OAG® 2018 turnaround tables

Arriving and Departing OTP Variances for the World's Largest Airports

Based on full year data 2017

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About the Turnaround Tables

The Turnaround Tables are based on the variance between the average on-time performance (OTP) of flights arriving at an airport and the average on-time performance (OTP) of flights departing from the same airport. The variance can be either positive or negative depending on whether more flights arrive late or depart late.

Airports which achieve a higher OTP for departing flights than arriving flights are those airports which are making up for delays of inbound flights through the efficiency of aircraft turnaround processes. This may be due, in part, to the activities of the airlines themselves, but airports which are successful in returning delayed aircraft to their scheduled operating times bring benefits to passengers and airline customers alike.

Qualifying Criteria

The Turnaround Tables are based on the Top 250 airports worldwide by the number of scheduled flights. The OAG schedules database must have flight status data for at least 80% of all scheduled flights operated by an airport, and 12 months of data.

Each table represents the 10 largest airports in each world region by number of scheduled flights and ranks them from those with the greatest positive variance between arriving and departing OTP to those with the largest negative variance.

OAG's definition of on-time performance is flights that arrive or depart within 14 minutes and 59 seconds (under 15 minutes) of their scheduled arrival/departure times. Cancellations are also included.

OAG's on-time performance data is based on 57 million flight records for the full year 2017. In this analysis, a 'record' is defined as a flight for which OAG has either a 'code' or an actual time of arrival or departure.

OTP data is not included for other categories of flights such as charter and non-passenger operations.

General Commentary

It would be easy to assume that airports which are best at getting schedules back on track were those which have ample excess capacity so that finding alternate slots or gates for aircraft which arrive late is easier. However, the tables show there is no simple relationship between congested airports and those that are less able to turn aircraft around quickly. While Jakarta (CGK), Dubai (DXB) and Paris Charles de Gaulle (CDG) each have a negative relationship between arriving and departing OTP (i.e. more flights depart late than arrive late), other congested airports such as Beijing (PEK) and Tokyo (HND) have a positive relationship (i.e. on average they make up for delays).

Factors Influencing On-Time Performance

- Airports with ample capacity may find it easier to find alternate gates for flights which arrive late, and new slots for those aircraft to depart.
- Congested airports may have more difficulty getting late-arriving flights back on schedule due to a lack of gates or slots.
- Some airports and airlines may be better than others at handling late arriving flights, and using their operational procedures to get those aircraft back on schedule.
- Airports and airlines for which connecting traffic is a sizeable and important part of their business may choose to delay departures so that connecting passengers don't miss connections.
- Airports and airlines for which fast aircraft turnaround times are an important part of their business model may experience delays which have a knock-on effect to subsequent flights, due to insufficient time to recover.

ASIA PACIFIC (including Southwest Pacific)

Top 10 Biggest Airports

Ranked by turnaround variance

Delhi (DEL) achieves the best turnaround performance in the region, with a variance of +10.1 between arriving and departing OTP. It also has the third best departing OTP among this group of airports.

Tokyo Haneda (HND) has the highest arriving OTP of the group but still manages to improve on that for departing flights with a variance of +4.9 percentage points between arriving and departing OTP.

Jakarta Airport (CGK) has a relatively high proportion of late-arriving flights with OTP at only 67.2%, and being congested, it is a challenge to return these flights to their schedule. As a result, Jakarta has a negative variance of -10.7 percentage points between OTP for arriving and departing flights.

Rank	Code	Airport Name	Total Flights	Arriving OTP %	Departing OTP %	Variance %
1	DEL	Delhi	427,062	64.3	74.4	10.1
2	PEK	Beijing Capital	590,697	59.7	66.8	7.1
3	SIN	Singapore Changi	356,023	77.2	84.0	6.7
4	CAN	Guangzhou	450,691	62.3	67.7	5.4
5	HND	Tokyo Haneda	498,010	84.5	89.4	4.9
6	KUL	Kuala Lumpur	384,047	65.0	67.7	2.7
7	BKK	Bangkok Suvarnabhumi	341,567	70.8	69.7	-1.1
8	HKG	Hong Kong	358,242	68.3	64.7	-3.6
9	ICN	Seoul Incheon	324,387	69.2	63.4	-5.8
10	CGK	Jakarta	481,780	67.2	56.4	-10.7

NORTH AMERICA

Top 10 Biggest Airports

Ranked by turnaround variance

Toronto Airport (YYZ) achieves the highest positive variance between arriving and departing OTP among the Top 10 North American airports at +6.9 percentage points. However, both the arriving OTP and departing OTP are lower than for any other airport in the group. Toronto is clearly working hard to make up for the relatively poor OTP of arriving flights.

Atlanta (ATL), a Delta Air Lines hub and the largest airport in these tables, has the highest arriving OTP of the Top 10 airports in North America. Departing OTP is 3.3 percentage points lower, a relatively small variance given the scale of the operation.

Rank	Code	Airport Name	Total Flights	Arriving OTP %	Departing OTP %	Variance %
1	YYZ	Toronto	437,177	64.3	71.2	6.9
2	SFO	San Francisco	429,394	69.3	74.2	4.9
3	JFK	New York JFK	431,639	73.0	75.3	2.4
4	LAX	Los Angeles	641,468	74.0	75.1	1.1
5	ORD	Chicago O'Hare	840,397	80.1	79.7	-0.3
6	CLT	Charlotte	519,284	82.2	81.7	-0.5
7	DFW	Dallas/Fort Worth	623,415	81.9	81.0	-0.9
8	IAH	Houston	432,159	82.8	81.8	-1.0
9	DEN	Denver	551,419	83.1	81.3	-1.8
10	ATL	Atlanta	857,850	84.2	80.9	-3.3

LATIN AMERICA

Top 10 Biggest Airports

Ranked by turnaround variance

While the largest airports in Latin America typically handle fewer scheduled aircraft operations than the largest airports in other regions, on-time performance is generally good and there are only small variances between arriving and departing OTP.

Rio de Janeiro (GIG) heads the Top 10 airports for positive variance, with 85.8% of departing flights getting away on time.

Mexico Airport (MEX), the largest airport in Latin America, also has a higher proportion of flights leaving on time than arriving on time, by two percentage points.

In general, the Top 10 airports in Latin America have relatively small variances between arriving OTP and departing OTP. Buenos Aires (AEP) has the largest negative variance but this is only by 3.3 percentage points.

Rank	Code	Airport Name	Total Flights	Arriving OTP %	Departing OTP %	Variance %
1	GIG	Rio de Janeiro	113,077	82.9	85.8	2.9
2	PTY	Panama City	134,155	87.4	90.1	2.8
3	MEX	Mexico City	402,683	80.0	82.5	2.5
4	VCP	Sao Paulo Viracopos	98,497	81.4	83.8	2.4
5	BSB	Brasilia	125,930	84.8	85.0	0.2
6	GRU	Sao Paulo Guarulhos	244,229	79.7	79.8	0.1
7	SCL	Santiago	138,311	80.7	80.0	-0.6
8	BOG	Bogota	265,969	69.4	68.4	-1.0
9	CGH	Sao Paulo Congonhas	176,138	83.0	81.8	-1.2
10	AEP	Buenos Aires Aeroparque J Newbury	123,718	75.7	72.4	-3.3

MIDDLE EAST AND AFRICA

Top 10 Biggest Airports

Ranked by turnaround variance

Addis Ababa (ADD) has the most positive variance between arriving and departing OTP among the Top 10 airports in this region, at 5.6 percentage points. With a departing OTP of over 80%, the airport is proving to be an effective hub airport.

Both Kuwait Airport (KWI) and Dubai International Airport (DXB) have strong negative variances between OTP for arriving and departing flights.

Rank	Code	Airport Name	Total Flights	Arriving OTP %	Departing OTP %	Variance %
1	ADD	Addis Ababa	85,916	75.1	80.6	5.6
2	DOH	Doha	204,828	82.6	87.8	5.2
3	RUH	Riyadh	185,312	73.8	78.0	4.2
4	BAH	Bahrain	80,395	81.0	84.8	3.8
5	NBO	Nairobi	91,499	75.1	77.1	2.0
6	CPT	Cape Town	87,867	86.0	87.2	1.2
7	CAI	Cairo	138,395	74.3	72.3	-2.1
8	SHJ	Sharjah	72,671	80.5	69.1	-11.5
9	DXB	Dubai	400,820	80.6	59.7	-20.9
10	KWI	Kuwait	105,636	79.8	46.8	-33.0

EUROPE

Top 10 Biggest Airports

Ranked by turnaround variance

With the exception of Moscow Sheremetyevo Airport (SVO), all of the Top 10 airports in Europe have a negative variance between arriving and departing OTP.

However, departing OTP at these European airports is still frequently better than airports in some other regions, most notably in Asia Pacific.

Despite the runway constraints it operates under, Europe's biggest airport, Heathrow (LHR), manages to keep departing flight OTP to within 2% of arriving OTP. Madrid (MAD) also has a minimal negative variance, with just over 1% between arriving and departing OTP.

Rank	Code	Airport Name	Total Flights	Arriving OTP %	Departing OTP %	Variance %
1	SVO	Moscow Sheremetyevo	271,709	76.0	86.5	10.6
2	MAD	Madrid	368,958	84.4	83.3	-1.1
3	LHR	London Heathrow	480,085	75.7	73.8	-1.9
4	IST	Istanbul Ataturk	434,078	75.7	72.2	-3.5
5	MUC	Munich	382,307	80.4	76.4	-4.1
6	AMS	Amsterdam	469,161	79.2	74.3	-4.9
7	FRA	Frankfurt	447,355	79.7	73.4	-6.3
8	BCN	Barcelona	309,257	82.4	73.5	-8.9
9	FCO	Rome Fiumicino	294,635	81.2	71.7	-9.5
10	CDG	Paris Charles de Gaulle	443,964	76.8	65.2	-11.6

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