying it would impose additional steps for passengers, costs for airports, and changes in business processes.

Effects on Air Service
If PFC Cap is raised:

- Major increase in airport funding, allowing opportunity for development/expansion of airports to accommodate decreasing capacity
- Increase of passenger fares per ticket purchase, potentially resulting in a decrease in passenger demand

Contract Towers – National Impacts

Through the Federal Aviation Administration's (FAA) Contract Tower Program, the agency contracts ATC services to the private sector at airports. Through the program, the FAA, in partnership with local governments and the private sector, can provide an important service to aviation users at a substantially reduced cost to taxpayers. The primary advantages of this program are identified as: enhanced safety, improved ATC services, and significant VFR ATC cost savings to the FAA. In 2013, the FAA slowed the process of admitting airports into the Contract Tower Program and closed 149 contract towers as part of sequestration budget cuts. However, as of late 2015, the FAA regained funding for the program and is in the process of relaunching it. A bill released in 2014 included $140-million in dedicated funding for FAA's Contract Tower Program and the agency's contract tower cost-share program. A letter from 25 senators to the Senate Appropriation Committee stated, "Full and dedicated funding for the contract tower program is critical to ensuring that operations continue through fiscal year 2015 at the 252 FAA Contract Towers across the country. Restricting or reducing the operations of contract towers would have a substantial and serious

impact on general aviation safety, the efficiency of large commercial service airports, emergency medical operations, law enforcement, agricultural activities, and businesses throughout the United States."[7] The addition of contract towers will provide a lower cost ATC option and provide guidance to VFR traffic.

Effects on Air Service
- ⊙ Increased safety and efficiency of the national airspace
- ⊙ Decreased ATC costs for the FAA potentially increasing funding for airports
- ⊙ Potential expansion of ATC services, providing relief to major airports resulting in increased efficiency at large commercial service airports

Transportation Security Administration (TSA) – National Impacts

The TSA was created as a result of the terrorist attacks on September 11, 2001 in New York, NY and Washington, DC. On November 19, 2001, the 107th Congress signed the Aviation and Transportation Security Act establishing the TSA with the mission to "protect the nation's transportation systems to ensure freedom of movement for people and commerce."

Proposed Budget Cuts/Staffing

Congress' recent planned budget cuts to TSA's funding has been cause for concern for the air travel industry. Budget cuts will result in under-staffing of TSA throughout the country and present more opportunities for agency mishaps. U.S. Travel Association President and CEO Roger Dow expressed his opinion on the budget cuts in a letter to the Senate and House of Representatives, "We strongly urge that the Committee revisit its FY16 recommendations and find cost savings in other areas to allow funding for security staff to be kept at current levels rather than reduced by some 600 employees." The potential cuts to TSA staffing can yield a large increase in TSA wait times and passenger delays. Private screening contracts are becoming an answer for some airports in response to TSA staffing issues. Orlando Sanford International Airport (SFB) recently awarded Trinity Technology Group Inc. a $23.9-million-dollar contract for security screening services. All commercial service airports are eligible to apply to the screening partnership program to support their TSA staff[8].

Managed Inclusion II

TSA PreCheck offers expedited screening at airports across the U.S. and is part of a broader intelligence-driven, risk-based approach to security. All passengers are eligible for expedited screening based on the secure flight passenger data (SFPD) that airlines are required to send to the TSA. Passenger profile information must match exactly what is listed on their TSA PreCheck/CBP Trusted Traveler application, driver's license or other government-issued ID. The TSA is responsible for selecting participants on a per-flight-segment basis. Recently, the TSA has removed an aspect of the PreCheck program known as "Managed Inclusion II." Managed Inclusion II allowed for the TSA Officers to randomly select passengers for a quicker screening process, which upon passing would allow said passengers to continue through the PreCheck line. While Managed Inclusion II frustrated those who had signed up for the TSA PreCheck program it also raised security concerns. The removal of Managed Inclusion II will undeniably lower security risks to the aviation system, however major airports are concerned about the resulting increase in the TSA line time. The Metropolitan Washington Airports Authority has reported an increase in average and peak TSA wait times since the removal of Managed Inclusion II.[9] Other airports have noted that the increase in wait times isn't drastic, but could greatly affect TSA wait times during peak travel periods.

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[7] http://contracttower.org/ctaannual/July2014_newsletter.pdf
[8] https://www.tsa.gov/for-industry/screening-partnerships
[9] https://www.washingtonpost.com/news/dr-gridlock/wp/2015/10/29/no-more-cutting-the-line-at-tsa-screening/

Effects on Air Service
Budget Cuts/Staffing
- Decreased efficiency/throughput at airports due to longer TSA wait times
- Passenger dissatisfaction and potential loss in airport revenue
- Expensive contracts with private screening companies to aid in lack of security at airports

Removal of Managed Inclusion II
- Increased safety at airport screening
- Increased wait times for passengers at TSA checkpoints

Airline Pilot Shortage – National Impacts
Training Requirements
The long foreseen pilot shortage is finally occurring in the United States aviation system. According to an article in Forbes titled *Pilot Shortage Threatens to Slow U.S. Airline Growth* by Birgit Anderson, "Unless airlines find ways to work with partners to cultivate a pilot pipeline, they could face difficult, even volatile, competition for experienced pilots because the current regulatory and industry situation can only yield about two-thirds of the pilots the U.S. will need in the next 20 years."[10] Part of the shortage in experienced pilots can be credited to the recent increase in FAA pilot qualification requirements. In 2013, the FAA published a rule requiring first officers – also known as co-pilots – to hold an American Transport Pilot (ATP) certificate, requiring 1,500 hours total time as a pilot. Previously, first officers were required to have only a commercial pilot certificate, which requires 250 hours of flight time.[11] In response to the steep increase in required flight hours, many U.S. pilots are looking for jobs with foreign airlines where flight hour requirements are not as stringent.

Impact on EAS Airports
The effect of the pilot shortage has taken a large toll on smaller airlines as larger airlines acquire the more experienced pilots with higher wages. Some airlines, such as Great Lakes Airlines, have begun to work around the requirements. For example, Great Lakes Airlines removed 10 seats from some of its Beechcraft 1900 aircraft to drop the passenger count below 10 and change the FAA regulations under which the carrier operates. While this serves as a short term solution for smaller airlines, Great Lakes Airlines has already reported the larger airlines hiring their pilots as soon as they meet the 1,500-hour requirement. The rising shortage of pilots for U.S. carriers can potentially have an adverse effect on airports across the country.

The Essential Air Service (EAS) program was put into place to guarantee that small communities that were served by certificated air carriers before airline deregulation maintain a minimal level of scheduled air service. Congress added section 419 to the Federal Aviation Act, which established the EAS program to ensure that smaller communities would retain a link to the National Air Transportation System, with Federal subsidy when necessary. However, as the pilot shortage becomes more prominent in the U.S., airlines could potentially reduce the flights offered to EAS airports to maximize more profitable flights and pilot utilization.

Effects on Air Service
- Decrease in routes offered by airlines
- Increased wages for pilots resulting in increased fares for passengers
- Potential airline consolidation (especially among smaller airlines) resulting from the competition for experienced pilots
- Potential decrease in service offered to EAS airports

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[10] http://www.forbes.com/sites/oliverwyman/2016/01/28/pilot-shortage-threatens-to-slow-u-s-airline-growth/#65cd2eabb6ec
[11] https://www.faa.gov/news/press_releases/news_story.cfm?newsId=14838

Demographic and Social

Slow Growth in Europe and Japan – Global Impacts

Japan, which has the third largest economy in the world, and some countries in Europe are facing a decline in population. A declining population can lead to major economic implications for a country. According to the Washington Post, Japan's and Germany's populations are decreasing by 0.1-percent a year, but Japan's rate is projected to decline more rapidly.[12] The National Trade and Tourism Office[13] identified a four-percent decrease in passengers traveling to America from Japan in 2014. In 2014, 69-percent of travel from Japan to America was attributed to vacation/holiday, a one-percent decrease from 2013. The decreasing rate of vacation/holiday from Japan could be attributed to the gradual shift to an elderly demographic in Japan as the country experiences population decline. According to Fabio Gygi, anthropologist and Japan expert at SAOS, University of London, "People 65 and above are predicted to make up 40-percent of the total Japanese population by 2060."[14]

While Japan experiences a population decline resulting in a demographic shift towards the elderly, U.S. airlines and airports could potentially experience negative effects to their international passenger levels from Japan. Economists predict an economic downturn, which has a parallel relationship with vacation/travel, in Japan due to the growing population decline. The revenue generated from Japanese tourists in America could start to dwindle in the near future as a result of Japan's potential economic recession and aging demographic. Some Eastern European countries including Slovakia and Poland are also facing similar or worse population decline problems. Like Japan, these population declines are predicted to lead to economic downturn resulting in little or no international tourism from those countries.

Effects on Air Service

- Decrease in tourism to the U.S. from Japan and some Eastern European countries resulting in a decrease in revenue for U.S. airlines and airports
- Future decrease in routes servicing those countries due to declining demand

Infectious Diseases (Zika/Ebola) – Global Impacts

According to the New York Times, "About 30 million people fly to the United States each year from countries in the Caribbean and Latin America that are currently affected by Zika. Air travel has been a factor in the spread of Zika, which is circulating in about two dozen countries according to Isaac I. Bogoch, author of a recent study on the spread of Zika."[15] Airlines were challenged with the recent outbreak of Zika in 2016 and the outbreak of Ebola in 2014. In response to Zika, airlines have been offering full refunds on tickets to "infected countries" or a re-booking to a later date free of charge. The intimidation of virus breakouts such as Zika and Ebola have been known to reduce travel demand and decrease passenger activity at airports at least on some level.

The large affect viral outbreaks can have on internationally traveling passengers can have negative consequences for airports. Not only could passenger demand falter, airlines could begin cancelling/changing routes based on virus-related issues. To help reduce Zika concerns and risks for passengers, Orlando International Airport released a Zika prevention plan. According to a local Orlando news station, "The plan consists of working with the Orlando International Airport's on-staff biologist to monitor the mosquito population and enhance the mosquito spraying program on airport property, along with increasing employee awareness of mosquito habits and to stay informed with the state health department and CDC."[16]

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[12] https://www.washingtonpost.com/news/worldviews/wp/2013/10/31/how-the-worlds-populations-are-changing-in-one-map/
[13] http://travel.trade.gov/outreachpages/download_data_table/2014_Japan_Market_Profile.pdf
[14] http://www.dw.com/en/impact-of-japans-shrinking-population-already-palpable/a-18172873
[15] http://www.nytimes.com/interactive/2016/02/06/science/air-travel-from-countries-affected-by-zika.html
[16] http://www.clickorlando.com/news/orlando-international-airport-releases-zika-prevention-plan

Effects on Air Service
- Decrease in demand from the U.S. to virus affected countries
- Decrease in airport/airline revenue as a result of decreasing demand
- Increasing airport capacity as a result of decreasing demand
- Loss of revenue among airports and airlines

U.S./Florida Population, Age, Income Changes – National/Florida Impacts

Population
According to the United States Census Bureau, the final population of the United States in 2015 was approximately 323-million people. The country's population is growing exponentially with one birth in the U.S. every eight seconds and one death every 11 seconds. As of July 1, 2015, the population of Florida was approximately 20-million people according to the U.S. Census Bureau. In 2015, the migration rate into Florida from other states (202,510 people) and other countries (129,525 people) was the highest in the country. More of Florida's population growth was credited to people moving into Florida, rather than babies born.[17] As the country's third most populated state, Florida is predicted to continue to grow rapidly in population over the next decade. As population increases, Florida airports are expected to experience increasing demand.

Millennials
The millennial generation (no specific range exists, but commonly includes people born between 1980 and 2000) is leading the country's population, in terms of age ranges, especially 23 year olds at 0.75-percent of the population.[18] The millennials, or generation Y, are well-known for their rapid adoption of new technologies and constant interaction with web-based social media. The generation's strong relationship with technology may impact future air travel demand from the level of air travel that is desired to the technology needed at airports. Characteristically, the millennial generation is enthralled with travel, but as of 2015, does not have enough personal income to support a major impact on air service in the near future.

Aging Population
Florida, compared to other states, currently has the greatest number and-percentage of residents age 65 and over. According to the Florida Legislature Office of Economic and Demographic Research, "between 2010 and 2030, Florida's population is forecasted to grow by almost 4.8 million. Florida's older population (age 60 and older) will account for most of Florida's population growth, representing 56.9-percent of the gains." The resulting labor force contraction as a result of an aging population could significantly depress economic output and boost inflation as wages increase to attract skilled-workers from other areas. Economic slowdown and larger retirement population will lead to a decline in consumer spending and changes in investment patterns as the senior population spends down its savings. [19] This decline in consumer spending could result in a decline in air travel among the senior population.

Income
Economic activity and personal income have been recognized as exogenous drivers of personal air travel for many years. Real personal income is projected to continue to increase in the future. However, that does not mean that income will necessarily continue to exert as strong an influence on rising air travel demand. There are indications and predictions that income-related factors influencing air travel demand may moderate in the future.[20] The aging population of Florida paired with the millennial generation facing workforce integration difficulties could result in lower incomes for the Florida population in the future, having a large effect on air travel demand.

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[17] http://www.floridatoday.com/story/news/local/2015/12/22/florida-population-tops-20-million-census-report-says/77739200/
[18] http://www.census.gov/popclock/
[19] http://edr.state.fl.us/Content/presentations/economic/FlEconomicFuture&theImpactofAging_3-17-14.pdf
[20] http://www.dot.ca.gov/hq/tpp/offices/owd/horizons_files/NCST_WP_Travel_Demand_Draft.pdf

Effects on Air Service

◉ Future increases in air travel demand as Florida's population continues to grow at a rapid pace
◉ Decreasing capacity due to increasing demand
◉ Potential decline of income in Florida could slow demand for air travel
◉ Increase in low-cost carrier presence due to declining income
◉ Potential long-term increase in air travel resulting from Millennial volume and interest in air travel

Economic

Opening of Cuba Market – Global Impacts

The travel industry recently received a great opportunity to open routes from America to Cuba. The opportunity comes at the result of the United States and Cuba restoring diplomatic relations and reopening their embassies. Since the restoration of U.S. and Cuba relations, travel agencies are reporting exponential growth in interest from American tourists hoping to visit Cuba. Airlines have begun operating flights to Cuba and are facing demand for more. "Interest in Cuba has reached levels not seen for a generation," said Scott Laurence, senior vice president of airline planning for JetBlue, which has been operating charter flights from Miami, Fort Lauderdale and Tampa.[21] While travel to Cuba is now easier than ever, there are still some restrictions on the new travel destination. In order to be granted permission to visit Cuba, one must specify the visit as one of a list of 12 reasons. According to the U.S. Department of the Treasury, the 12 reasons that allow for obtaining travel permission to Cuba are:

◉ Family visits
◉ Official business of the U.S. government, foreign governments, and certain intergovernmental organizations
◉ Journalistic activity
◉ Professional research and professional meetings
◉ Educational activities
◉ Religious activities
◉ Public performances, clinics, workshops, athletic and other competitions, and exhibitions;
◉ Support for the Cuban people
◉ Humanitarian projects
◉ Activities of private foundations or research or educational institutes
◉ Exportation, importation, or transmission of information or information materials
◉ Certain authorized export transactions[22]

The opening of travel to Cuba presents many opportunities for international airports to house airlines operating flights to new travel destination. On Thursday July 7, 2016, the U.S. Department of Transportation (DOT) awarded flights to Havana, Cuba to eight carriers it thought provided the most-compelling route applications. The airlines and routes include:

◉ Alaska Airlines
  ▪ Los Angeles – one daily round-trip
◉ American Airlines
  ▪ **Miami – four daily round-trips**
  ▪ Charlotte – one daily round-trip
◉ Delta Airlines
  ▪ Atlanta – one daily round-trip
  ▪ New York JFK – one daily round trip
  ▪ **Miami – one daily round-trip**

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[21] http://www.usatoday.com/story/news/world/2015/12/17/us-cuba-commercial-flights-agreement/77474112/
[22] https://www.treasury.gov/resource-center/sanctions/Programs/Documents/cuba_faqs_new.pdf

- ⊙ Frontier Airlines
  - ▪ **Miami – one daily round-trip**
- ⊙ JetBlue
  - ▪ **Fort Lauderdale – two daily round trips (except one on Saturday)**
  - ▪ New York JFK – one daily round trip
  - ▪ **Orlando – one daily round trip**
- ⊙ Southwest Airlines
  - ▪ **Fort Lauderdale – two daily round trips**
  - ▪ **Tampa – one daily round trip**
- ⊙ Spirit Airlines
  - ▪ **Fort Lauderdale – two daily round trips**
- ⊙ United Airlines
  - ▪ Houston Bush Intercontinental – one weekly round-trip (Saturday only)
  - ▪ Newark Liberty – one daily round-trip

The growing demand for Cuba flights is likely to increase passenger demand at Florida airports and further the need for expansion of airport capacity.

Effects on Air Service

- ⊙ Increase in demand for international tourism increasing passenger flow and decreasing capacity at international airports
- ⊙ Increased revenue for airports and airlines resulting from excitement over new travel destination
- ⊙ Potential increase in airline competition towards Caribbean destinations

Oil Prices – National Impacts

The trend of dropping oil prices is greatly benefiting the airline industry. Jet fuel prices are well-known as the largest expense to airlines, comprising nearly three-quarters of their expenses. Oil has slid from more than $100 a barrel in mid-2014, and as of 2015 was selling between $30 and $35 per barrel.[23] Larger airlines are taking advantage of the low-cost oil and showing record breaking profits as a result. Business Insider states, "United Airlines' $1.2 billion profit in the second quarter of 2015 was the highest in company history." United Airlines' extreme profit is one of many cases of large airline success resulting from low oil prices. Vinay Bhaskara, a senior business analyst for Airways News states, "Airlines are using this as an opportunity to invest in their business. It's smart, strategic growth. Given that fuel prices are down, there's no effect to the bottom line, and the headline profit numbers expand."

Large airlines aren't the only benefactors from the dropping oil prices, smaller, low-budget carriers are taking the opportunity to expand their businesses. While larger airlines only slightly drop their fares and focus on a higher profit/expense ratio, the smaller airlines are using the lower oil costs to drastically decrease their fares. "Ultra-low-carriers are much bigger than they were a year ago, and especially more than two or three years ago," said Bhaskara. "With the lower price of fuel, they've been emboldened to drop down their base fares even further. Because of that, they've been growing at a tremendous rate."[24] Due to the lower oil prices, a huge increase in market share is creating more competition among the airlines. The result of increased competition and low oil prices could result in new routes, increased passenger demand (due to lower fares), and decreasing airport capacity. The projected continuing decrease in oil prices could dramatically impact the future of the aviation industry and pressure rapid growth.

Some airlines, such as Southwest Airlines, have historically tried to eliminate volatility in oil prices by entering into long-term fuel contracts. Southwest Airlines entered into a long-term fuel contract in 1998[25] eventually maintaining their fuel costs at $51 a barrel through 2009. This contract was instrumental in the development of the company as oil prices shot above $100 a barrel in following years. During this time,

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[23] http://fortune.com/2016/02/24/oil-saudi-arabia-production-cuts/
[24] http://www.businessinsider.com/cheap-oil-is-having-an-impact-on-air-travel-2015-8
[25] http://usatoday30.usatoday.com/money/industries/travel/2008-07-23-southwest-jet-fuel_N.htm

Southwest Airlines saved billions during the long period of high oil prices. However, after 2009, Southwest further entered hedging contracts along with several other airlines including Delta who are experiencing loss during the current low-price period for oil. A 2015 article in The Economist states, "Delta will lose $1.2 billion on hedging in 2015, but overall, it still expects to see a $1.7 billion benefit from lower fuel prices."[26]

Effects on Air Service
- Low oil prices will continue to provide prosperity for most airlines
- The low oil prices allow for lower passenger fares thus increasing passenger demand and decreasing airport capacity
- Airline prosperity during low oil prices coupled with increasing passenger demand provides an increase in airport revenues

Technology

Boeing 787 Dreamliner – Global Impacts

The Boeing 787 Dreamliner was unveiled in 2011 with many promising features to enhance air travel. Three key features include decreased weight, fuel consumption, and noise. According to CNN Travel, "It is 60-percent less noisy than other planes of its size and capability. Clever engineering features, such as a fuselage made of lightweight composite materials, allow it to use less fuel than competitors. It emits less nitrogen dioxide."[27] With less weight and less fuel consumption, the 787 is capable of flying longer distances than any similar sized jet in history. Boeing states, "The 787's unparalleled fuel efficiency and range flexibility enables carriers to profitably open new routes as well as optimize fleet and network performance."[28] The possibility of new routes for carriers can ultimately change the numbers of incoming/outgoing passengers from major airports, both domestically and internationally. The 787's design geared toward sustainability should play a major role in the evolution of commercial flight; however, the technological innovations in the interior of the jet will provide never before seen levels of comfort and excitement to travelers. Boeing's determination to provide comfortable travel may result in increasing passenger demand in years to come.

Effects on Air Service
- Lower fuel consumption and less weight leads to opportunities for new routes for carriers, including international routes, and an increase in passenger demand
- A focus on sustainability helps produce a more environmentally friendly statement and increased satisfaction among aviation critics
- The substantial decrease in noise impact increases community satisfaction with airports and passenger demand

Technological Development – National Impacts

NextGen

NextGen is an initiative from the Federal Aviation Administration (FAA) to develop technology geared towards making air travel safer and more efficient by replacing older/existing technology. An example of NextGen technology is the FAA's "En Route Automation Modernization (ERAM) which processes data from 64 radars and tracks 1,900 aircraft at a time."[29] According to the FAA, "Once all planned programs are in place, FAA expects NextGen to deliver $134 billion in direct airline, industry, and passenger benefits (passenger value of time and carbon dioxide emissions) through 2030."[30] There are many initiatives being developed specifically for airports to help accommodate the demand for additional capacity in a safe, efficient and environmentally responsible manner.[31] Specific initiatives for airports are provided at the FAA

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[26] http://www.economist.com/blogs/gulliver/2015/01/fuel-hedging-and-airlines
[27] http://travel.cnn.com/explorations/life/whats-so-special-about-Boeing-dreamliner-766616/
[28] http://www.boeing.com/commercial/787/
[29] https://www.faa.gov/air_traffic/technology/eram/
[30] https://www.faa.gov/nextgen/
[31] https://www.faa.gov/nextgen/qanda/airports/

website (www.faa.gov/nextgen). The development of NextGen technologies will increase operational throughput at airports at the same time as increasing safety. While NextGen is an FAA-driven initiative, it requires aircraft operators, both private and airline, to equip aircraft and pursue NextGen practices.

Airline Ticketing Technology

The ever-developing smart phone technology has provided airlines with the opportunity to create Apps allowing passengers to purchase tickets directly from their phones. The Apps also allow passengers to quickly and easily check into their flight and store their boarding pass right on their phone. Airline websites are also improving for easier purchasing. A report commissioned by the International Air Transport Association predicted that airline websites will produce 59-percent of booking volume by 2017, up from 35-percent in 2012.[32] The continuing development of ticketing technology will increase passenger demand and allow for greater efficiency at airports.

Luggage Self-Tagging

Self-Tagging is a relatively new initiative geared towards faster passenger check-in and efficiency. According to American Airlines, "Self-Tagging helps you save time by letting you print your own bag tags from several self-service kiosks and placing them directly on your luggage."[33] By printing bag tags from a self-service kiosk, attaching the tag to luggage, and dropping it off at the designated location, check in time at airports is becoming faster than ever. Currently, 37 airports have implemented self-tagging and have noted quicker passenger check in times and shorter lines. Based on current trends, self-tagging is likely to continue developing at airports across the country and will provide a quicker/more efficient mode of luggage check in for passengers.

Off-Airport Check-In

A new system of expedited airport check in called "off-airport check-in" is starting to develop in areas of high tourism in the United States. By arriving to the off-airport check-in facility at least three hours before the flight and paying the designated fee, the system provides check-in, boarding passes, and check-in/delivery of luggage. The system provides a stress free way for passengers to check-in with luggage well before their flight and enjoy more vacation time.[34] Off-airport check in also allows for passengers to go right to security and on to their gate upon arriving at the airport, drastically reducing check-in time and stress. Passenger satisfaction and efficiency are two of the many identified benefits of off-airport checking in.

Effects on Air Service

NextGen
- Monetary benefits for aviation industry as a whole
- Implementation costs
- Increased efficiency over several platforms of the aviation system
- Safety benefits resulting from new technology
- Noise and emissions reduction boosting airport public perception

Ticketing
- Ease of ticket purchasing increasing passenger demand
- Major increases in efficiency at airports due to quick and easy check-ins for passengers

Self-Tagging
- Increased passenger satisfaction at airports due to less wait times
- Increased efficiency and speed of passenger throughput at airports
- Airport revenue increase due to more passenger "lounge time" at the gates

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[32] http://buyingbusinesstravel.com/feature/0822152-advances-booking-technologies-made-airlines
[33] https://www.aa.com/i18n/urls/selftag.jsp
[34] http://www.offairportcheckin.com/

- ⦿ Efficient and practical checking in for passengers resulting in passenger satisfaction and reduction in airport wait times

Airline

Consolidation of U.S. Carriers – National Impacts

Over the past decade, the consolidation of large air carriers in the United States has been actively taking place. Today, the U.S. is primarily left with four "legacy" carriers that comprise just under 70-percent of the market according to US DOT data from November 2015: U.S. Airways (20-percent), Southwest (18-percent), Delta (17-percent), and Continental (15-percent)[35]. Over the past 12 years, a series of bankruptcies and mergers has taken what had been 10 major carriers down to these four which dominate the U.S. air travel market.[36] According to Michael Boyd of Forbes, "To read the media stories, the merger of American and US Airways is being assumed to be the last of airline consolidation in this country." However, Boyd believes that isn't case. "The next wave of consolidation will be within 'regional airlines' – the sector that provides significant-percentages of major airline operations."[37] Boyd anticipates an increasingly difficult time for regional airlines over the next three to five years that will force the smaller companies to merge.

Consolidation of airlines has been known to have both positive and negative effects on passengers. The diminished competition resulting from consolidation has been known to drive fares up for certain routes. Another disadvantage of consolidation for passengers includes the reduction of airline service from less profitable routes previously served. Most mergers take place as a result of financial difficulties that the acquiring airline doesn't wish to be grandfathered into. "The U.S. airline industry has always wanted to consolidate," Perry Flint, editorial director and associate publisher of Air Transport World, said in an interview. "It tends to happen in bunches, until Washington becomes concerned and tries to block it."[38]

Effects on Air Service
- ⦿ Consolidation typically results in less airline competition further resulting in increased passenger fares
- ⦿ Increasing passenger fares result in decreasing passenger demand and increasing airport capacity
- ⦿ As regional airlines begin to consolidate, cheaper routes will potentially develop due to new airlines comprised of multiple smaller airlines trying to compete with the legacy airlines
- ⦿ With the potential for cheaper fares, passenger demand would increase and airport capacity decrease
- ⦿ Cheaper fares would lessen route choices for passengers, and result in a loss of seats when duplicate service is removed

Airline Seat Size & Load Factor – National Impacts

In an effort to increase load factors, the portion of airline output that is actually consumed[39], airlines have been reducing seat pitch (distance between a point in a seat and the same point in the seat in front of it) and seat width. CNN Travel reports, "Southwest's new pitch configuration moves its rows about an inch closer together, from 32 to 31 inches, according to the airline. In addition, economy seats will move only two inches during recline instead of three, the airline says. Southwest's new economy class seats will allow for six additional coach seats per plane. The new seats also weigh less, which will save about $10 million in yearly fuel costs."[40]

Over the years, passengers have expressed dissatisfaction with the narrow seats and little leg room. Today's average seat width is 16.5 inches versus the 18.5-inch-wide seat of the 1990s. However, the

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[35] http://www.transtats.bts.gov/
[36] http://money.cnn.com/infographic/news/companies/airline-merger/
[37] http://www.forbes.com/sites/mikeboyd/2015/10/18/more-us-airline-consolidation-is-already-happening/#449a7edf3425
[38] http://students.com.miami.edu/netreporting/?page_id=1593
[39] http://web.mit.edu/airlinedata/www/Res_Glossary.html
[40] http://www.cnn.com/2012/05/30/travel/airline-seats/

resulting increased load factor produces a higher profit for airlines on each flight. Bill McGee, writer for USA Today, states, "I believe the U.S. airline industry's conscious decision to dramatically increase load factors since the 1990s has been the single biggest contributor to passenger dissatisfaction with flying. Fuller flights mean more than just rubbing shoulders and elbows with strangers. There are far-reaching negative effects to these record loads, including boarding headaches, overhead bin shortages, and increases in involuntary bumping."[41] A United Airlines representative adds, "The special seating lures 'higher revenue and more frequent customers.' Some customers want more space", he says, but "there are other customers who value getting the cheapest price, and for them the seating is not their highest priority." [42] Special seating is part of a bigger strategy by airlines to de-construct the revenue opportunities; it's not just an airline ticket. Passengers now have to pay for the airline ticket, seat selection, baggage fees, food, early boarding, etc. This strategy doesn't benefit the airport except more concessions sold since passengers don't get substantial food on the plane. The narrowing seats and high load factors are boosting airline and airport throughput of passengers and increasing daily passenger capacity.

Effects on Air Service

- ⊙ Higher load factors result in increasing revenues for both airlines and airports
- ⊙ Decreasing capacity at airports as more passengers are able to fit onto a flight
- ⊙ Potential passenger dissatisfaction if seat size continues shrinking, leading to decreasing demand and revenue

"Uber-Style" Flights – National Impacts

Some aviation experts believe a new style of private aviation will steal the business-class air travelers from the commercial airline service. Several Apps and companies have recently started offering private flights at a relatively low cost. CNN Travel states, "Instead of calling a broker or buying into shared executive jet ownership, these new Apps allow travelers to secure a private aircraft with just a few clicks and no membership fees." Sergey Petrossov, Jetsmarter's founder, sees a future where the executive jet industry goes the way of the Uber-reshaped taxi market. He believes Apps could even become so efficient that prices drop to a point where private aircraft not only take business from traditional operators and airlines, but from road transport.[43] One of the new private air travel companies, SurfAir, offers a $1,950 monthly "all you can fly" plan for flights in California. Upon becoming a SurfAir member, one can book unlimited private flights between 12 destinations in California. The experience comes with no lines, no hidden fees (including free checked bags), 30 second booking from a smart phone, and private air terminals.[44] The experience of these private flight companies is likely to draw business-class travelers away from commercial airline travel and commercial terminals. The main limitation to these services are the dependence of a jet being available where the passenger needs it to be at any given moment. However, with consolidation of some of the private airline companies, this new style of air travel could play a huge role in the future of the aviation industry.

Effects on Air Service

- ⊙ Competition for traditional airlines could lead to cheaper commercial flights for passengers further resulting in air travel demand
- ⊙ Utilization of reliever airports could increase major airport capacity while decreasing airport revenue and congestion

Ultra-Low-Cost Carriers

Some airlines are beginning to operate in the U.S. aviation market under an "ultra-low-cost" business model. These airlines charge passengers extremely low fares for major domestic flights and some select international flights if the passengers are willing to accept their operational scheme. The ultra-low-cost

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[41] http://www.usatoday.com/story/travel/columnist/mcgee/2014/09/24/airplane-reclining-seat-pitch-width/16105491/
[42] http://www.cnn.com/2012/05/30/travel/airline-seats/
[43] http://www.cnn.com/2015/06/09/travel/uber-private-jets/
[44] http://www.surfair.com/how-it-works.html

carriers charge an extremely low base fee, but drive up other prices such as baggage or food. On top of the high prices for extras, these companies also operate on seasonal flight calendars and in some cases, only depart from specific airports. For example, WOW Airlines offers flights to Europe and Iceland for as low as $99; however, passengers can expect at least a $25 charge for every checked bag, and must get to one of the few airports WOW operates out of (including Boston and Washington DC). While the flight to Europe is extremely cheap, the flight back will be at the normal expected international flight price. These deals are great for those who don't mind working with the ultra-low-cost carriers on their special fees, flight dates, and departing locations; however, the hassle of dealing with the ultra-low-cost carriers has proven to be an irritating experience for some passengers. For example, a new ultra-low-cost Canadian airline, New Leaf, is offering discounted routes with prices ranging from $89 to $149. However, air travel expert and passenger champion Gabor Lukacs warns there are "serious, serious issues" with the company and recommends passengers refrain from jumping at tempting fares. Most of the referred to issues Lukacs identifies with the ultra-low-cost carrier pertain to liability for passengers and the unreliability of the carrier's business plan. [45] As of now, the impact ultra-low-cost carriers have on the market depends on the routes they serve in relation to the legacy carriers. The current focus of the ultra-low-cost carriers is to target specific "underserved" routes by the legacy carriers, where they could provide cheaper fares and retain a higher load factor. However, to remain relevant against the large legacy carriers, low-cost carriers have had to evolve and develop their business plans.

To account for this, existing low-cost carriers have changed their business model in recent years. Spirit Airlines chief executive Ben Baldanza says, "The business model has changed, the old one didn't work. Spirt Airlines was a low-cost airline but not low-cost enough, and it was competing in a space that was very saturated with other competitors." A strong focus on reducing cost per available seat mile (CASM) has been a driving factor behind ultra-low-cost carriers, especially Spirit Airlines. "Spirit's CASM is $10.20 compared to: Southwest $11.05, JetBlue $12.55, Delta $16.03, and American Airlines $16.93." Recent consolidation events in the U.S. airline industry have created more opportunities for ultra-low-cost carriers to grow domestically. Another characteristic of the low-cost business model is a focus placed on point to point service rather than utilizing airports as hubs.

Utilization of aircraft is a key component to low-cost carriers' business model. Beginning in 2016 an order of 75 new A320s will begin being delivered to Spirit Airlines. The fleet is configured in a high density, single class configuration offering 178 seats in the A320, 19-percent more than a JetBlue A320. Spirit's airplanes run at the highest average daily aircraft utilization rate amongst U.S. low cost carriers at 12.7 hours per day. Along with high utilization, average load factors run at 85.2-percent with the lowest break even fare per passenger flight segment in the industry at $58. The focus on low fares allows carriers to increase other optional fees as other sources of revenue. Spirit Airline's success operating under the ultra-low-cost carrier business model is just one among other airlines such as Frontier Airlines and Allegiant Airlines. Some of these fees include pricey baggage fees and in some cases even soda fees. The proven effectiveness of these airlines' ultra-low-cost business model provides anticipation for success of low-cost carriers in the future, and increased growth/passenger demand for low-cost airlines.

Effects on Air Service
- Competition of ultra-low-cost carriers can force legacy carriers to lower flight costs
- Lower flight costs and low-cost carrier emergence will result in major increases in passenger demand
- Airline competition and low costs will decrease airport capacity substantially in years to come, but provide profits for airports on a national scale
- Implementation of passenger throughput efficiency techniques will need to be considered by airports to account for future positive flux in passengers

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[45] http://globalnews.ca/news/2437629/avoid-new-ultra-low-cost-airline-passenger-advocate-warns/

Overview of
Florida's
Current
Commercial
Air Service

Florida is home to a diverse system of airports. Florida's four large hub airports are responsible for the majority of annual enplanements for the entire state. However, the medium, small, and nonhub airports maintain a vital role in the state aviation industry. This section identifies how important each commercial service airport in Florida plays to the overall system.

OVERVIEW OF FLORIDA'S CURRENT COMMERCIAL AIR SERVICE

Compared to other states, Florida continues to have one of the most comprehensive systems of scheduled commercial service airports. As of 2016, 20 airports in Florida had regularly scheduled commercial airline service.

Since the 2013 Air Service Study, Northeast Florida (SGJ) has been added as an airport with commercial service. Representation of scheduled commercial service to SGJ is included in this report. As demand for commercial aviation continues to grow throughout the U.S., Florida has collaterally increased enplanements since the previous update of this report. **Figure 2** displays the growth in annual enplanements for each year of this report dating back to 2000.

Airport Categorization

The Federal Aviation Administration (FAA) categorizes commercial service airports as large hub, medium hub, small hub, and nonhub airports as described in **Table 4**.

Table 4: FAA Airport Categories

Hub Type	Percentage of Annual Passenger Boardings
Large	1% or more
Medium	At least 0.25%, but less than 1%
Small	At least 0.05%, but less than 0.25%
Nonhub	More than 10,000, but less than 0.05%

FDOT

Figure 2: Statewide Annual Enplanements

Source: Summarized from U.S. DOT DB1B Market Fare Data and O&D Survey, Reconciled from Schedules T-100

2016 Air Service Study

All of Florida's commercial service airports fall into one of the four FAA categories. **Figure 3** displays the-percentages of Florida's airports in each of the above FAA airport categories.

<div align="center">Figure 3: Florida Airport Category Breakdown</div>

As seen, a large majority of Florida airports are classified as either small or nonhub airports. While each of these airports have less than 0.25-percent of the country's total annual passenger boardings, they play a vital role to the Florida aviation system. **Table 5** below lists Florida's commercial service airports by hub size.

<div align="center">Table 5: Commercial Service Airports by Location ID & Hub Type</div>

Loc ID	NPIAS Service Level	NPIAS Hub Type
MIA	Primary	Large
MCO	Primary	Large
FLL	Primary	Large
TPA	Primary	Large
RSW	Primary	Medium
JAX	Primary	Medium
PBI	Primary	Medium
SFB	Primary	Small
PIE	Primary	Small
SRQ	Primary	Small
PNS	Primary	Small
ECP	Primary	Small
EYW	Primary	Small
DAB	Primary	Nonhub
SGJ	Primary	Nonhub
MLB	Primary	Nonhub
PGD	Primary	Nonhub
TLH	Primary	Nonhub
GNV	Primary	Nonhub
VPS	Primary	Nonhub

Figure 4 displays Florida's commercial service airports by their respective FAA hub size. Further, the figure shows the-percentage of the country's annual passenger boardings at each airport. As shown, Miami International had the highest-percentage at 2.63-percent, followed closely by Orlando International at 2.35-percent of annual passenger boardings.

Figure 4: Florida Commercial Service Airports by Hub Size

Florida Travel Patterns and Fares

With such a diverse and multifunctional aviation system, Florida's travel patterns and fares are an exciting metric to analyze. Comparing Florida's average fares and travel patterns between airports and with the rest of the country provides useful insight to the state of Florida's aviation industry.

FLORIDA TRAVEL PATTERNS AND FARES

Using information obtained from the U.S DOT Air Passenger O&D Study and the Official Airline Guide (OAG), Florida's commercial service airports were analyzed to identify travel patterns for all domestic originating passengers. For this assessment, data is provided for Florida's commercial service airports in the following categories:

⊙ Number of annual domestic passengers originating at each airport bound for cities within the eight geographic regions of the U.S.
⊙ Percent of originating passengers by airport and by region bound for destinations within the eight geographic regions of the U.S.
⊙ The average one-way fare paid by originating passengers to reach destinations within the eight geographic regions of the U.S.

Figure 5 graphically displays the number, percent, and average fare to each of the eight US regions.

Travel Patterns

Top Travel Destinations

In 2014, for a majority of all airports and all regions of Florida, cities in the Southeastern part of the U.S were the top travel destinations as seen in **Table 6.** This is consistent with the 2008, 2011, and 2014 update to this report.

In 2014, cities located within the Northeast and Midwest ranked as the second-and third-most heavily traveled destinations for Florida-originating domestic air travelers. This is also consistent to the 2008, 2011, and 2014 report.

The least traveled to region of the U.S. from Florida is still the Northwest region (Alaska, Washington, Oregon, and Idaho). The top destination for flights departing Florida airports was Atlanta, Georgia located in the Southeastern region of the U.S.

FDOT

Figure 5: Florida Passenger Destinations and Average Regional Fares

Northwest
$279.61
219,043
0.4%

North Central
$209.54
1,213,146
2.1%

Northeast
$175.29
17,489,917
30.5%

Midwest
$182.90
8,487,961
14.8%

Southwest
$278.14
3,139,692
5.5%

South Central
$212.95
6,129,933
10.7%

Mid South
$187.50
1,719,410
3.0%

Southeast
$173.83
18,906,601
33.0%

Legend

U.S. Region
Average Fare
Passengers
% of Passengers

MÉXICO

Gulf of
Mexico

Source: Summarized from U.S. DOT DB1B Market Fare Data and O&D Survey, Reconciled from Schedules T-100

FDOT

Passenger Growth

Between 2012 and 2014, many airports and regions experienced fluctuations in the number of domestic passengers served. The Northeast region had the greatest-percentage increase in number of domestic passenger, with a 4.1-percent increase in passengers between 2011 and 2014.

Fares

Average One-Way Fare

Florida's average annual one-way domestic fares have steadily been below the national average since the beginning of this report. The average one-way fare paid by all domestic passengers originating in Florida increased from $180.77 in 2012 to $192.96 in 2014. The national average one-way fare paid by all U.S passengers traveling domestically was $217.43 in 2014.

Florida Regions with Lowest Average One-Way Fares

In previous updates to this report, the airports in the East Central region (FDOT District 5) of Florida (MCO, SFB, MLB, and DAB) and West Central region (FDOT District 7 and parts of 1) of Florida (TPA, PIE, and SRQ) had average one-way fares lower than the statewide average. In 2014, these two regions, with the addition of two airports in the Southeast region (FDOT District 4) (PBI and FLL), all had average one-way fares less than the statewide average. This trend most likely results from the multiple low cost carriers that serve the large hub airports in these regions.

Florida Regions with Highest Average One-Way Fares

In 2014, the highest average one-way fare ($235.25) was reported in FDOT District 3 of Florida (PNS, VPS, ECP, and TLH). Additionally, FDOT District 6 (MIA and EYW) and FDOT District 2 (GNV) had comparably close fares to the average of District 3.

Florida Compared to National Average Fares

Florida's average one-way fare ($192.96) continues to remain below the national average of $217.43. This trend has been ongoing since the inception of this report.

Average Fares Excluding Orlando International Airport

In 2014, excluding MCO (the largest airport in Florida that is serviced predominately by low-cost carriers), the average one-way fare paid by domestic passengers was $195.98. In the same year, the national average was $217.43. This shows the prevalence of low-cost carriers and the low yield market that exists in Florida. In 2014, the fare difference between all Florida airports and Florida airports excluding MCO was $3.02, reflecting continued expanded offerings by low-cost carriers at other commercial service airports throughout the state.

Table 6 below provides a summary of outbound passengers, top destination region, and average one-way fares for each of Florida's airports as well as summaries for each FDOT District and the State as a whole.

Table 6: Florida Regional Comparison (2014)

FDOT District	2014 USDOT Data		
	Outbound O & D Passengers	Top US Destination Region: percent	Average One-way Fare
District 1	**4,712,799**	**Northeast: 30.7%**	**$184.08**
Punta Gorda (PGD)	336,805	Midwest: 59.7%	$105.89
Sarasota (SRQ)	3,794,488	Northeast: 33.0%	$189.13
Southwest Florida (RSW)	581,506	Southeast 66.7%	$196.35
District 2	**2,814,268**	**Southeast: 55.4%**	**$203.01**
Gainesville (GNV)	206,520	Southeast: 98.9%	$231.84
Jacksonville (JAX)	2,588,071	Southeast: 52.1%	$201.57
Northeast Florida (SGJ)	19,677	Northeast 64.8%	$88.99
District 3	**1,851,980**	**Southeast: 67.0%**	**$235.25**
Pensacola (PNS)	758,428	Southeast: 63.6%	$232.00
Northwest Florida Beaches (ECP)	394,491	Southeast: 51.3%	$222.66
Northwest Florida Regional (VPS)	360,181	Southeast: 68.3%	$243.43
Tallahassee (TLH)	338,880	Southeast: 91.7%	$248.48
District 4	**12,638,264**	**Northeast: 41.4%**	**$178.52**
Palm Beach (PBI)	2,867,194	Northeast: 54.5%	$195.71
Ft. Lauderdale (FLL)	9,771,070	Northeast: 37.6%	$173.48
District 5	**16,581,565**	**Northeast: 31.4%**	**$176.34**
Daytona Beach (DAB)	306,457	Southeast 99.6%	$198.90
Orlando (MCO)	15,142,761	Northeast 32.9%	$180.35
Orlando-Sanford (SFB)	917,659	Midwest: 39.0%	$97.60
Melbourne (MLB)	214,688	Southeast: 99.7%	$197.57
District 6	**9,799,982**	**Southeast: 39.6%**	**$224.64**
Key West (EYW)	383,714	Southeast:93.7%	$244.43
Miami (MIA)	9,416,268	Southeast 37.4%	$223.84
District 7	**8,906,845**	**Southeast: 30.0%**	**$173.98**
Tampa (TPA)	8,251,709	Southeast:31.3%	$180.22
St. Pete/Clearwater (PIE)	655,136	Midwest: 42.2%	$95.44
Florida Total	**57,305,703**	**Southeast: 33.3%**	**$192.96**

Source: Summarized from U.S DOT DB1B Market Fare Data and O&D Survey, Reconciled from Schedules T-100

FDOT

This section presents Florida airports' flights, seats, average seats per flight, number of destinations served, and aircraft type usage. Comparing the most current data to past data shows the overall direction of the Florida aviation industry. By analyzing the trends in Florida air transportation, interested parties can understand where Florida is and where it is going as a major player in the National aviation industry.

Statewide Domestic Service Trends

STATEWIDE DOMESTIC SERVICE TRENDS

Current Domestic Air Service Trends

Departing Flights

As shown in **Figure 6**, in the summer of 2015, an average of 10,180 nonstop domestic flights were scheduled each week from all of Florida's commercial service airports. This represents a slight increase over the 2014 report's 9,922 weekly nonstop domestic flights. Though there was an increase overall, three airports had notable decreases in the number of weekly departing flights. From 2013 to 2015, MCO had 75 fewer weekly departures, while RSW and VPS combined to have 80 fewer weekly departures. Smaller airports, including PIE, SFB, and PGD helped off-set the loss of scheduled flights between 2013 and 2015. Together, these airports added approximately 140 average weekly flights to domestic destinations.

The overall increase in total departures between 2013 to 2015 is supported by the increase in the number of nonstop domestic destinations served from Florida's airports; this number increased from 127 in 2013 to 132 in 2015. In all, Florida travelers can reach over 50 more domestic destinations on nonstop flights than they could in 2000, where nonstop domestic flights went to 78 different domestic locations. Data for 2015 is summarized in **Figure 6 and Table 7.**

In **Figure 6**, the number of average weekly flights are represented by the dark blue bars and labeled on the right Y-axis, the number of average weekly seats are represented by the light blue line and are labeled on the left Y-axis. The average number of seats per flight is identified in white text at the top of each number of average flights per week bar.

Departing Seats

In the summer of 2015, during each week there was, on average, 1.33-million departing seats representing a noticeable increase from the 1.24-million departing weekly seats reported in 2013. The increase in weekly departing seats supports the increase in weekly domestic flights. The increase in average seats per flight can be attributed to the increase in Jet utilization over other aircraft types.

Figure 6: Average Weekly Seats, Flights, and Average Seats Per Flight

Source: Summarized from Official Airline Guide, Schedules Analyzer

Table 7: Statewide Domestic Summary (2015)

Florida Origin Airport	# of Destinations Served	Weekly Scheduled		Average Seats per Flight
		Departures	**Seats**	
ALL FLORIDA AIRPORTS	**132**	**10,180**	**1,333,543**	**131**
DISTRICT 1				
Punta Gorda (PGD)	22	65	10,903	168
Sarasota (SRQ)	6	98	10,963	112
Southwest Florida (RSW)	30	438	60,326	138
DISTRICT 2				
Gainesville (GNV)	4	95	4,883	51
Jacksonville (JAX)	26	630	66,728	106
Northeast Florida (SGJ)	2	5	469	94
DISTRICT 3				
Northwest Florida Beaches (ECP)	11	134	13,649	102
Northwest Florida Regional (VPS)	5	144	9,933	69
Pensacola (PNS)	13	226	20,222	89
Tallahassee (TLH)	7	128	8,358	65
DISTRICT 4				
Ft. Lauderdale (FLL)	65	1,604	220,330	137
Palm Beach (PBI)	18	405	55,681	137
DISTRICT 5				
Daytona Beach (DAB)	2	57	6,458	113
Melbourne (MLB)	2	50	4,535	91
Orlando (MCO)	76	2,525	361,743	143
Orlando-Sanford (SFB)	57	174	29,249	168
DISTRICT 6				
Key West (EYW)	7	145	8,349	58
Miami (MIA)	56	1,669	223,415	134
DISTRICT 7				
St. Pete-Clearwater (PIE)	42	127	21,127	166
Tampa (TPA)	64	1,461	196,221	134

Source: Summarized from Official Airline Guide, Schedule Analyzer

Aircraft Type
Jet Aircraft
When all seats that departed Florida airports each week to domestic locations were considered, approximately 91-percent of those seats were on large jet aircraft.[46] This level has remained virtually unchanged since 2000. In the summer of 2015, the average number of seats per flight increased to 135, up slightly from 2013 when there was an average of 130 seats per flight. This seats-per-departure figure remained notably higher than 2000 levels. In 2000, there was an average of 107 seats per flight.
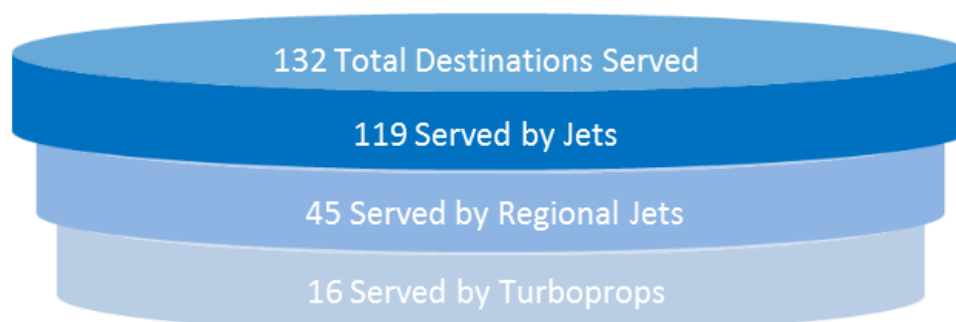
Regional Jet Aircraft
In both 2013 and 2015, eight-percent of seats that departed from Florida airports were on regional jet aircraft

Turboprop Aircraft
In both 2013 and 2015, one-percent of seats that departed from Florida airports were on turboprop aircraft. The number of destinations served by Florida airports broken down by aircraft type is shown in **Figure 7.**

Figure 7: 2015 Destinations Served by Aircraft Type

132 Total Destinations Served

119 Served by Jets

45 Served by Regional Jets

16 Served by Turboprops

Source: Summarized from Official Airline Guide, Schedules Analyzer

Largest Airport
In all study years, MCO has had the highest number of domestic destinations served and the highest number of available departing domestic seats each week. This service pattern remained unchanged in the summer of 2015, though there was a decline in the scheduled weekly departures from 2013 to 2015 (weekly departures decreased from 2,479 to 2,405). During this same time, the number of destinations served decreased from 70 in 2013 to 76 in 2015.

Lowest Number of Weekly Departing Flights
In 2013, PGD had the lowest number of average weekly departing flights with 25. In 2015, SGJ had the lowest number of weekly departures for airports with full reporting data with five weekly departures. In 2015, PGD had 66 weekly departing flights which surpassed both MLB and DAB at 50 and 56 respectively. It is important to note that, due to the types of carriers that operate at SFB and PIE, not all departing flights are reported to the *Official Airline Guide.*

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[46] The aircraft classifications used in this document include large jets (turbofan aircraft with more than 70 seats, sometimes referred to as "jets"), regional jets (turbofan aircraft with fewer than 70 seats, typically referred to as RJs), and turboprops (propeller-driven aircraft of all sizes, typically smaller than 50 seats).

Air Service Changes

In 2014, US Airways officially merged with American Airlines, completing the latest round of big airline mergers in the U.S. As the dust settles on this round of airline mergers, four "super carriers" in the U.S. have been identified. These four carriers now include:

⊙ Delta
⊙ Southwest
⊙ American
⊙ United

Although these four carriers are considered to be the primary operators in the U.S., other smaller airlines have maintained a presence in Florida. Some of these airlines include: JetBlue, Spirit, Allegiant, Silver, etc.

This chapter analyzes the 2015 intrastate service between the 20 commercial service airports in Florida. This data allows interested parties to better understand the inter-connectivity of Florida's aviation system. Intrastate service is an important factor of air service in the state of Florida. This importance is portrayed in the following chapter.

INTRASTATE SCHEDULED AIRLINE SERVICE

Current Intrastate Air Service Trends

Given the distances between many of Florida's primary cities, commercial air service is an important mode for intrastate travel. **Figure 8 and Table 8** summarize the arrivals and departures of weekly intrastate service in Florida from the summer of 2015. The following trends were found related to intrastate travel in Florida.

Weekly Departures

Between 2013 and 2015, the number of weekly intrastate flights increased slightly from 1,144 to 1,158. This slight increase came after a decrease of over 230 weekly flights between 2011 and 2013. 2013 was the lowest number of weekly intrastate departures of any year of the report.

Overall Service Trends

In 2015, 13 Florida airports provided service to intrastate destinations. This figure remains consistent with the 2014 update to this report. Between 2011 and 2013, 11 airports cut intrastate flights from service, including FLL which reduced its intrastate service from 164 to 123 weekly departures. Since the previous update, intrastate service further increased.

Top Intrastate Airports

In 2013, MIA provided the largest number of intrastate flights, followed by TPA, MCO, and EYW. In 2015, MIA still had the most intrastate flights, followed by TPA, FLL, and MCO, while EYW had the fifth most intrastate flights with 116 weekly departures. **Figure 8** shows the-percentage of intrastate departures and arrivals, as shown, MIA was the top intrastate origin and destination in 2015 followed by MCO and TPA.

Airports without Intrastate Service

In 2011, intrastate service was added to SFB, PIE, PGD, and VPS. In 2013, MLB, DAB, SRQ, PGD, VPS, and ECP did not offer intrastate service. These same airports continued to only serve out-of-state destinations in 2015. There are no airports who added intrastate service between 2013 and 2015.

Type of Aircraft

In 2011, 48-percent of intrastate flights were on jets and 28-percent were on turboprops. In addition, there were more regional jet flights in 2011, 18-percent, and a small number of trips made by prop planes. In 2013, 34-percent of all intrastate flights were completed by jets, 35-percent of flights were completed by turboprops, while 24-percent were completed on regional jets, and six-percent on prop planes. This number shifted in 2015, with 54-percent of intrastate flights having been completed by turboprop aircraft. Jets and regional jets served 22-percent of intrastate flights in 2015, and prop planes flew 0.3-percent of intrastate flights.

Table 8: Florida Intrastate Departures and Arrivals

Florida Origin	Southwest FL (RSW)	Gainesville (GNV)	Jacksonville (JAX)	NW FL Beaches (ECP)	Pensacola (PNS)	Tallahassee (TLH)	Ft. Lauderdale (FLL)	Palm Beach (PBI)	Orlando (MCO)	Orlando-Sanford	Key West (EYW)	Miami (MIA)	St. Pete-Clearwater (PIE)	Tampa (TPA)	Naples (APF)	Florida Total
DISTRICT 1																
Southwest FL (RSW)	-	-	-	-	-	-	-	-	7	-	7	-	-	-	-	**14**
DISTRICT 2																
Gainesville (GNV)	-	-	-	-	-	-	-	-	13	-	-	10	-	-	-	**23**
Jacksonville (JAX)	-	-	-	-	5	-	38	-	-	-	-	40	-	17	-	**100**
DISTRICT 3																
NW FL Beaches (ECP)	-	-	-	-	-	-	-	-	7	-	-	-	-	7	-	**14**
Pensacola (PNS)	-	-	5	-	-	-	-	-	12	-	-	21	-	13	-	**52**
Tallahassee (TLH)	-	-	-	-	-	-	4	-	11	-	-	19	-	12	-	**45**
DISTRICT 4																
Ft. Lauderdale (FLL)	-	-	38	-	-	4	-	-	38	-	26	-	-	70	-	**176**
Palm Beach (PBI)	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	**12**
DISTRICT 5																
Orlando (MCO)	7	13	-	7	12	11	38	-	-	-	21	63	-	-	-	**172**
Orlando-Sanford (SFB)	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	**2**
DISTRICT 6																
Key West (EYW)	7	-	-	-	-	-	26	-	21	-	-	34	2	26	-	**116**
Miami (MIA)	-	10	40	-	21	19	-	-	63	2	34	-	-	41	4	**234**
DISTRICT 7																
Tampa (TPA)	-	-	17	7	13	12	70	12	-	-	26	41	-	-	-	**198**
Total:	14	23	100	14	52	45	175	12	172	2	114	230	2	199	4	**1,158**

Figure 8: 2015 Florida Intrastate Flight Destinations

Source: Summarized from Official Airline Guide, Schedules Analyzer

A vital facet of Florida aviation is international air service. This chapter analyzes 2015 international service data in comparison to previous years of study. The data presented in this chapter provides insight to the direction Florida's international air service is heading, and where it has come from. Not all Florida airports provide international service, therefore this chapter does not apply to all Florida airports.

INTERNATIONAL SCHEDULED SERVICE

In addition to scheduled service to destinations in the U.S., several of Florida's commercial service airports also have nonstop service to international destinations. The following pages summarize the international service offerings from Florida airports. Overall, the number of departures for international destinations has been steadily increasing since 2011, with a large increase in flights to destinations in South America. **Figure 9** provides an overall summary of international destinations served by Florida's airports since 2000. As shown, 2015 saw the highest number of international flight departures of any year of the report.

Note: International service data does not include international charter service for any of the airports, including SFB. SFB accommodates a notable number of international charter flights, as do some of the other commercial service airports.

Weekly Departures

Florida had an average of 1,992 weekly departures to international destinations in 2011, before increasing to 2,175 in 2013. International service increased between 2013 and 2015 to 2,414 weekly departures, an increase of approximately 10-percent.

Major Airports with International Service

Miami International Airport

In all years of this report, MIA had the highest number of weekly departures to international destinations. In 2011, there were 1,281 weekly international departures out of MIA, representing 64-percent of all international flights out of Florida. In 2013, the number of weekly international departures from MIA rose to 1,472, accounting for nearly 68-percent of all international flights out of Florida. In 2015, weekly international departures from MIA rose again to 1,516, a three-percent increase from 2013.

Fort Lauderdale-Hollywood International Airport

In 2011, FLL had the second most weekly international departures, representing 22-percent of all international departures out of Florida. International travel at FLL decreased in 2013, when its 379 international flights comprised 17-percent of Florida's international departures. In 2015, international travel at FLL increased to 20-percent of Florida's international departures at 476.
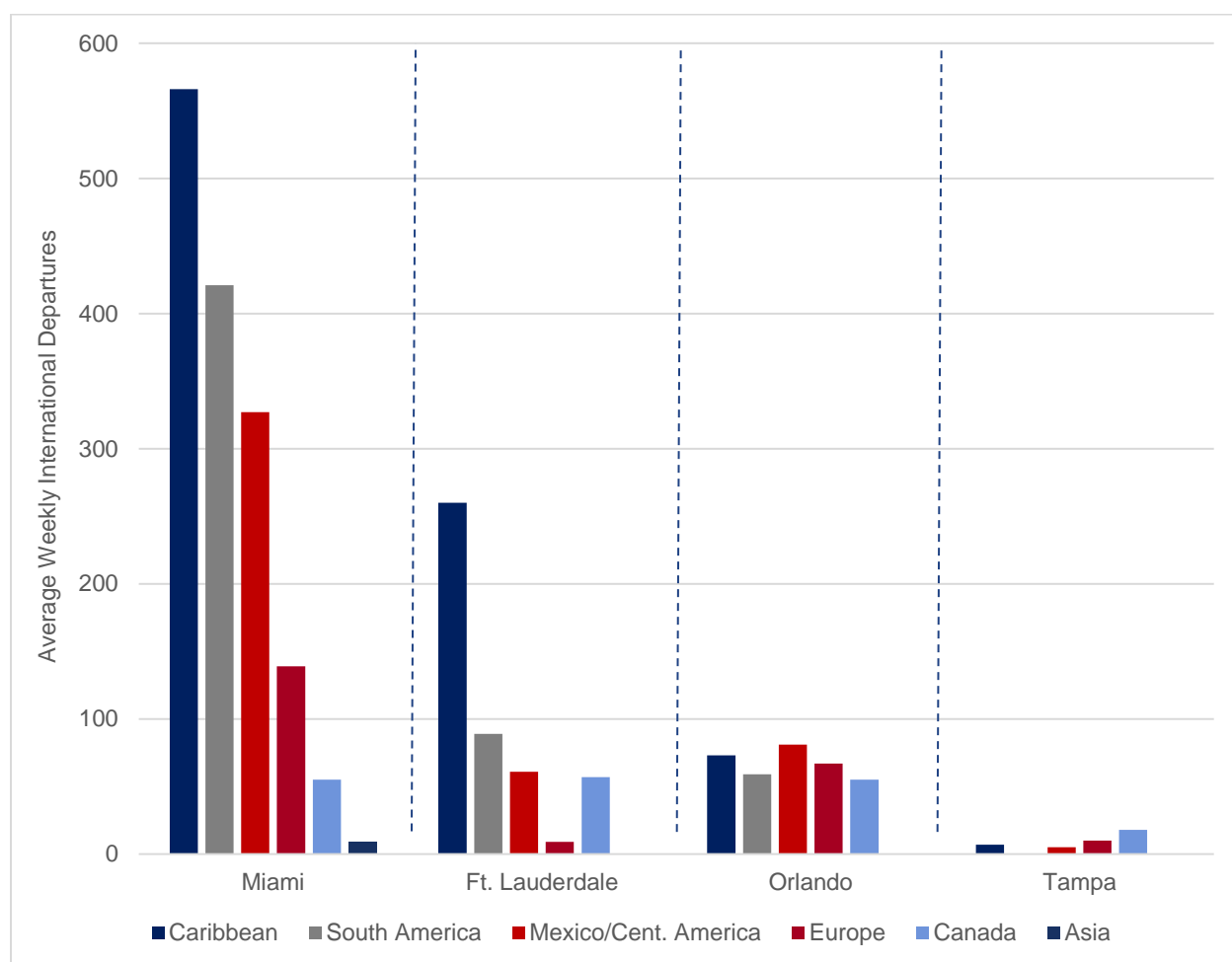
Orlando International Airport

In 2011, MCO offered 199 international flights that comprised 10-percent of the Florida total. In 2013, MCO had 262 weekly international flights, which represented 12-percent of Florida's total. MCO increased international service to encompass 14-percent of Florida's total at 335.

Tampa International Airport

TPA increased its average weekly international service from 24 flights a week to 40 between 2012 and 2014. The increase can be attributed to the addition of seven weekly flights to Canada as well as four additional flights to Mexico/Central America and three more weekly flights to Europe.

A summary of weekly international departures at the four large hub airports is shown in **Figure 9**. **Figure 10** illustrates the weekly statewide international departures.

Figure 9: Weekly International Flight Departures

Other Airports with International Service

In 2013, international service was added at JAX, with service to the Bahamas, giving Florida eight airports with international service. In 2015, SRQ added service to Canada, which increased the number of Florida airports offering international service to nine. In addition to SRQ and JAX, international service is also provided at: SFB, PBI, and RSW.

Caribbean and Atlantic Destinations

In 2011, the Caribbean and Atlantic accounted for 45-percent of all international flights. In 2013, the Caribbean and Atlantic accounted for 42-percent of all international flights. This-percentage decreased to 38-percent of Florida's weekly international flights in 2015.

Central and South American Destinations

In 2013, 41-percent of international travel from Florida went to Central and South America, the highest of any reported year in this report. In 2015, 43-percent of international flights departing from Florida were bound for Central and South America.
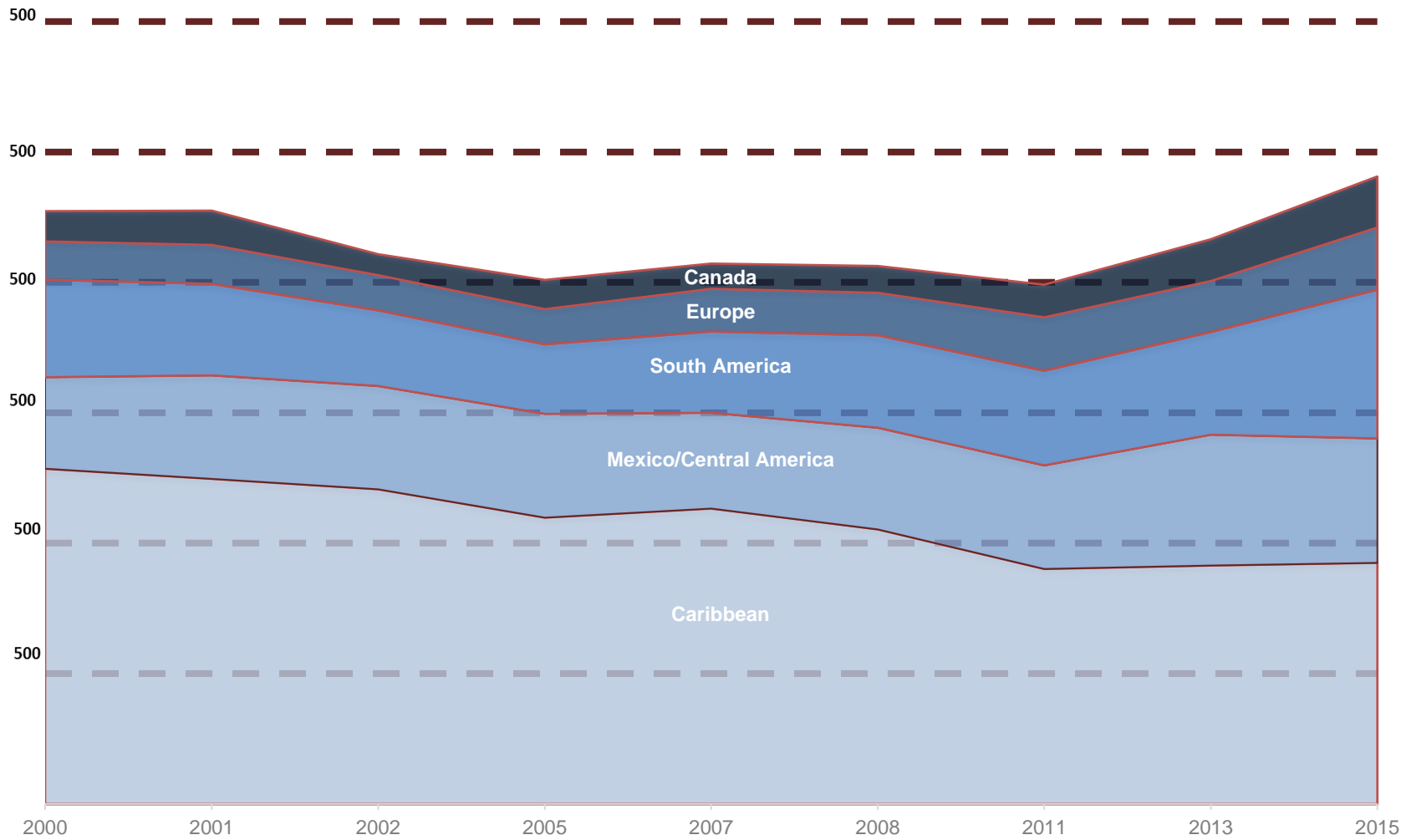
European Destinations

In 2011, Florida departures to Europe rose to 10-percent before falling back to nine-percent in 2013. In 2015, flights to Europe increased back to 10-percent of Florida's international travel.

Canadian Departures

In 2013, seven-percent of all international flights were to Canada. In 2015, flights to Canada increased to eight-percent of all international flights.

Figure 10: Weekly Statewide International Departures

Source: Summarized from Official Airline Guide, Schedules Analyzer

Comparable Markets

Looking at Florida airports side-by-side with other commercial service airports around the country with similar numbers of enplanements provides insight to how each airport is performing. This chapter compares all 20 of Florida's airports with other airports. This chapter primarily compares domestic enplanements, average weekly flights, and number of destinations served. 1111

COMPARABLE MARKETS

Comparing markets by the number of annual travelers each market enplanes provides a general reference point for how one community's scheduled commercial airline service may compare to service in a similar community. There are many factors that enter into the level of commercial airline service at any given airport. Some of these factors include:

⊙ Types of traveler served, such as those traveling for business versus leisure purposes
⊙ Employment status, type of employment, total disposable income, population, age of the population, and tourism all help determine a certain market area's demand for commercial airline travel
⊙ Distance to alternative travel options, convenient and competing modes of transportation, or other nearby commercial service airports that travelers may choose for their departures
⊙ Geographic location of the market – whether the market is rural, suburban, or urban and the location of the market in comparison to domestic airline route structures impacts its commercial airline service level

At some level, scheduled airline service to all of Florida's commercial service airports is impacted by each of these factors. For example, Florida markets have a high-percentage of leisure travelers and a higher than average-percentage of retirees. Additionally, Florida often enplanes many travelers who fly on deeply discounted fares and frequent flyer tickets ($0 fares).

Similar to most states, Florida airports face competition from the state's excellent system of highways, both interstate and intrastate. More importantly, airports in Florida often face intense competition from one airport. Many of Florida's small and non-hub airports are close to one or more large or medium hub airports, impacting commercial airline service at these small and non-hub airports.

Florida's geographic location at the extreme southeastern tip of the continental U.S. means that Florida airports are "spoke" locations for most airlines. States located in other regions often have many airline route structures that crisscross above and are located in closer proximity to a greater number of airline connecting hubs. For these reasons, it is difficult to directly compare scheduled commercial airline service in Florida to airline service in other similar markets.

The factors noted above indicate that Florida markets may not always have the same level of commercial airline service as other comparable markets. Year 2014 annual enplanements were used to determine which markets should be compared to Florida's scheduled air service.

The following pages provide a graphical comparison of annual domestic enplanements, flights, and number of destinations served to compare commercial air service at comparable markets. A shown, commercial
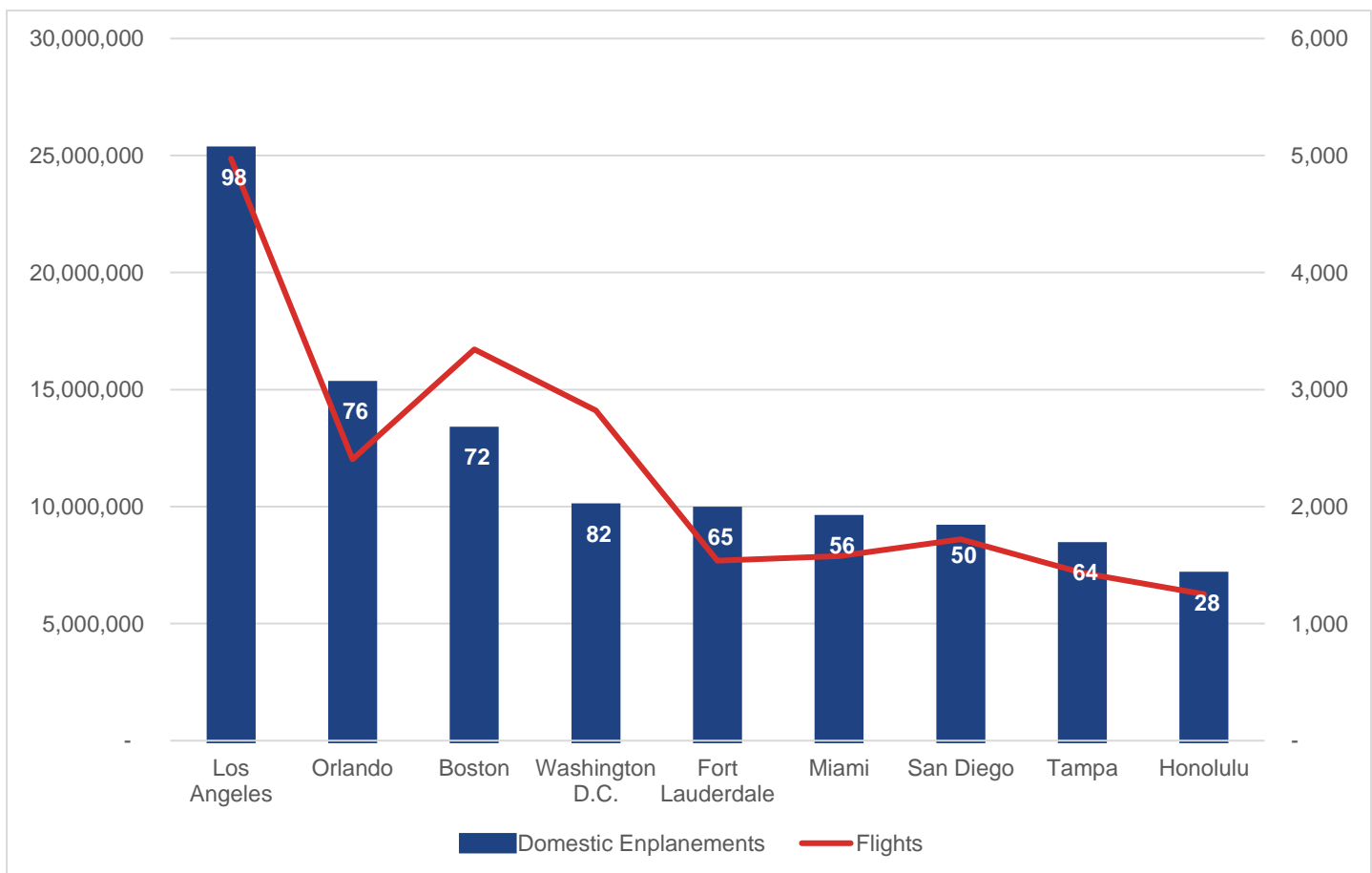
airline service from Florida markets compare well to the average service levels found in each hub size category. For each hub size category, a graphical comparison is provided. In these charts, enplanements are represented by dark blue bars, average weekly flights are represented by the red line, and average destinations served are represented by the white numbers.

Large Hub Airports

MCO, the only airport in Florida with more than 10-million domestic enplanements in 2014 (15.1 million), has more weekly departing flights and seats and serves more destinations and hubs than any other Florida airport. MCO benefits from being centrally located within the state as well as from being a leading tourist destination. Other airports in this category include Los Angeles International Airport (LAX) and Boston Logan International Airport (BOS). Similar to MCO, these airports are located in areas that benefit from higher than average tourist activity. As shown in **Figure 11**, MCO serves 76 domestic destinations, compared to 98 and 72 at LAX and BOS, respectively. The 76 domestic destinations served by MCO are the most of any airport in Florida.

FLL and MIA have significantly fewer departing flights than the average for airports with a similar number of enplanements. Despite having roughly 300,000 fewer enplanements, MIA has a larger number of weekly departing flights than FLL. TPA, which has more than one-million fewer enplanements than both MIA and FLL, serves a large number of destinations (eight more than MIA and one less than FLL) but also has roughly 20,000 fewer departing seats than either of the others. All three airports serve a greater than average number of domestic connecting airline hubs.
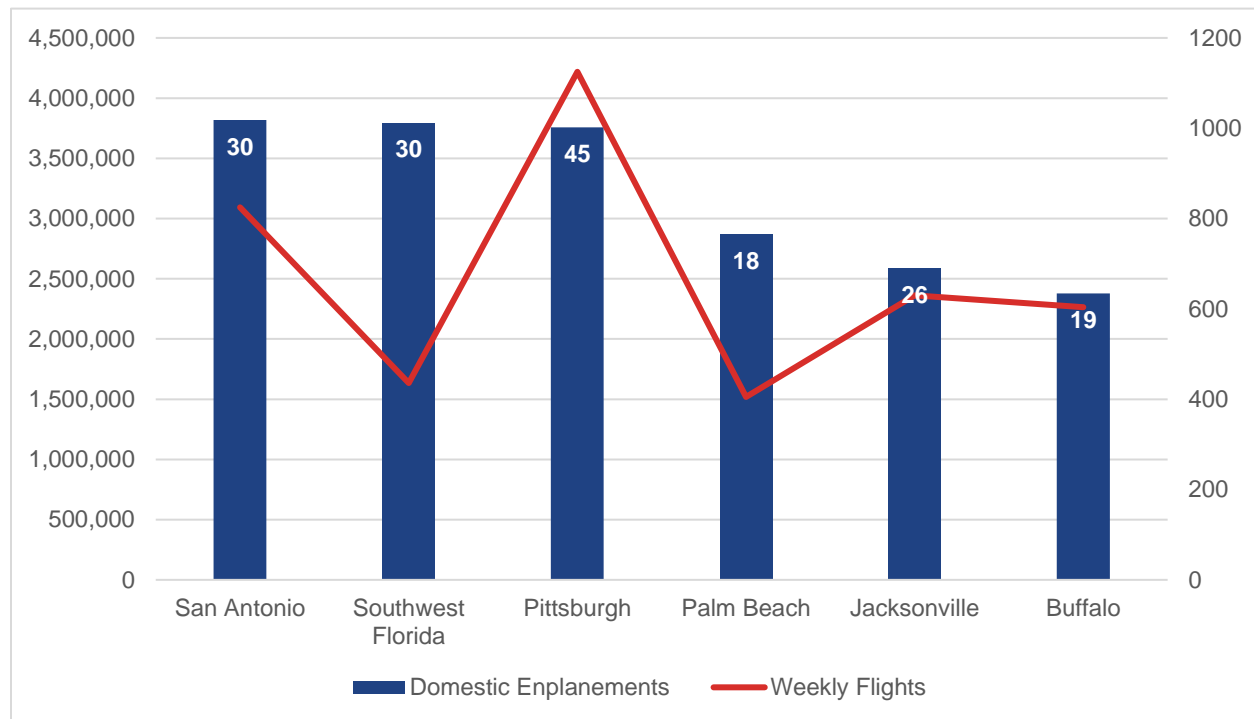
Figure 11: Comparison of Large Hub Airports

Medium Hub Airports

The medium hub category (**Figure 12**) includes RSW, PBI, and JAX. Both PBI and RSW are far below the group average for scheduled weekly domestic departures. RSW was above the category average for the number of non-stop destinations served in 2014.
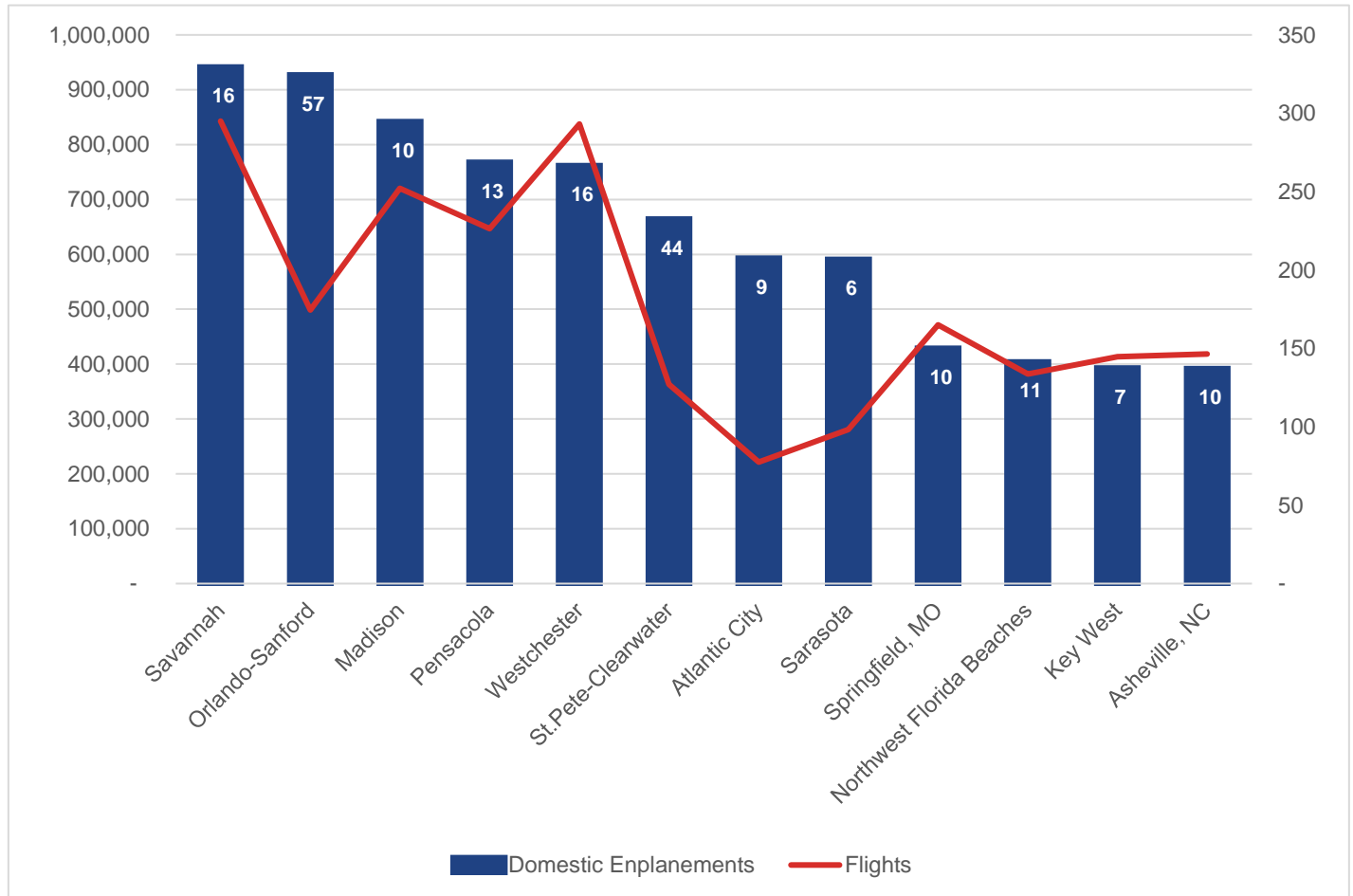
Figure 12: Comparison of Medium Hub Airports

Small Hub Airports

In 2014, the small hub category included SFB, PNS, PIE, EYW, ECP, and SRQ (**Figure 13**). PIE moved up into this category between 2012 and 2014. SFB, PNS, and PIE were all above the average number of weekly seats in this category, with SRQ falling roughly 9,000 weekly seats below. All of the Florida airports in this category were below the average weekly flights number with the exception of PNS, which was about 30 flights a week above the average.

Figure 13: Comparison of Small Hub Airports

Nonhub Airports

As shown in **Figure 14**, the Nonhub category includes MLB, SGJ, VPS, TLH, PGD, and DAB. SGJ had a lower number of domestic enplanements and average weekly flights than the average of other airports in this category. VPS had the highest number of annual enplanements. Although PGD was third on the annual enplanements list

Figure 14: Comparison of Nonhub Airports

Statewide Fares

The average one-way fare from Florida's 20 commercial service airports is an important measurement as it displays the price Florida travelers are consistently paying on air travel. By comparing the current pricing data to previous years of study, Florida airports can be analyzed based on how their prices have changed over the past several years.

STATEWIDE FARES

Since annual information for 2015 is not yet available, fare information presented in this section is for the calendar year 2014. Nationally, in 2014, the average one-way fare paid by all domestic air travelers was $217.43, up significantly from the 2000 national one-way average fare of $157.93. This continues the trend of increasing fares at U.S. airports and illustrates the pricing power carriers have gained nationwide. Fare increases also correspond to the merger of multiple carriers, which is creating a situation where they are able to charge more for flights than they have been able to previously.

The average one-way fare for all Florida airports in 2014 was $192.96, up significantly from the statewide average fare in 2000 of $157.93; however, the statewide average fare was lower than the national average fare as it has been for all years of this report. The average one-way domestic fare for each of the Florida airports for multiple years from 2000 – 2014, as available from previous reports, is provided in **Table 9**.

As shown in **Table 9,** there have been large changes in fares in recent years. Every airport except for SFB and PIE saw an increase in average fare since 2012. This is most likely due to the recovery from the global economic crisis and the ability and willingness for consumers to purchase tickets. Increasing demand, which can be seen in overall Florida enplanement growth, can be assumed to be a major factor in the growing fare trend. The increasing fare trend is shown in comparison to the increasing passenger trend in **Table 9.**

Table 9: Average One-Way Fares

Florida Airport	2000	2002	2004	2006	2007	2008	2009	2010	2012	2014	% Change 2000-2014	% Change 2007-2014
Orlando – Sanford (SFB)	$106.11	$99.82	$88.56	$91.43	$117.35	$93.88	$78.74	$90.08	$100.14	$ 97.60	-8.02%	-16.83%
St. Pete – Clearwater (PIE)	$106.43	$90.60	$88.58	$100.96	$117.98	$100.77	$79.97	$84.52	$103.60	$ 95.44	-10.33%	-19.11%
Orlando (MCO)	$123.77	$110.92	$110.76	$122.97	$172.13	$147.09	$136.11	$144.07	$164.46	$180.35	45.71%	4.78%
Ft. Lauderdale (FLL)	$125.09	$110.39	$107.93	$123.99	$171.72	$144.54	$134.95	$145.31	$157.80	$173.48	38.68%	1.02%
Tampa (TPA)	$127.62	$109.80	$109.27	$124.04	$170.20	$150.69	$142.88	$153.80	$172.44	$180.22	41.21%	5.88%
Palm Beach (PBI)	$140.74	$121.17	$116.13	$127.76	$176.40	$161.16	$148.48	$156.27	$178.88	$195.71	39.06%	10.94%
Southwest Florida (RSW)	$135.17	$121.55	$120.85	$130.44	$173.08	$160.85	$149.51	$154.21	$184.13	$189.13	39.92%	9.28%
Sarasota (SRQ)	$134.90	$121.76	$128.53	$137.04	$172.25	$160.21	$146.12	$154.72	$177.87	$196.35	45.55%	13.99%
Jacksonville (JAX)	$132.04	$117.68	$122.06	$137.05	$179.72	$154.39	$146.40	$158.96	$187.80	$201.57	52.66%	12.16%
Miami (MIA)	$168.09	$143.17	$140.60	$147.99	$212.26	$185.24	$168.62	$180.88	$200.17	$223.84	33.16%	5.45%
Daytona Beach (DAB)	$149.74	$130.65	$134.93	$157.46	$180.78	$166.63	$175.63	$171.86	$175.09	$198.90	32.83%	10.02%
Key West (EYW)	$141.16	$138.04	$147.49	$160.65	$235.31	$233.27	$233.79	$197.83	$194.61	$244.43	73.16%	3.87%
Pensacola (PNS)	$178.18	$134.01	$140.70	$164.02	$208.24	$199.89	$192.92	$195.65	$215.99	$232.00	30.20%	11.41%
Tallahassee (TLH)	$167.61	$116.84	$127.94	$166.58	$237.30	$230.19	$225.81	$238.06	$223.27	$248.48	48.25%	4.71%
Gainesville (GNV)	$186.44	$152.13	$159.30	$188.31	$246.98	$237.42	$199.84	$212.35	$213.71	$231.84	24.35%	-6.13%
Northwest FL Regional (VPS)	$150.07	$153.06	$167.36	$208.46	$225.63	$233.74	$237.60	$240.11	$232.36	$243.43	62.21%	7.89%
Northwest FL Beaches (ECP)	$177.67	$158.23	$179.35	$214.39	$286.15	$271.48	$266.36	$166.15	$188.41	$222.66	25.32%	-22.19%
Melbourne (MLB)	$152.82	$145.90	$150.79	$225.50	$233.24	$188.85	$181.37	$165.62	$178.28	$197.57	29.28%	-15.29%
Northeast Florida (SGI)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	$88.99	n/a	n/a
Punta Gorda (PGD)	n/a	n/a	n/a	n/a	n/a	n/a	$26.74	$45.98	$92.55	$105.89	n/a	n/a
Florida Total	$134.22	$117.31	$116.47	$130.03	$180.12	$210.73	$191.66	$154.16	$180.77	$192.96	43.77%	7.13%
US Total	$157.93	$136.53	$134.37	$149.49	$174.06	$186.17	$172.84	$189.19	$206.29	$217.43	37.67%	24.92%

Source: Summarized from U.S. DOT DB1B Market Fare Data and O&D Survey, reconciled from Schedules T-100

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Figure 15: Statewide Average Fares and Passengers

Source: Summarized from U.S. DOT DB1B Market Fare Data and O&D Survey and Official Airline Guide, Schedules Analyzer

ENPLANEMENT TRENDS

The majority of Florida airports experienced growth in annual enplanements between 2013 and 2015. Some of Florida's airports in the Small and Non-Hub categories have experienced decline in their levels of annual enplaned passengers. These airports include ECP and SRQ. On the other hand, some of the Florida airports in the Small and Non-Hub categories have experience average annual rates of growth in their annual enplaned passengers that have actually exceeded the state's average. Enplanements for all commercial service airports in the Florida system grew 2.6-percent between 2013 and 2015. Small and Non-Hub airports whose enplanements have grown at a rate above the state average include:

⊙ Punta Gorda (70.4-percent)
⊙ Gainesville (7.8-percent)
⊙ Daytona Beach (4.2-percent)
⊙ Sanford-Orlando (28.1-percent)
⊙ St. Pete-Clearwater (35.0-percent)
⊙ Key West (3.4-percent)

Opportunities for improving scheduled commercial air service vary by market. For most of the Florida airports in the Small and Non-Hub categories, their proximity to more active Medium and Large Hub airports impacts their ability to attract new air service and, in some cases, to even retain existing air service. While many of the Small and Non-Hub airports compete with Large and Medium Hub airports, some also compete with each other for enplaning passengers. The competing airports and the enplanement trends between 2013 and 2015 are depicted in **Table 10**.

As shown in **Table 10**, many airports have seen an increase in annual enplanements despite their close proximity to larger more attractive airports. These airports continue to increase their enplanements by attracting niche carriers and charter operators.

Table 10: Airport Competition and Enplanement Trends

Small/Non-Hub Airports	2010-2015 Enplanement Trend	Competing Airport(s)
Pensacola	Increasing (2.3%)	Northwest Florida Beaches
Tallahassee	Increasing (2.4%)	Jacksonville/Orlando/Atlanta
Orlando-Sanford	Increasing (28.1%)	Orlando/Daytona Beach
Key West	Increasing (3.4%)	Miami
Daytona Beach	Increasing (5.3%)	Orlando/Jacksonville
Melbourne	Decreasing (0.2%)	Orlando
St. Pete-Clearwater	Increasing (35.0%)	Tampa/Sarasota
Northwest Florida Beaches	Decreasing (7.1%)	Tallahassee/Northwest Florida Regional
Northwest Florida Regional	Decreasing (3.5%)	Tallahassee/Northwest Florida Beaches
Gainesville	Increasing (7.9%)	Jacksonville/Orlando/Tampa
Punta Gorda	Increasing (70.4%)	Southwest Florida/Tampa

Source: U.S. DOT Enplanement Data

AIRPORT-SPECIFIC DOMESTIC SERVICE SUMMARIES

Key summary information regarding each commercial service airport's nonstop domestic and international service was also developed to supplement this document. These summaries provide detailed information on changes to air service offerings at Florida's 20 commercial service airports. In order to make them more user friendly, these summaries are provided on the FDOT website (www.dot.state.fl.us/aviation/ fas_studies.shtm) in three groups:

⊙ Full set of summaries for all 20 commercial service airports
⊙ Summaries separated by FDOT District
⊙ Individual airport summaries

Specific data found in these summaries includes annual enplanements, passengers and fares, weekly flights and seats, as well as intrastate and international data.