CITY & COUNTY OF SAN FRANCISCO

Office of the Controller

City Services Auditor, City Performance

City Services Benchmarking:

Airport Services Benchmarking

July 28, 2015

CONTROLLER'S OFFICE
CITY SERVICES AUDITOR

The City Services Auditor was created within the Controller's Office through an amendment to the City Charter that was approved by voters in November 2003. Under Appendix F to the City Charter, the City Services Auditor has broad authority for:

- Reporting on the level and effectiveness of San Francisco's public services and benchmarking the city to other public agencies and jurisdictions.
- Conducting financial and performance audits of city departments, contractors, and functions to assess efficiency and effectiveness of processes and services.
- Operating a whistleblower hotline and website and investigating reports of waste, fraud, and abuse of city resources.
- Ensuring the financial integrity and improving the overall performance and efficiency of city government.

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SUMMARY

The City and County of San Francisco Charter requires the City Services Auditor (CSA) to monitor the level and effectiveness of City services. Specifically, CSA shall review performance and cost benchmarks, and conduct comparisons of the cost and performance of San Francisco City government with other cities, counties, and public agencies performing similar functions.

This report compares airport services and practices at San Francisco International Airport (SFO) to those of twelve other peer airports across the continental United States. This report benchmarks key performance metrics between SFO and its peers, focused on air service and economic indicators as well as service quality.

Peers

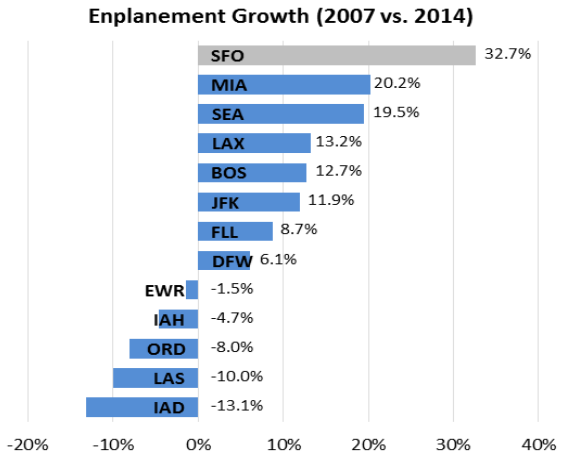
This report examines twelve large hub, international gateway airports in the continental United States with comparable origin & destination percentages, and a similar number of airlines servicing the airport. Peers for this report include:

- Boston Logan International (BOS)
- Chicago O'Hare International (ORD)
- Dallas/Fort Worth International (DFW)
- Ft. Lauderdale-Hollywood International (FLL)
- Houston Intercontinental (IAH)
- JFK International (JFK)
- Los Angeles International (LAX)
- Las Vegas McCarren International (LAS)
- Miami International (MIA)
- Newark Liberty International (EWR)
- Seattle-Tacoma International (SEA)
- Washington Dulles International (IAD)

HIGHLIGHTS

Enplanements

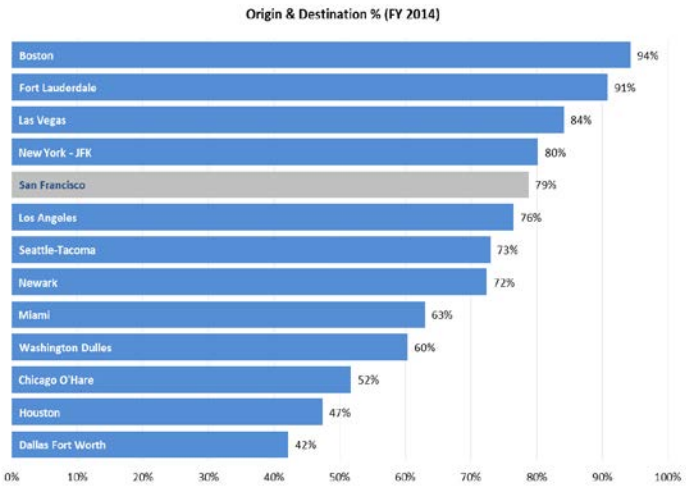
Enplanements are a measure of passenger boardings at a given airport, and signify the strength of an airport's service and passenger demand. Enplanements at SFO grew 33 percent from Calendar Year (CY) 2007 to 2014, the highest rate of growth amongst the peer group, and 13 percentage points higher than the closest peers, Miami and Seattle-Tacoma. During the same period, five peer airports experienced a loss in enplanements, with Washington Dulles experiencing the greatest loss of 13 percent.



In CY 2014, SFO had approximately 23.5 million total enplanements, 78 percent (18.4 million) domestic and 22 percent (5.1 million) international – the fifth highest in the peer group. Los Angeles led the peer group in total enplanements with 35.3 million, 73 percent domestic and 27 percent international.

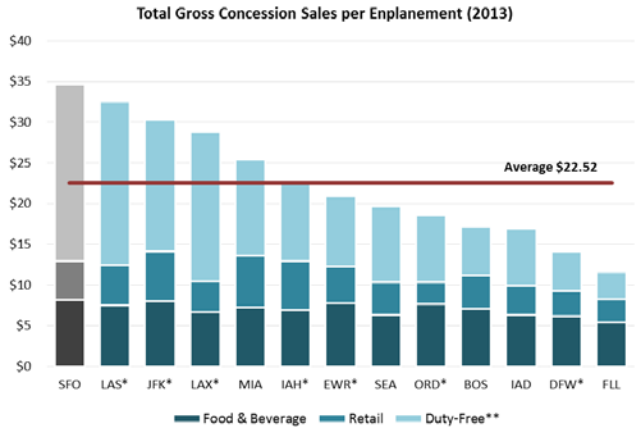
Origin and Destination Percentage

An airport's Origin & Destination (O&D) percentage measures the percentage of passengers that originate or terminate their trip at a given airport (as opposed to connecting to another flight), and is used as a measure of local demand, with a high O&D percentage indicating strong local demand. In CY 2014, SFO had an O&D percentage of 79 percent, the fifth highest in the peer group. Boston led the peer group with 94 percent O&D. Dallas-Fort Worth had the lowest O&D percentage with 42 percent.



Gross Concession Sales per Enplanement

SFO generated $34.60 in gross concession sales per enplanement in CY 2013, the highest in the peer group, and $12.08 higher than the peer average of $22.52. SFO led the peer group in gross food and beverage sales per enplanement, generating $8.15 in gross food and beverage sales per enplanement, $1.14 higher than the peer average of $7.01. In gross retail sales, SFO generated $4.77 per enplanement, the fifth highest in the peer group and $0.39 higher than the peer average of $4.38. Lastly, SFO generated $21.67 in gross duty-free sales per international enplanement, the highest in the peer group, and $10.54 above the peer average of $11.13.



*Includes passenger services concession sales such as banking and currency exchange services.
**Total duty-free sales are calculated per international enplanements

Airport Service Quality

The Airport Service Quality (ASQ) survey is a passenger-experience survey conducted by the Airports Council International (ACI) which asks passengers in participating airports to rate the airport in a variety of services including security and airport environment. The survey is distributed to 1,400 randomly selected passengers each quarter by a third party vendor of ACI. In the 2014 survey, SFO exceeded the panel average in all but one of the service quality categories. Airport customers gave SFO an overall satisfaction rating of 4.17 out of 5, compared to the panel average of 3.99.

Contents

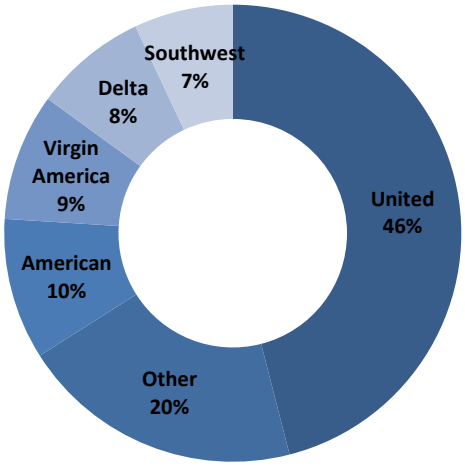
SFO: From 30,000 Feet

San Francisco International Airport (SFO) is a large hub airport located in the San Francisco Bay Area. SFO served approximately 47 million passengers in 2014, flying to 113 international and domestic destinations on 49 passenger airlines. A department of the City and County of San Francisco, SFO maintains 71 percent of the Bay Area's total air travel market share, a market which also includes Oakland International Airport and San Jose International Airport.

CY 2014 Total Passengers (enplanements and deplanements)	**47,074,162**
Domestic Passengers	**36,804,461**
Domestic Bay Area Market Share	**66%**
International Passengers	**10,269,701**
International Bay Area Market Share	**95%**

Airline Market Share at SFO

United Airlines has the highest market share of passengers at SFO, with 46 percent of passengers. The remainder is made up of two other legacy airlines, American (10 percent) and Delta (8 percent), and two low cost carriers, Virgin America (9 percent) and Southwest (7 percent). American's market share includes US Airways' passengers, as the airlines recently merged.



✈ Top 10 Domestic Destinations (2014)

Metropolitan Area	% of Total Domestic Seats
Los Angeles	14.6%
New York Area	10.1%
Chicago Area	6.8%
Seattle	5.7%
Las Vegas	5.3%
Hawaiian Islands	5.2%
San Diego	4.6%
Dallas	3.9%
Denver	3.6%
Baltimore/Washington	3.5%

✈ Top 10 International Destinations (2014)

Country	% of Total Int'l Seats
China	16.8%
Canada	14.7%
United Kingdom	9.7%
Mexico	8.4%
Germany	7.5%
Japan	6.8%
Taiwan	6.1%
France	5.8%
South Korea	5.8%
Philippines	2.3%

Methodology

Peer Selection. Peer selection was conducted using a likeness scoring methodology. Airports were first screened to ensure that they were both a large hub and an international gateway. Likeness scoring is a percentage-difference calculation between SFO and the potential peers in a number of categories, using SFO as a baseline. Likeness scoring was conducted for the remaining airports according to number international enplanements in 2013, origin and destination percentage, and number of airlines. For a further explanation of the peer selection methodology, see appendix A.

Data Collection. Benchmark metrics included in this report were selected through conversations with stakeholders at SFO and through industry research, including information from the Airport Cooperative Research Program's (ACRP) *Resource Guide to Airport Performance Indicators.*

Air Service and Economic Indicators. The data in this report related to air service and economic indicators was derived from a number of sources including airport-reported data, airport websites, and other Department of Transportation (DOT) and Federal Aviation Administration (FAA) reports. For a complete list of sources, see appendix B.

Service Quality. The data related to service quality was gathered from the Airports Council International's (ACI) Airport Service Quality (ASQ) survey report. The scores of participating, large hub airports were aggregated and compared against SFO. Of the selected peer group, Seattle-Tacoma, Dallas-Fort Worth, Las Vegas, Fort Lauderdale, and Boston participate in the ASQ survey. For a sample of the ASQ survey, see appendix C.

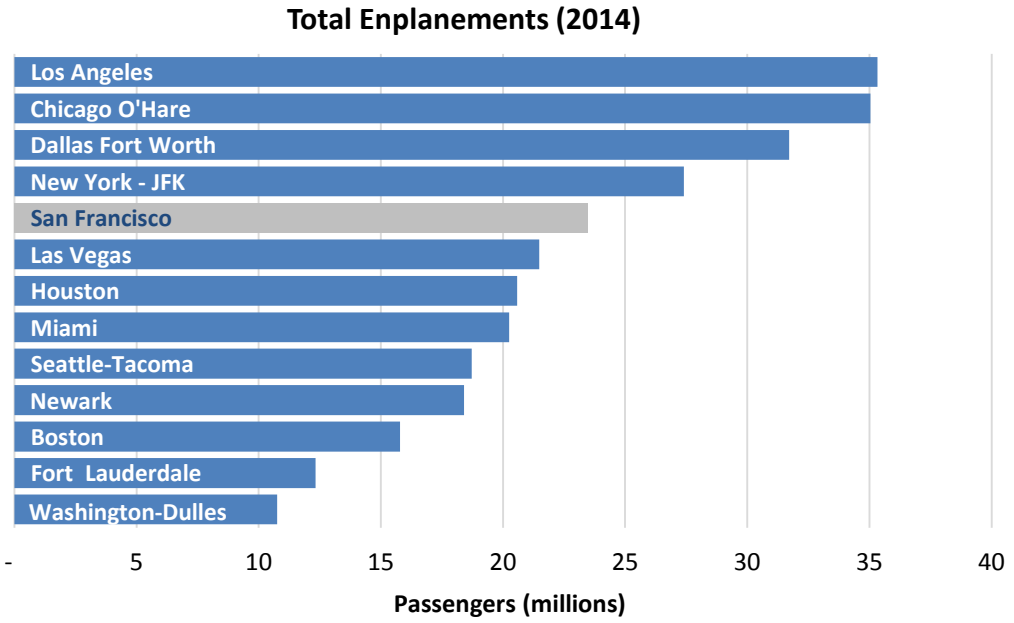
Air Service and Economic Indicators

Performance indicators in the air service and economic category focus on the strength of an airport's passenger market, diversification of airlines, and ability to generate revenue from non-airline sources.

Enplanements

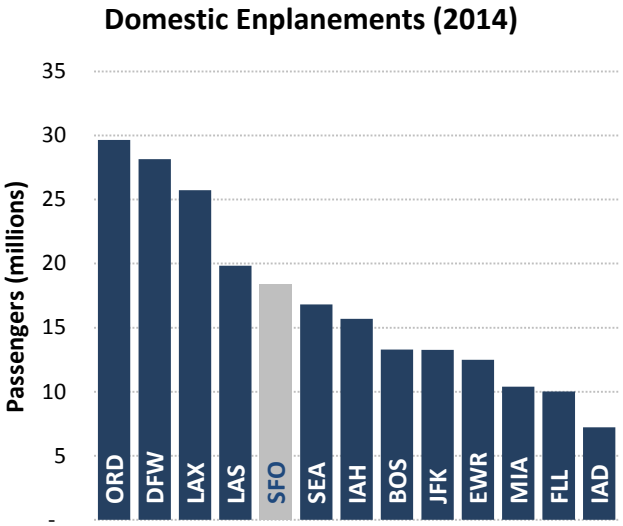
Enplanements are a measure of passenger boardings at a given airport. It does not include those who terminate their trip, or deplane, at a given airport. This is a common measure that airports use to measure the level of an airport's service and passenger demand. The level of enplanements is the primary driving variable for all other air service indicators at an airport. For this report, enplanement data include both revenue and non-revenue passengers, where revenue passengers are those passengers who have purchased tickets, and non-revenue passengers are those small subset of passengers who fly free of charge, such as airline employees and flight crew transferring to another base.

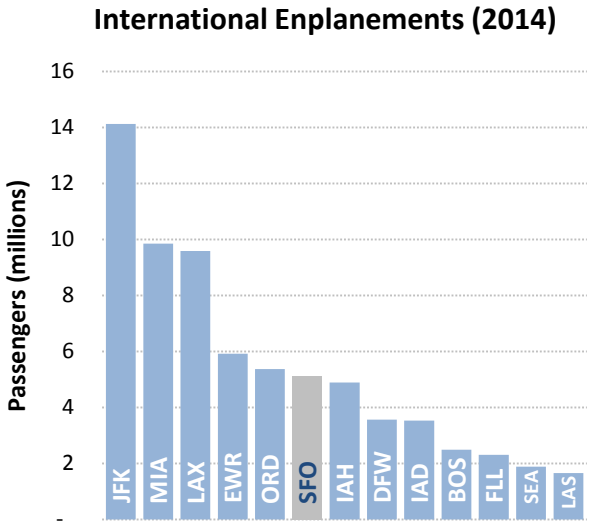
In 2014, Los Angeles International (LAX) led the peer group in total enplanements with 35.3 million, only slightly higher than Chicago O'Hare (ORD). SFO had 23.5 million enplanements in 2014, the fifth highest amongst the peer group, and above the peer average of 22.4 million.



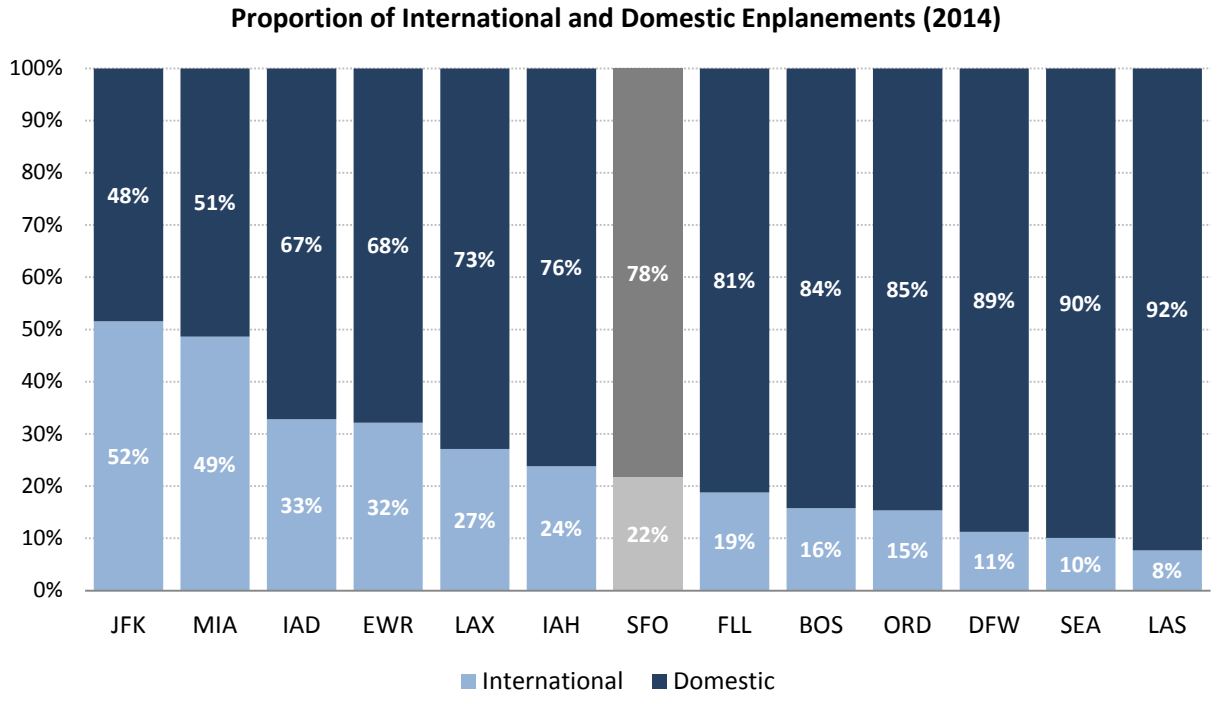
Domestic and International Enplanements

Enplanements can be further broken down between domestic and international. In 2014, ORD led the peer group in the number of domestic enplanements, with 29.7 million. SFO ranked fifth with 18.4 million domestic enplanements in 2014, higher than the 17.0 million peer average. JFK International (JFK) had the highest number of international enplanements, with 14.1 million, significantly higher than the remainder of the peer group. SFO ranked sixth in international enplanements with 5.1 million in 2014, below the peer average of 5.4 million.



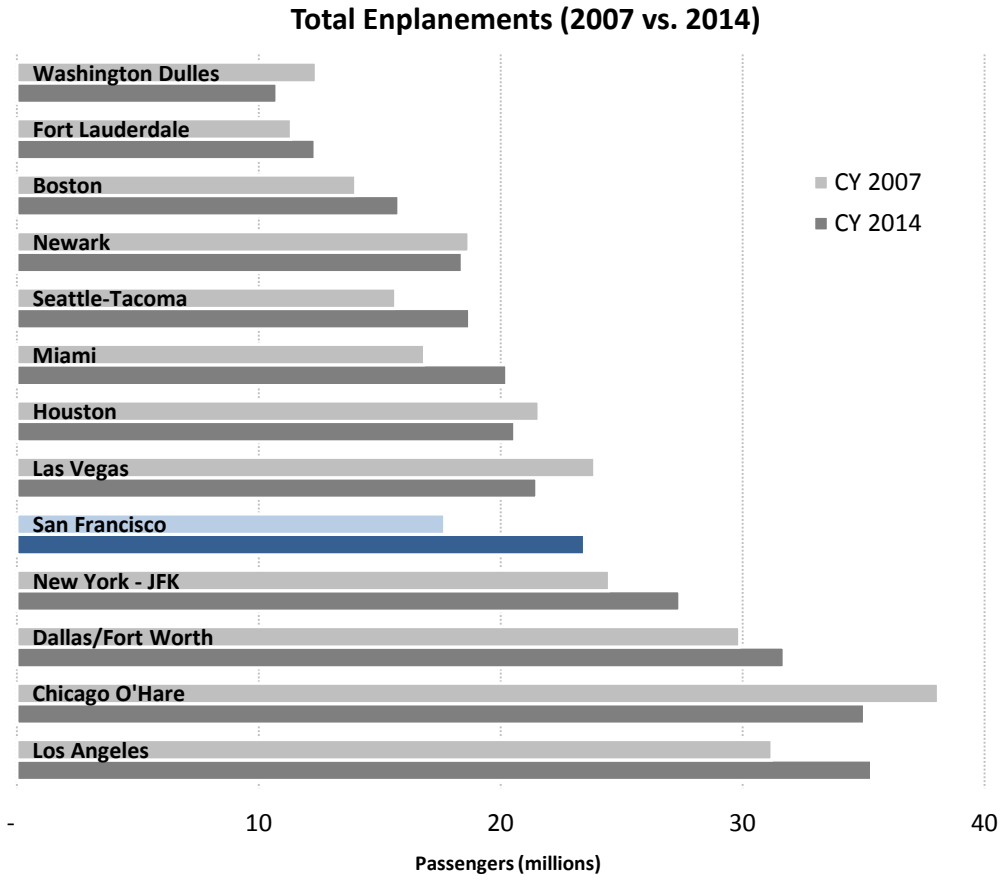


As a proportion of international and domestic enplanements, JFK had the highest proportion of international enplanements with 52 percent. While ORD led the group in total domestic enplanements, Las Vegas McCarren (LAS) had the highest proportion of domestic enplanements in 2014 with 92 percent. Of SFO's 23.5 million total enplanements in 2014, 78 percent were domestic, while 22 percent were international.

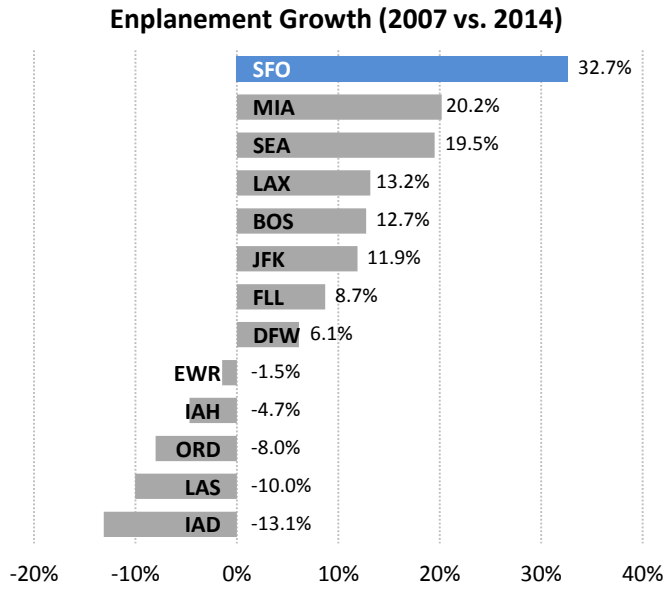


Growth in Enplanements

Calendar Years (CY) 2007 and 2014 were chosen as measuring points to show growth in enplanements, because they represent periods of time before and after the latest global recession, an inflection point in air travel demand.



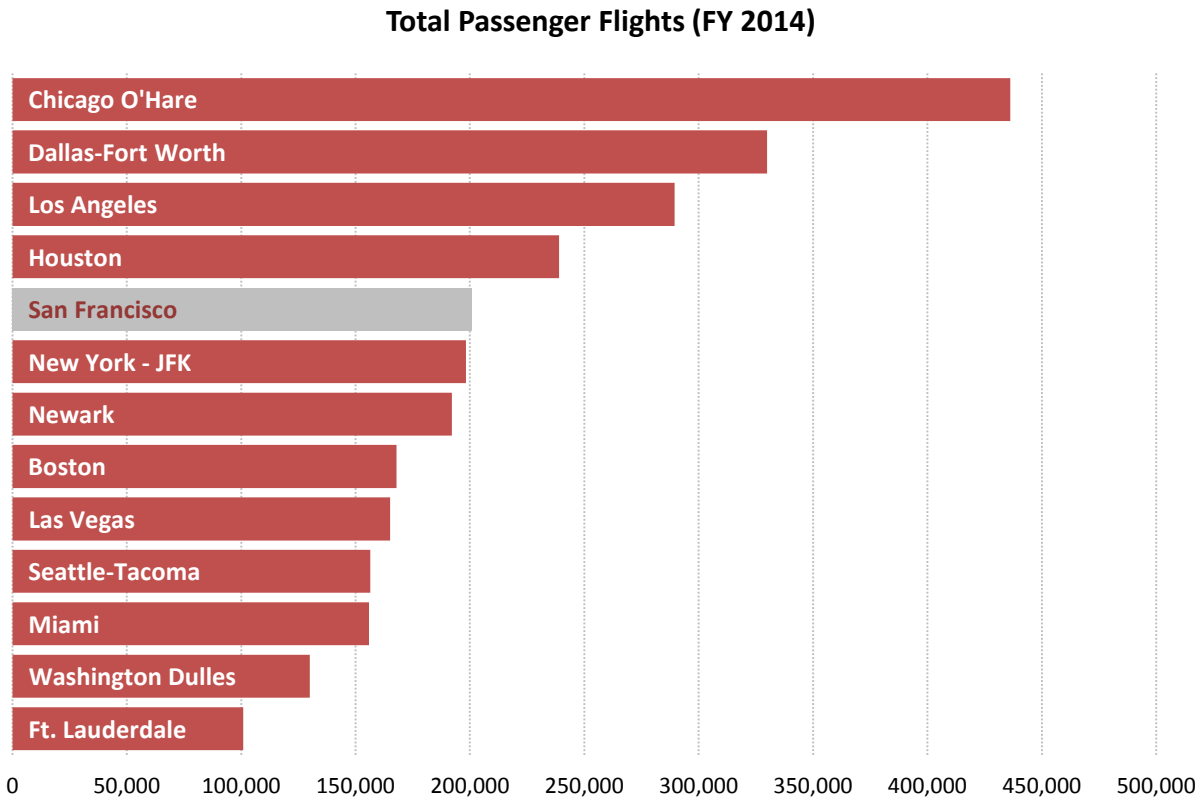
From 2007 to 2014, SFO experienced the highest percentage growth in enplanements amongst the peer group, with an increase of 33 percent. Within the peer group, seven airports experienced positive growth during the time period, while five peers experienced negative growth. Washington Dulles (IAD) experienced the greatest percentage loss in enplanements with a decline of 13 percent.



Total Number of Flights

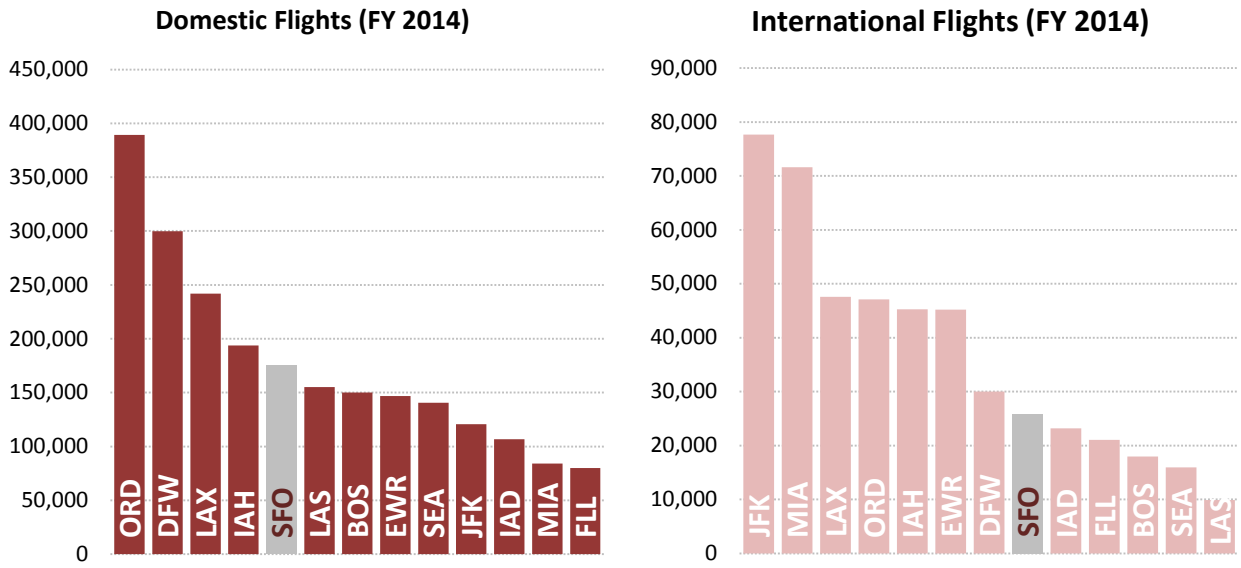
In addition to the number of enplanements, the number of passenger flights is an important metric since more flights generally indicate a higher volume of air service, although partly influenced by aircraft size. A greater number of flights in individual markets create more options for passengers.

In Fiscal Year (FY) 2014, ORD led in the number of flights offered, with approximately 436,000 flights. SFO offered just over 200,000 passenger flights, the fifth highest amongst the peer group, and below the peer average of 212,459. For the purposes of this study, a flight is defined as one commercial passenger aircraft landing.

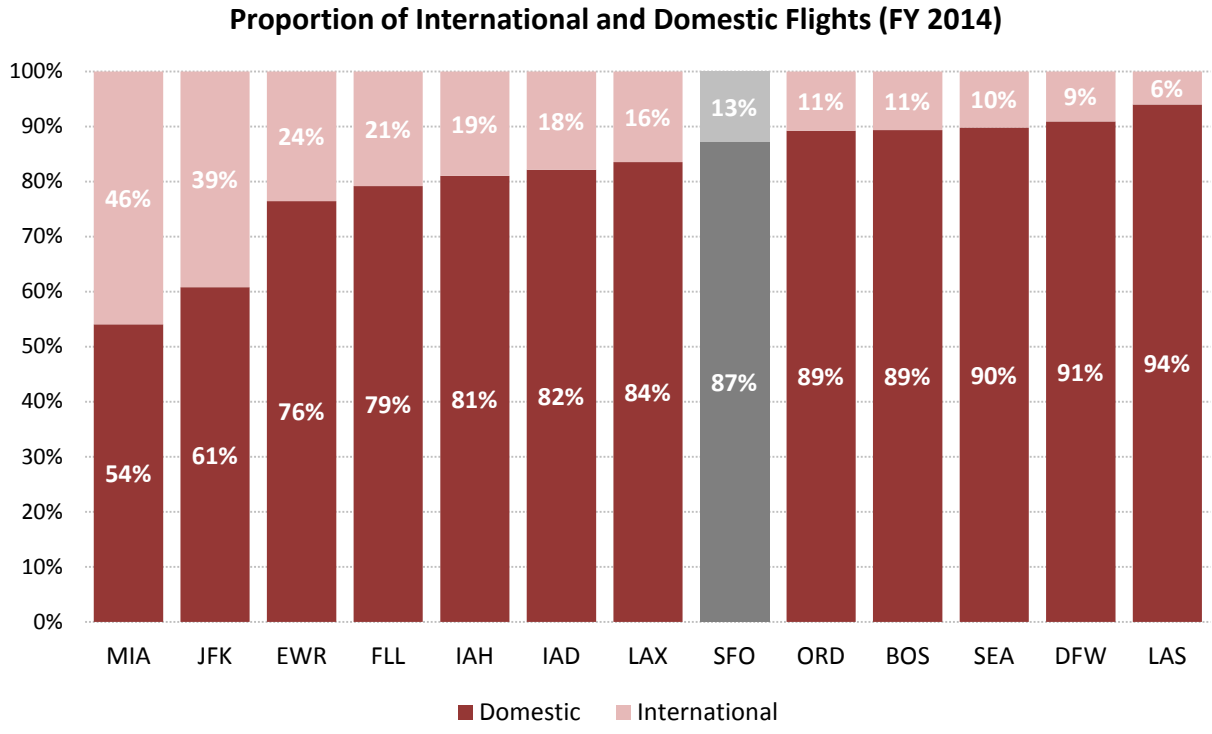


Domestic and International Flights

ORD offered the greatest number of domestic flights in FY 2014 with nearly 390,000 flights. SFO ranked fifth in the number of domestic flights, offering nearly 175,000 flights in FY 2014 close to the peer average of 175,675 flights. JFK offered the greatest number of international flights with over 77,000 flights in FY 2014. SFO ranked eighth in the number of international flights offered, with nearly 26,000 flights which is lower than the peer average of 36,784 flights.



As for the proportion of international to domestic flights offered, MIA offered the highest proportion of international flights with 46 percent, while LAS offered the highest proportion of domestic flights, with 94 percent. Of the nearly 200,000 total flights offered at SFO, 87 percent were domestic and 13 percent were international.

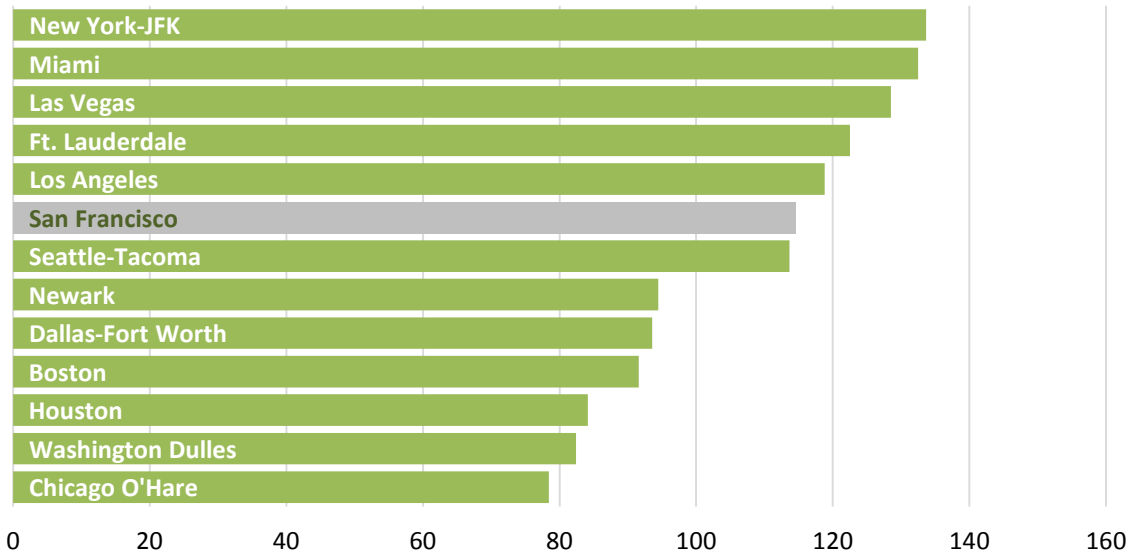


Enplanements per Flight

Enplanements per flight are an indicator of average aircraft size and aircraft occupancy, referred to in the industry as load factor. Generally, a high number of enplanements per flight mean larger average aircraft size and higher average load factors. Airports with a higher share of overseas international flights and long haul domestic flights on relatively large aircraft tend to have a high number of enplanements per flight.

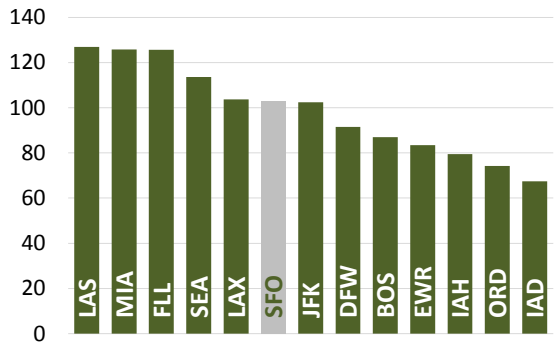
In Fiscal Year (FY) 2014, JFK led the peer group with 134 enplanements per flight. SFO ranked sixth with 115 enplanements per flight, higher than the peer average of 107. ORD had the lowest enplanements per flight of 78 passengers.

Total Enplanements per Flight (FY 2014)

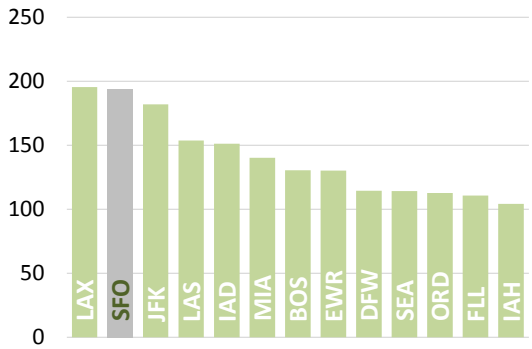


In the domestic sector, LAS had the highest number of enplanements per flight of 127 passengers. SFO had 103 enplanements per flight, ranking sixth among the peer group. In the international sector, LAX led the peer group with 196 enplanements per flight. SFO ranked second with 194 enplanements per flight.

Domestic Enplanements per Flight (FY 2014)



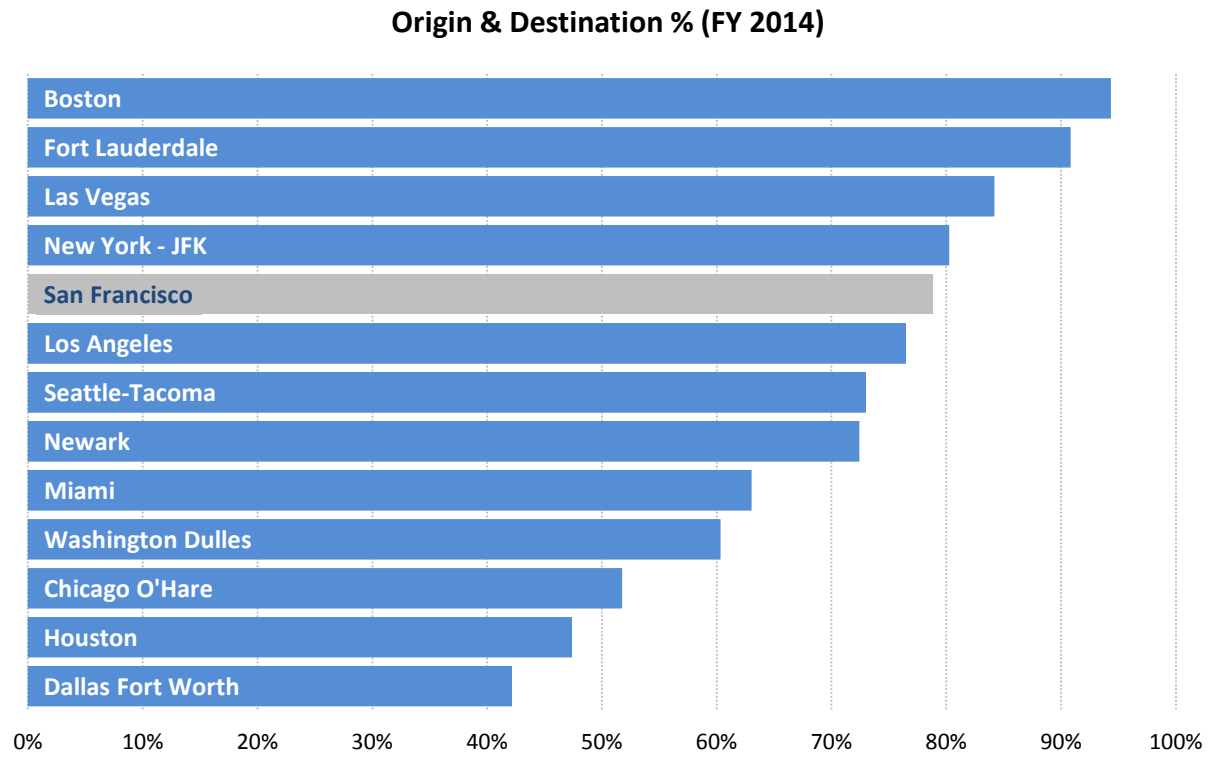
Int'l Enplanements per Flight (FY 2014)



Origin & Destination Percentage

An airport's Origin & Destination (O&D) percentage refers to the percentage of passengers that begin or end their trip at a given airport. This measure does not include those passengers connecting through a given airport. This is an important metric because it measures local demand, and a high O&D percentage indicates strong local demand, which helps mitigate the risk of passenger declines caused by changes in the airline industry, such as airline consolidation, route network restructuring, etc.

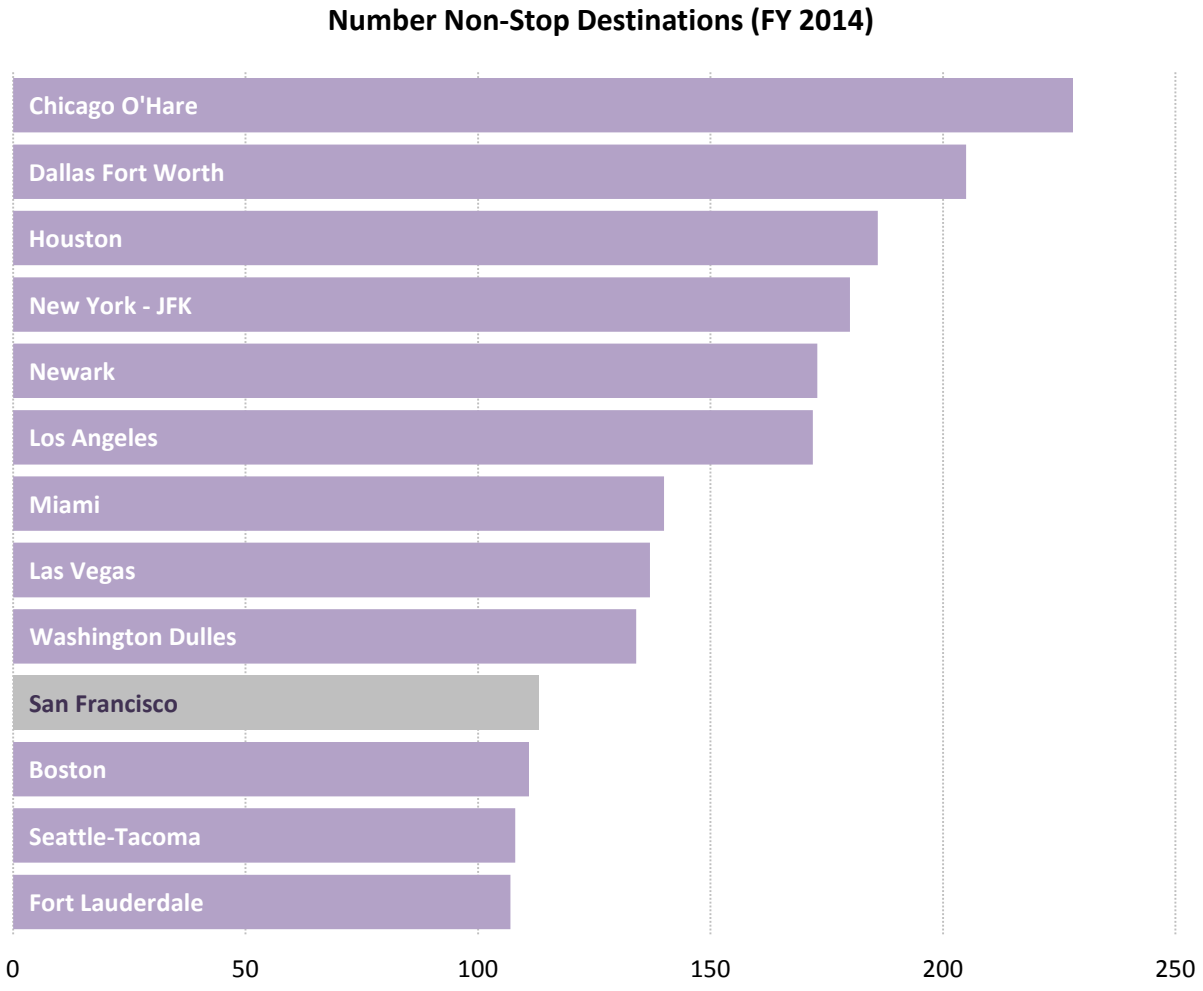
Boston (BOS) had the highest O&D percentage in the peer group, with an O&D percentage of 94 percent. SFO ranked fifth amongst the peer group, with an O&D percentage of 79 percent, higher than the peer average of 70 percent. Meanwhile, Dallas Fort Worth (DFW) had the lowest O&D percentage in the group with 42 percent.



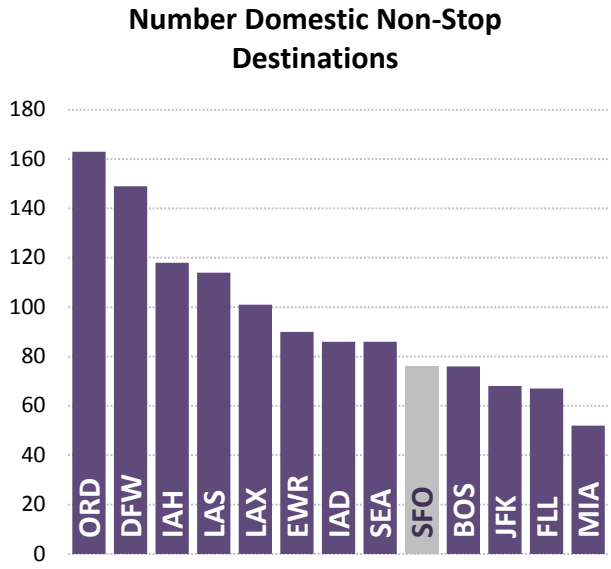
Non-Stop Destinations

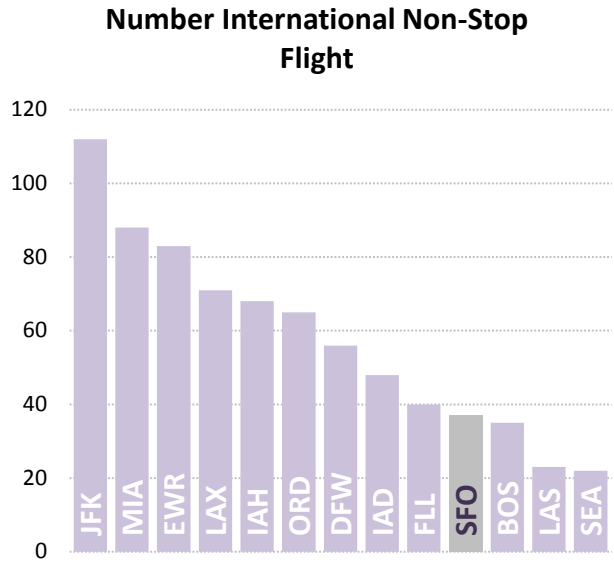
Availability of non-stop service helps local communities to attract business and tourism, which have an economic benefit to a given region. The location of an airport and structure of airline networks may affect this measure, as hubs in the middle of the country tend to have flights to more cities than coastal airports.

In FY 2014, the peer group, on average, offered service to 153 non-stop destinations. SFO offered non-stop service to 113 destinations, ranking tenth amongst the peer group in total non-stop destinations offered. ORD led the peer group with 228 non-stop destinations, while Fort Lauderdale (FLL) ranked at the bottom of the group with 107 non-stop destinations.

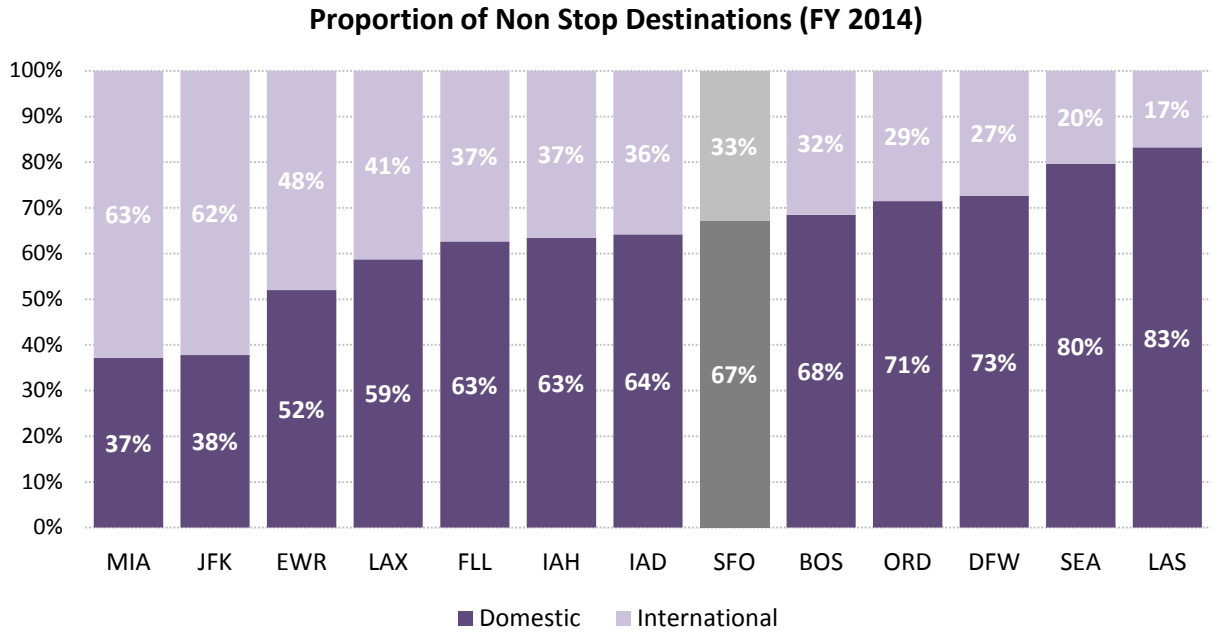


ORD offered the greatest number of domestic non-stop destinations in FY 2014 with 163 destinations compared to the peer average of 96. JFK offered the greatest number of international non-stop destinations with 112 while the peer group averaged 58. During the same period, SFO offered 76 domestic non-stop destinations and 37 international non-stop destinations, ranking ninth and tenth, respectively, amongst the peer group and lower than the peer group averages.



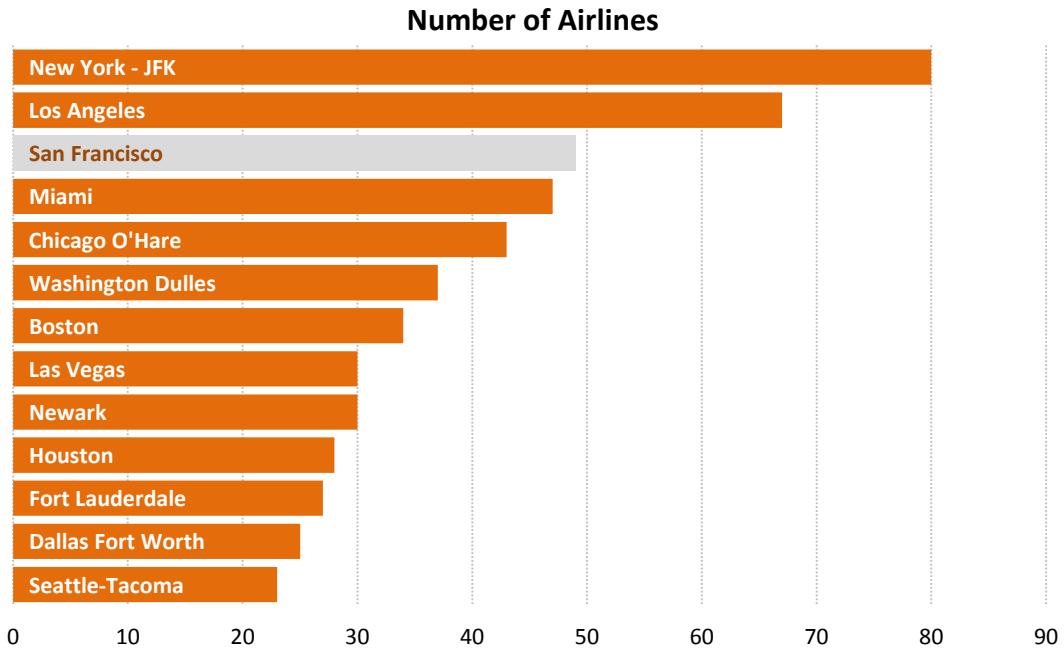


As for the proportion of international to domestic non-stop destinations, MIA offered the highest proportion of international non-stop destinations, with 63 percent. Meanwhile, LAS offered the highest proportion of domestic non-stop destinations with 83 percent. At SFO, 67 percent of non-stop destinations serviced were domestic, while 33 percent were international.



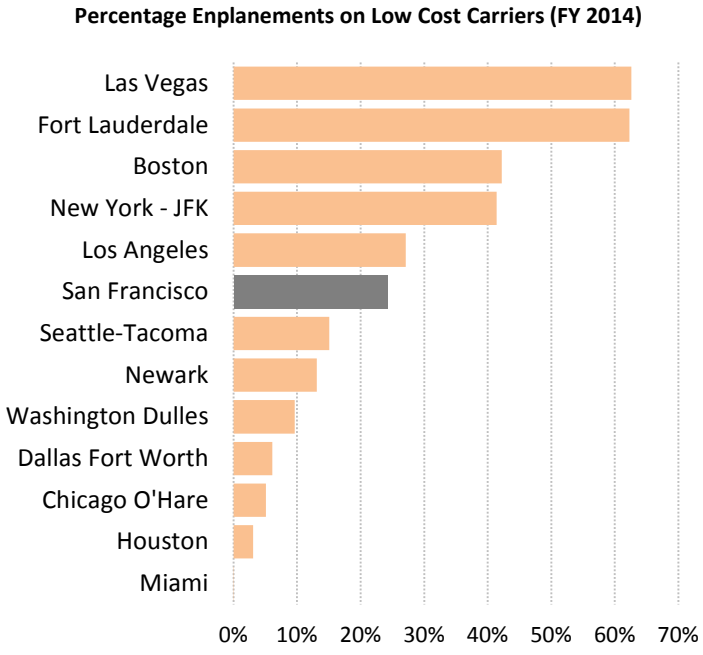
Number of Airlines

The number (or diversity) of passenger airlines offering service at a given airport not only creates competition, but also helps to lessen risk for an airport in the event of airline consolidation or service reductions. The diversity of airlines also helps to create competition amongst airlines, which helps to moderate fares, and ultimately drive demand for air travel. Currently, SFO has service offered by 49 airlines, the third highest in the peer group and above the peer group average of 40 airlines. JFK currently has service offered by 80 airlines, the highest in the group.



Low Cost Carriers

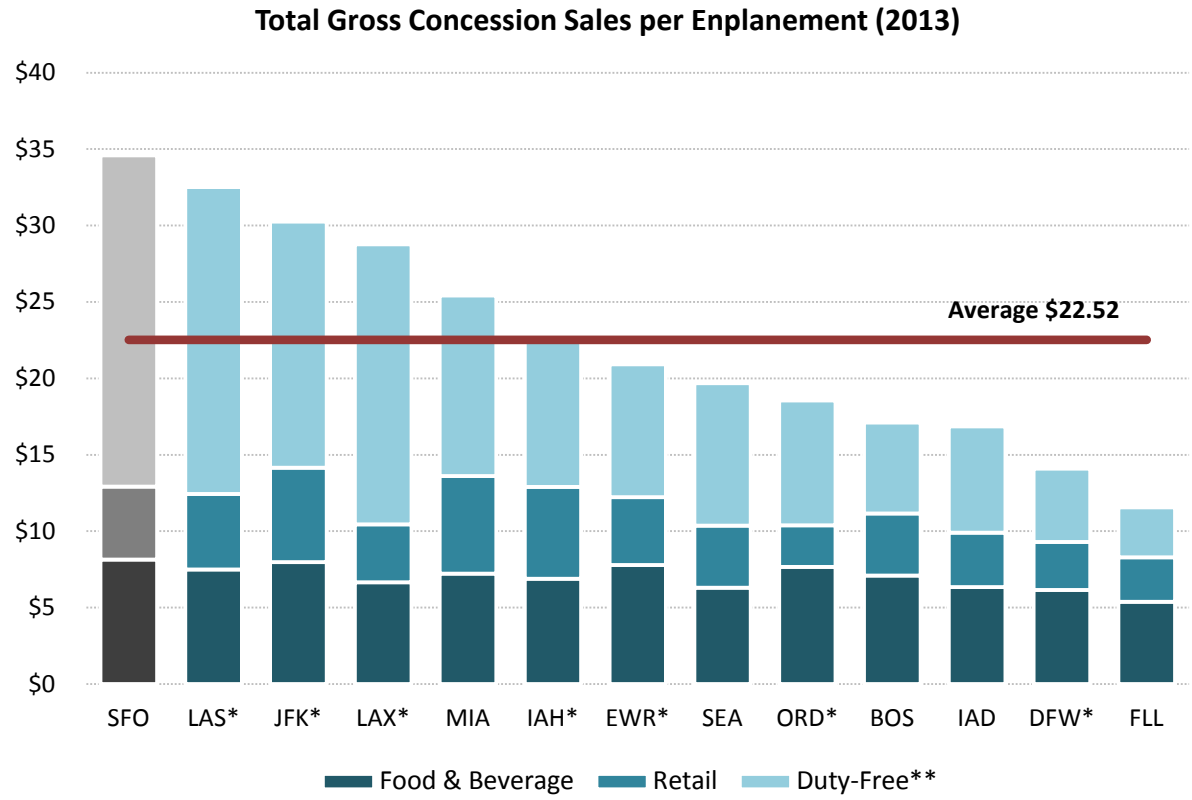
Low Cost Carriers (LCC) refers to airlines that offer point-to-point service with generally lower fares than "legacy" airlines, such as United, Delta or American. Examples of LCCs include Southwest, JetBlue and Virgin America. The impact of LCCs at an airport is that it moderates fares, as existing carriers tend to compete on price. In addition to driving competitive pricing, LCCs may also drive existing carriers to increase capacity, generating more service offerings. In FY 2014, enplanements on LCCs represented 24 percent of SFO's domestic enplanements. FLL had the highest percentage of service on LCCs with 61 percent, while MIA had the least, with less than one percent.



Gross Terminal Concession Sales per Enplanement

One important source of non-aeronautical revenue is terminal concession sales. The primary sources of terminal concession sales are: food and beverage, retail, and duty-free. Concession sales are also a measure of the quality and quantity of concession offerings, which are important in driving non-aeronautical revenue.

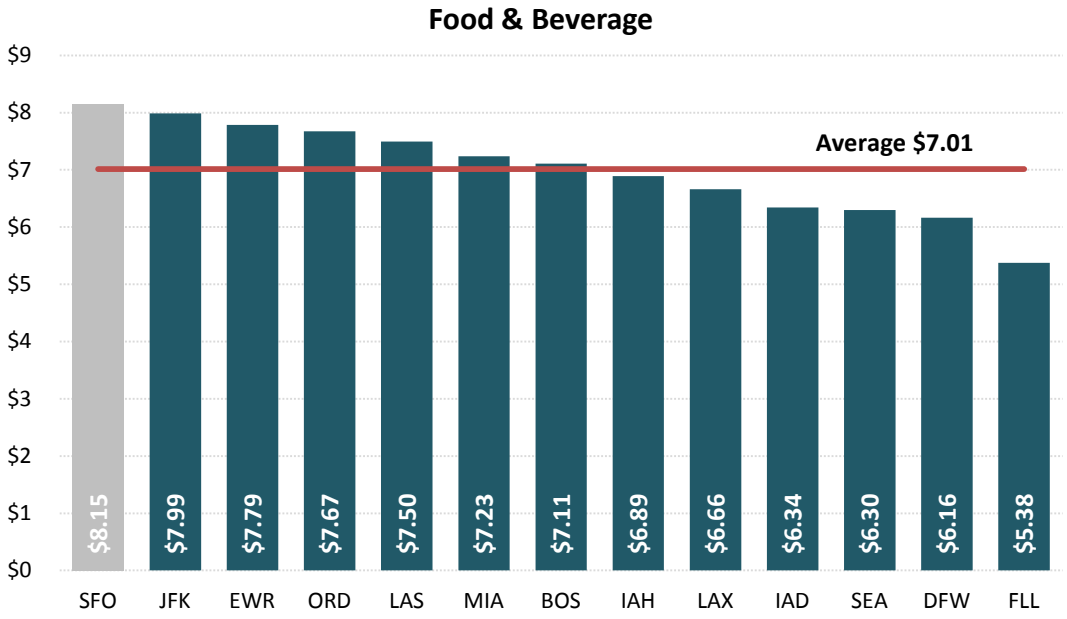
SFO generated $34.60 in gross terminal concession sales per enplanement in CY 2013, the highest in the peer group and $12.08 higher than the peer average of $22.52.



*Includes passenger services concession sales such as banking and currency exchange services.
**Total duty-free sales are calculated per international enplanements

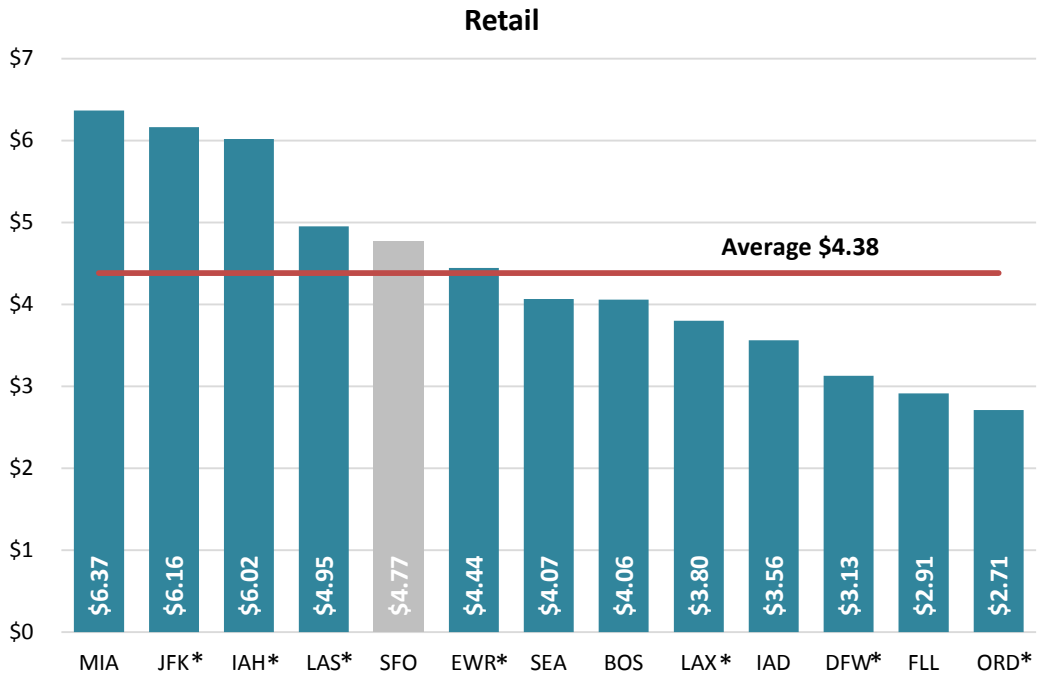
Food and Beverage

Food and beverage sales are an important concession category for airports, with a peer average of $7.01 per enplanement. SFO led the peer group in gross food and beverage sales per enplanement, with $8.15 per enplanement. The recently renovated Terminal 2 at SFO has contributed to the success of SFO's concession program. In addition to offering a wide variety of food and beverage choices, two-thirds of concessionaires are locally-owned.



Retail

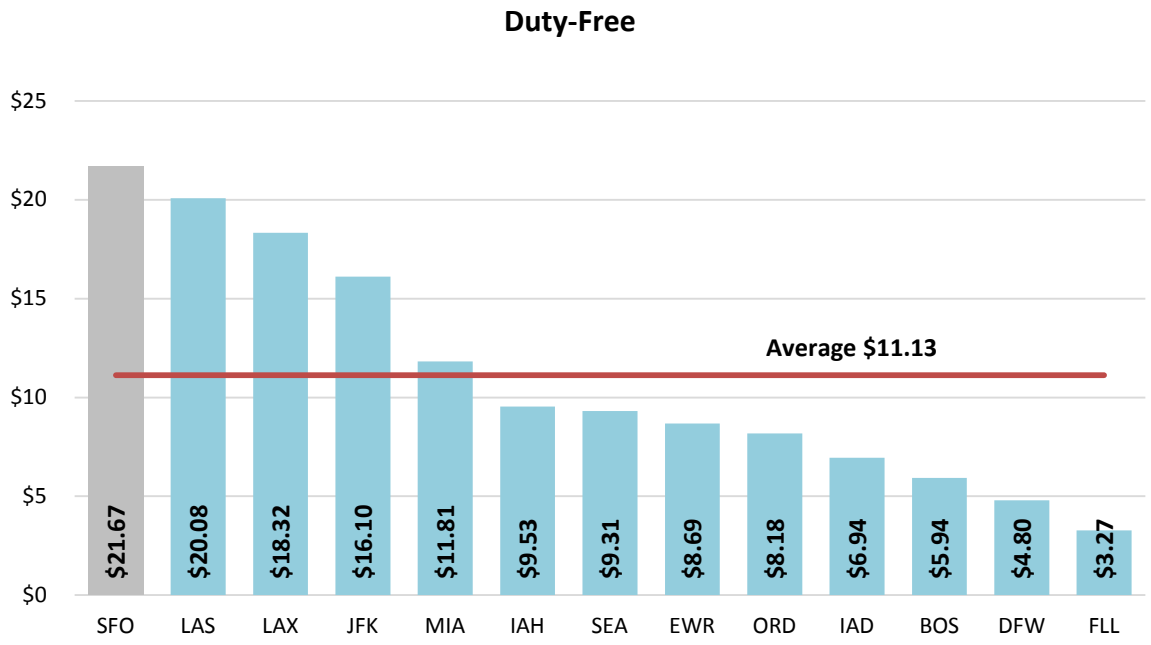
The peer average for the retail category is $4.38 per enplanement. MIA led the group in this category with $6.37 per enplanement. SFO ranked fifth in the group with $4.77 in gross sales per enplanement.



*Includes passenger services concession sales such as banking and currency exchange services

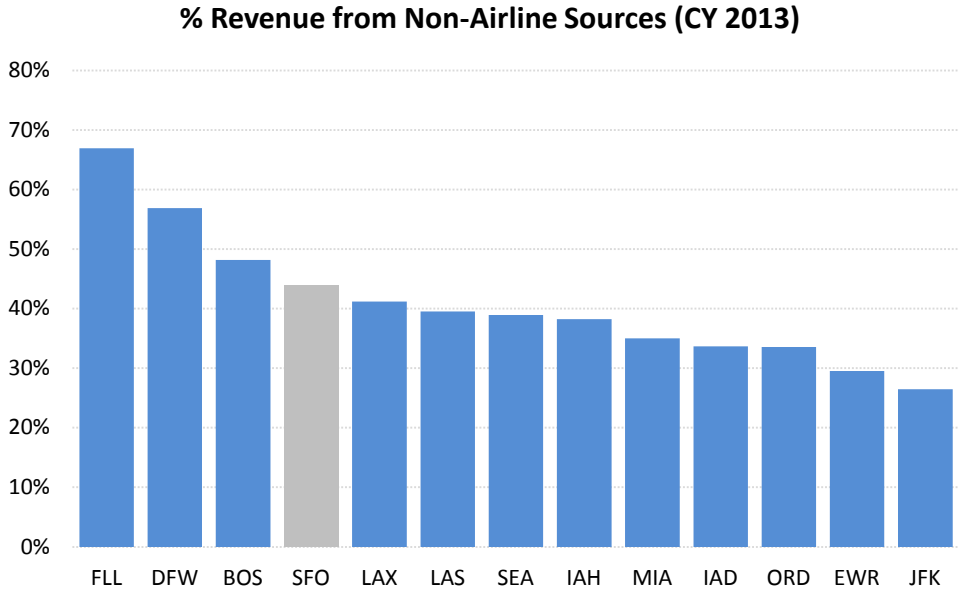
Duty Free

Duty free sales tend to be higher in coastal airports and airports with higher international enplanements. SFO led the peer group in this category with sales of $21.67 per international enplanement, $10.54 higher than the peer average of $11.13 per international enplanement. New and added service to regions with strong economic growth resulted in SFO's relatively high duty free sales per international enplanement.



Revenue from Non-Aeronautical Sources

Airports generate revenue from both aeronautical and non-aeronautical sources. Aeronautical revenue can include sources such as landing fees and terminal rental fees. Non-aeronautical revenue is generated through sources such as concessions, public parking, ground transportation, rental car, on-site hotel, etc. The amount generated is indicative of an airport's success in maximizing its various revenue streams. Because aeronautical revenue is driven in large part by rate structures that vary widely from airport to airport, non-aeronautical revenue is a better indicator to use in peer-to-peer benchmarking.



In 2013, SFO generated 44 percent of its total operating revenue from non-aeronautical sources, the fourth highest amongst the peers and higher than the peer average of 42 percent.

Service Quality

The Airports Council International's (ACI) Airport Service Quality (ASQ) survey is a benchmarking tool used by more than 250 airports worldwide to measure customer satisfaction across a number of service areas, including security, facilities and airport environment. Surveys are conducted by a third party vendor of ACI with a minimum of 350 randomly selected passengers at participating airports each quarter. SFO's sample size is 1,400 per quarter. Surveys are conducted 30-45 minutes prior to boarding, so that customers have had the full range of experiences at the airport. Because of the confidentiality of individual airport scores, the scores of participating, large hub airports in North America for each service category were aggregated by Guest Experience staff at SFO and compared against the individual scores for SFO. Of the peer group selected for this benchmarking report, Seattle-Tacoma, Dallas-Fort Worth, Las Vegas McCarran, Fort Lauderdale, Boston Logan, and Washington Dulles participate in the ASQ survey.

The 2014 ASQ Survey was used for the purposes of this report. Compared against aggregated data from participating peer airports, SFO exceeds the panel average in all, but one, service areas, including overall passenger satisfaction.

	SFO	Average	Difference
Overall			
Overall Satisfaction	4.17	3.99	**0.18**
Passport/Personal ID Control			
Passport Control Wait times	4.25	4.01	**0.24**
Passport Staff Courtesy	4.16	4.02	**0.14**
Security			
Security Checkpoint Wait Times	4.13	3.94	**0.19**
Security Checkpoint Staff Courtesy	4.09	4.01	**0.08**
Thoroughness of Inspection	4.17	4.02	**0.15**
Feeling of being safe	4.23	4.11	**0.12**
Airport Facilities			
Courtesy of Airport Staff	4.24	4.11	**0.13**
Dining	3.80	3.70	**0.10**
Dining Value for Money	3.03	3.29	**-0.26**
Wi-Fi	3.83	3.78	**0.05**
Restroom Availability	4.18	4.06	**0.12**
Restroom Cleanliness	4.02	3.82	**0.20**
Baggage Claim Wait times	3.75	3.75	-
Comfort of Waiting Areas	4.05	3.84	**0.21**
Airport Environment			
Airport Cleanliness	4.31	4.03	**0.28**
Airport Ambience	4.08	3.84	**0.24**

Appendix A. Peer Selection Methodology

Peer selection is an important first step in developing a benchmarking report. Given the wide variety of factors that differentiate one airport from another, the following peer selection methodology was utilized to select the most similar peer group.

i. *Initial Screening.* Two screening factors were used to ensure that potential peers share important characteristics with SFO.
   1. **Large Hub -** Whether an airport is considered a "large hub" based on FAA classification (1% or more of U.S. annual passenger enplanements).
   2. **International Gateway -** Whether a significant level of international service is offered by airlines at a given airport.

ii. *Selection Criteria.* The following grouping factors were then used to determine which potential peer airports were most similar to SFO.
   1. **International Enplanements** – The number of passenger boardings for international travel.
   2. **Origin and Destination (O&D) Passenger Percentage** – The percentage of passengers that begin or end their trip at a given airport.
   3. **Number of Airlines** - The number of airlines offering service at a given airport, a measure of diversification.

iii. *Peer Likeness Score.* CSA used a likeness score methodology to rank potential peers in these categories. Generally speaking, a likeness score is a percentage-difference calculation. Using SFO as a baseline, CSA calculated the percent difference in the categories listed above, and then calculated an aggregate likeness score for all potential peers. A likeness score below 1 is considered good and means that the peer shares characteristics similar to the baseline. A likeness score of 1 or greater indicates that a given potential peer is 100% (or more) different than the baseline.

Code	Airport Name	Screening Factor: Hub Size	Screening Factor: International Gateway	Grouping Factor: International Enplanements (2013)	Score	Grouping Factor: Originating Passengers	Score	Grouping Factor: Number of Airlines	Score	Aggregate Likeness Score
SFO	San Francisco International	L	Yes	4,605,000	0.00	78%	0.00	40	0.00	0.00
EWR	Newark Liberty International	L	Yes	5,564,000	-0.21	71%	0.10	30	0.33	0.07
ORD	Chicago O'Hare International	L	Yes	5,175,000	-0.12	53%	0.47	43	-0.08	0.09
IAD	Washington Dulles International	L	Yes	3,275,000	0.41	60%	0.30	37	0.08	0.26
MIA	Miami International	L	Yes	9,957,000	-1.16	57%	0.37	47	-0.18	0.32
BOS	General Edward Lawrence Logan International	L	Yes	2,032,000	1.27	94%	-0.21	34	0.18	0.41
IAH	George Bush Intercontinental/Houston	L	Yes	4,285,000	0.07	53%	0.47	21	0.90	0.48
LAX	Los Angeles International	L	Yes	8,386,000	-0.82	76%	0.03	72	-0.80	0.53
FLL	Fort Lauderdale/Hollywood International	L	Yes	1,792,000	1.57	90%	-0.15	29	0.38	0.60
DFW	Dallas/Fort Worth International	L	Yes	3,057,000	0.51	42%	0.86	24	0.67	0.68
LAS	McCarran International	L	Yes	1,431,000	2.22	85%	-0.09	30	0.33	0.82
SEA	Seattle-Tacoma International	L	Yes	1,622,000	1.84	70%	0.11	23	0.74	0.90
JFK	John F Kennedy International	L	Yes	12,694,000	-1.76	80%	-0.03	80	-1.00	0.93

Appendix B. **Air Service and Economic Indicators.**

Enplanements. Enplanement data for CY 2007 and CY 2014 was collected from airport traffic reports published through the airport website. In some cases, enplanement data was not published. To estimate enplanements in those cases, the total number of reported passengers for a given time period was divided in half to arrive at a rough estimate for enplanements. Those airports are indicated with an asterisk below.

Airport	Enplanements 2007	Enplanements 2014	International Enplanements (2014)
BOS	https://www.massport.com/media/11370/c_stats_dec07.pdf	https://www.massport.com/media/291700/1214-avstats-airport-traffic-summary.pdf	
DFW	https://www.dfwairport.com/stats/P1_008344.php	https://www.dfwairport.com/stats/index.php	https://www.dfwairport.com/stats/P2_250653.pdf
EWR*	https://www.panynj.gov/airports/pdf-traffic/DEC2007_EWR.PDF	https://www.panynj.gov/airports/pdf-traffic/DEC2014_EWR.pdf	
FLL*	http://www.broward.org/Airport/About/Documents/Fllhistoricairporttraffic2012.pdf	http://www.broward.org/Airport/About/Documents/FLLstatsmarch2015.pdf	
IAD	http://www.metwashairports.com/file/dmats1207ye.pdf	http://www.mwaa.com/file/ATS_12-14_Final.pdf	
IAH	http://www.fly2houston.com/traffic-and-stats (Calendar Year 2009 Traffic Summary)	http://system.gocampaign.com/netisd_org/images/imagelibrary/620/74/9227/539799-CY14%20Report.pdf	
JFK*	https://www.panynj.gov/airports/pdf-traffic/DEC2007_JFK.PDF	https://www.panynj.gov/airports/pdf-traffic/DEC2014_JFK.pdf	
LAS	https://cms.mccarran.com/dsweb/Get/Document-200057/Enplaned%20Passengers%202007.pdf	https://cms.mccarran.com/dsweb/Get/Document-388983/Enplaned%20Passengers%202014.pdf	https://cms.mccarran.com/dsweb/Get/Document-370452/Enplaned%20International%20Pax%202014.pdf
LAX*	http://www.lawa.org/uploadedfiles/LAX/statistics/voat-1207.pdf	http://www.lawa.org/uploadedfiles/LAX/statistics/voat-1214.pdf	
MIA	http://www.miami-airport.com/2007_traffic_report.asp	http://www.miami-airport.com/2014_traffic_report.asp	
ORD*	http://www.flychicago.com/SiteCollectionDocuments/OHare/AboutUs/Facts%20and%20Figures/Air%20Traffic%20Data/2007%20December.pdf	http://www.flychicago.com/SiteCollectionDocuments/OHare/AboutUs/Facts%20and%20Figures/Air%20Traffic%20Data/1214%20ORD%20SUMMARY.pdf	
SEA	https://www.portseattle.org/About/Publications/Statistics/Documents/2007activity.pdf	https://www.portseattle.org/About/Publications/Statistics/Airport-Statistics/Pages/default.aspx	https://www.portseattle.org/About/Publications/Statistics/Airport-Statistics/Pages/default.aspx
SFO	http://www.flysfo.com/sites/default/download/about/news/pressres/stats/pdf/as200712.pdf	http://media.flysfo.com/media/sfo/media/air-traffic/as201412.pdf	

Number of Airlines. Information on number of airlines was gathered through searches of peer airport websites. In all cases, the number of airlines was limited to the number of passenger airlines.

Airport	Source
Boston Logan International (BOS)	https://www.massport.com/logan-airport/airlines-at-boston-logan/
Dallas-Fort Worth (DFW)	https://www.dfwairport.com/airlines/index.php
Newark Liberty (EWR)	http://www.panynj.gov/airports/ewr-airlines.html
Fort Lauderdale (FLL)	http://www.broward.org/Airport/Flights/Pages/WhereIsMyAirline.aspx
Washington-Dulles (IAD)	http://www.metwashairports.com/dulles/831.htm
Houston Intercontinental (IAH)	http://www.fly2houston.com/iah-About-IAH
JFK International (JFK)	http://www.panynj.gov/airports/jfk-airlines.html
McCarren International (LAS)	https://www.mccarran.com/Fly/Airlines.aspx
Los Angeles International (LAX)	http://www.lawa.org/LAXAirlines.aspx
Miami International (MIA)	http://www.miami-airport.com/airline_information.asp
Chicago O'Hare (ORD)	http://www.flychicago.com/ohare/en/myflight/airline/pages/airline-information.aspx
Seattle-Tacoma International (SEA)	http://www.portseattle.org/Sea-Tac/Flights-Airlines/Airlines/Pages/default.aspx
San Francisco International (SFO)	http://media.flysfo.com/sfo-facts-2014.pdf

Flights, Enplanements per Flight, and Non-Stop Destinations: Data from Official Airline Guide (OAG), May 29, 2015.

Origin & Destination Percentages and Low Cost Carrier Percentages: Leigh Fisher

Non-Operating Revenue: Federal Aviation Administration. Form 127, 2013. <http://cats.airports.faa.gov/Reports/reports.cfm>.

Concession Gross Sales per Enplanement: Airport Revenue News (ARN) Factbook, 2014.

Appendix C. Airport Service Quality Survey

11. If it was NOT a connecting flight, what mode of transport did you use to arrive at THIS airport?

Private/Company Car ☐ Bus/Shuttle ☐ Taxi/Limo ☐
Rail/Subway ☐ Rental Car ☐ Other ☐

12. How long before the scheduled departure time of your flight did you arrive at the airport?

Less than 30 mins ☐ 30 - 45 mins ☐ 45 - 60 mins ☐ 1hr - 1hr 15 mins ☐
1hr 15 mins – 1hr 30 mins ☐ 1hr 30 mins – 2 hours ☐ More than 2 hrs ☐

13. When you checked in at this airport, did you use a: *(more than one answer possible)*

Self-service kiosk ☐ Check-in desk ☐ Internet check-in ☐
Phone check-in ☐ Bag drop-off desk ☐ Other ☐

14. What is your nationality/country of citizenship?

15. What is your country of residence? *(If different from above)*

16. Postal/Zip Code (residence): ☐☐☐☐☐☐☐☐

17. Are you ... Male ☐ Female ☐

18. What is your age group?

16-21 ☐ 22-25 ☐ 26-34 ☐ 35-44 ☐
45-54 ☐ 55-64 ☐ 65-75 ☐ 76 & over ☐

Additional Comments:

Thank you for completing this questionnaire. Please hand it back to the interviewer before boarding your flight.

Interviewer: Please indicate in the boxes below the traffic, the terminal and the gate of the interview *(Please write in block capitals)*

I or D	Quest. No	Airport	Terminal	Gate No.

English 2011

ASQ SURVEY **AIRPORT SERVICE QUALITY**

Dear Passenger

You have been randomly selected to take part in a survey which is part of this airport's continuing commitment to provide the highest levels of service. This survey is an ACI (Airports Council International) initiative; it helps airports understand how you, the customer, judge their performance and helps the airport improve services to meet your needs more effectively.

Your opinion of your airport experience today is essential to us. Please take a few minutes to complete this questionnaire and hand it back to the interviewer before your departure.

Write in Your Response or Place an 'X' in the Box Where Applicable

1. Airline:

Flight Number		Departure Date			Departure Time
				2011	:
Letters	Numbers	D D	M M		(24 hours e.g. 19:30)

2. Have you just made a connection/transfer at THIS Airport? Yes ☐ No ☐

3. Which airport are you flying to on the flight that you are about to board?

4. What is/was your MAIN reason for this air trip?

Business ☐ Leisure ☐ Other ☐

5. Which section of the aircraft are you travelling in?

First Class ☐ Business/Upper Class ☐ Economy/Tourist ☐

6. Including this trip, how many return trips by air have you made in the last 12 months? *(A departing and arriving flight counts as one trip)*

1-2 ☐ 3-5 ☐ 6-10 ☐ 11-20 ☐ 21 or more ☐

01

Write in Your Response or Place an 'X' in the Box Where Applicable

7. Based on your experience today, please rate THIS airport on each service item:

ACCESS	? Did not notice/use	5 ☺☺☺ Excellent	4 ☺☺ Very Good	3 ☺ Good	2 😐 Fair	1 ☹ Poor
A. Ground transportation to/from airport	☐	☐	☐	☐	☐	☐
B. Parking facilities	☐	☐	☐	☐	☐	☐
C. Value for money of parking facilities	☐	☐	☐	☐	☐	☐
D. Availability of baggage carts/trolleys	☐	☐	☐	☐	☐	☐
CHECK-IN (at this airport)						
E. Waiting time in check-in queue/line	☐	☐	☐	☐	☐	☐
F. Efficiency of check-in staff	☐	☐	☐	☐	☐	☐
G. Courtesy and helpfulness of check-in staff	☐	☐	☐	☐	☐	☐
PASSPORT/PERSONAL ID CONTROL						
H. Waiting time at passport/personal ID inspection	☐	☐	☐	☐	☐	☐
I. Courtesy and helpfulness of inspection staff	☐	☐	☐	☐	☐	☐
SECURITY						
J. Courtesy and helpfulness of security staff	☐	☐	☐	☐	☐	☐
K. Thoroughness of security inspection	☐	☐	☐	☐	☐	☐
L. Waiting time at security inspection	☐	☐	☐	☐	☐	☐
M. Feeling of being safe and secure	☐	☐	☐	☐	☐	☐
FINDING YOUR WAY						
N. Ease of finding your way through airport	☐	☐	☐	☐	☐	☐
O. Flight information screens	☐	☐	☐	☐	☐	☐
P. Walking distance inside the terminal	☐	☐	☐	☐	☐	☐
Q. Ease of making connections with other flights	☐	☐	☐	☐	☐	☐
AIRPORT FACILITIES						
R. Courtesy and helpfulness of airport staff *(excluding check-in, passport control and security)*	☐	☐	☐	☐	☐	☐
S. Restaurant/Eating facilities	☐	☐	☐	☐	☐	☐
T. Value for money of restaurant/eating facilities	☐	☐	☐	☐	☐	☐

Write in Your Response or Place an 'X' in the Box Where Applicable

AIRPORT FACILITIES	? Did not notice/use	5 ☺☺☺ Excellent	4 ☺☺ Very Good	3 ☺ Good	2 😐 Fair	1 ☹ Poor
U. Availability of bank/ATM facilities/ money changers	☐	☐	☐	☐	☐	☐
V. Shopping facilities	☐	☐	☐	☐	☐	☐
W. Value for money of shopping facilities	☐	☐	☐	☐	☐	☐
X. Internet access/Wi-fi	☐	☐	☐	☐	☐	☐
Y. Business/Executive lounges	☐	☐	☐	☐	☐	☐
Z. Availability of washrooms/toilets	☐	☐	☐	☐	☐	☐
AA. Cleanliness of washrooms/toilets	☐	☐	☐	☐	☐	☐
BB. Comfort of waiting/gate areas	☐	☐	☐	☐	☐	☐
AIRPORT ENVIRONMENT						
CC. Cleanliness of airport terminal	☐	☐	☐	☐	☐	☐
DD. Ambience of the airport	☐	☐	☐	☐	☐	☐
Overall satisfaction with the airport	☐	☐	☐	☐	☐	☐

8. Which of the items listed in Question 7 are MOST IMPORTANT to you at THIS airport?
(Please use the letters in front of the items for your rating)

1st: ☐ (e.g. P) 2nd: ☐ (e.g. K) 3rd: ☐ (e.g. V)

9. What was your BEST and WORST experience at THIS airport today?

Best: ☐

Worst: ☐

10. Arrivals services at this airport: *(Based on previous experience in last 3 months)*	? Did not notice/use	5 ☺☺☺ Excellent	4 ☺☺ Very Good	3 ☺ Good	2 😐 Fair	1 ☹ Poor
A. Passport/Personal ID inspection	☐	☐	☐	☐	☐	☐
B. Speed of baggage delivery service	☐	☐	☐	☐	☐	☐
C. Customs inspection	☐	☐	☐	☐	☐	☐

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