

Global Aviation Monitor (GAM)

Analysis and Short Term
Outlook of Global, European
and German Air Transport

December 2015



Main Results of Global Air Transport Supply Analysis and Outlook

Background:

- Covers about 3,500 airports worldwide
- Covers about 850 airlines worldwide
- Air transport supply of 2015: More than 34 M flights (non-stop) worldwide, new record value
- Busiest month 2015: July with 3.08 M flights
- Air traffic increases slowly since April 2013
- Forecasting methodology: Time series analysis

Analysis: January 2015 – December 2015

Global

- December 2015: 2.8 M flights supplied (+3.6%)
- About 5% growth per year before financial crisis 2008/2009, then a rapid decline of more than 9% between February 2008 and February 2009, followed by a rather slow recovery until 2011 (7.2% increase between February 2009 and February 2011). Since 2011, the number of flights grows only very slowly; stagnation between September 2012 and March 2013, small growth rates since April 2013; growth rates of around 3% since March 2015
- Airports: Heterogeneous development of no. of flights offered; strong growth e.g. at Shanghai Pudong, Tokyo Haneda, Jakarta, Dubai or Istanbul Ataturk (between +5% and +8%)
- Airlines: Heterogeneous development of no. of flights offered; strong growth e.g. of Turkish Airlines and Ryanair; American Airlines merger with US Airways

World Regions, Europe

- Overall small increase since April 2013; in Europe, small traffic increase since July 2013; in Asia continued growth; no growth in North America
- Airports: Heterogeneous developments of no. of flights offered; strong increase at Istanbul Sabiha Gokcen and Dublin however decline at some airports, e.g. Moscow Domodedovo
- Airlines: Heterogeneous developments of flights, some airlines, e.g. Turkish Airlines with strong growth, some growth in the low cost segment, e.g. Wizz, Ryanair and easyjet; new: Eurowings (former Lufthansa and germanwings flights in Germany and Europe are now operated by Eurowings except at Frankfurt and Munich; long-haul low cost flights from Cologne), some airlines, e.g. Air Berlin and Air France with decrease

Germany

- Airports: Some bigger airports, e.g. Cologne, Stuttgart, and some small airports e.g. Memmingen, with traffic growth; strong growth at Berlin Schoenefeld because of strong growth of Ryanair; some German airports with downward trend, e.g. Leipzig and Bremen
- Airlines: Heterogeneous developments of number of flights offered; strong growth of e.g. Ryanair, easyjet, Germania and Wizz; some airlines, e.g. Air Berlin and Air France, with decreasing traffic

Outlook: January 2016 – March 2016

Global

- For the next few months, a small traffic growth of 2-4% is expected

World Regions, Europe

- For the next few months, a small traffic growth of 2-4% is expected

Germany

- For the next few month, a small traffic growth of 1-3% is expected

| Rank | Airport | 12/2015 | Growth rate |
|------|--------------------------------------|---------|-------------|
| 1 | Atlanta Hartsfield-Jackson Intl | 35.552 | 3,0 |
| 2 | Chicago O'Hare International | 34.367 | -2,7 |
| 3 | Dallas/Fort Worth Intl | 27.834 | -2,9 |
| 4 | Los Angeles International | 25.461 | 0,7 |
| 5 | Beijing Capital | 25.206 | 0,7 |
| 6 | Denver Intl | 22.126 | -1,3 |
| 7 | Charlotte | 21.247 | -1,4 |
| 8 | Houston George Bush Intercontinental | 20.000 | -2,4 |
| 9 | Tokyo Haneda | 19.334 | 6,3 |
| 10 | Shanghai Pudong International | 19.224 | 5,0 |
| 11 | Istanbul Ataturk | 18.757 | 7,9 |
| 12 | London Heathrow | 18.607 | -0,5 |
| 13 | Jakarta Soekarno-Hatta | 18.454 | 6,4 |
| 14 | New York J F Kennedy International | 18.148 | 4,3 |
| 15 | Paris Charles de Gaulle | 17.493 | 0,8 |
| 16 | Mexico City Juarez International | 17.083 | 3,9 |
| 17 | Hong Kong International | 17.012 | 4,7 |
| 18 | Amsterdam | 16.998 | 4,6 |
| 19 | Dubai | 16.959 | 5,9 |
| 20 | Guangzhou | 16.908 | -2,0 |
| 21 | Toronto Lester B Pearson Intl | 16.731 | 1,4 |
| 22 | San Francisco International | 16.633 | -1,2 |
| 23 | Frankfurt International | 16.487 | -0,1 |
| 24 | Phoenix Sky Harbor Intl . | 16.434 | 1,4 |
| 25 | Newark Liberty International | 16.301 | 0,0 |

Tab. 1: Number of monthly Take-offs at the biggest Airports in the World

| Rank | Airport | 12/2015 | Growth rate |
|------|--------------------------|---------|-------------|
| 1 | Frankfurt International | 16.487 | -0,1 |
| 2 | Munich International | 12.995 | -0,9 |
| 3 | Dusseldorf International | 6.811 | -2,2 |
| 4 | Berlin Tegel | 6.754 | 3,3 |
| 5 | Hamburg | 4.950 | -2,3 |
| 6 | Stuttgart | 3.370 | 5,6 |
| 7 | Cologne/Bonn K.A. | 3.122 | 8,2 |
| 8 | Berlin Schoenefeld | 2.901 | 42,2 |
| 9 | Hanover | 1.618 | -0,9 |
| 10 | Nuremberg | 1.242 | -3,3 |
| 11 | Bremen | 850 | -7,0 |
| 12 | Dresden | 718 | -9,5 |
| 13 | Leipzig/Halle | 670 | -14,8 |
| 14 | Frankfurt Hahn | 603 | -2,9 |
| 15 | Dortmund | 485 | -3,0 |
| 16 | Dusseldorf Niederrhein | 301 | -15,0 |
| 17 | Munster | 283 | 1,8 |
| 18 | Karlsruhe/Baden Baden | 236 | 5,4 |
| 19 | Saarbrücken Ensheim | 195 | -12,2 |
| 20 | Memmingen | 177 | 14,9 |
| 21 | Friedrichshafen | 146 | -39,2 |
| 22 | Paderborn | 128 | -22,0 |
| 23 | Mannheim | 84 | 13,5 |
| 24 | Rostock-Laage | 47 | 11,9 |
| 25 | Erfurt | 38 | 18,8 |

Tab. 3: Number of monthly Take-offs at the biggest Airports in Germany

| Rank | Airport | 12/2015 | Growth rate |
|------|-----------------------------------|---------|-------------|
| 1 | Istanbul Ataturk | 18.757 | 7,9 |
| 2 | London Heathrow | 18.607 | -0,5 |
| 3 | Paris Charles de Gaulle | 17.493 | 0,8 |
| 4 | Amsterdam | 16.998 | 4,6 |
| 5 | Frankfurt International | 16.487 | -0,1 |
| 6 | Madrid Barajas | 14.109 | 6,1 |
| 7 | Munich International | 12.995 | -0,9 |
| 8 | Rome Fiumicino | 11.396 | 0,1 |
| 9 | Moscow Sheremetyevo International | 10.170 | 6,3 |
| 10 | Barcelona | 9.635 | 5,7 |
| 11 | London Gatwick | 9.427 | 6,3 |
| 12 | Copenhagen | 9.102 | 11,4 |
| 13 | Paris Orly | 9.080 | 0,1 |
| 14 | Zurich | 8.749 | -0,3 |
| 15 | Istanbul Sabiha Gokcen | 8.470 | 26,8 |
| 16 | Moscow Domodedovo | 8.225 | -15,0 |
| 17 | Vienna | 8.128 | -1,2 |
| 18 | Oslo | 8.021 | 1,9 |
| 19 | Brussels | 7.723 | 3,1 |
| 20 | Stockholm Arlanda | 7.628 | 2,7 |
| 21 | Dublin | 7.095 | 10,9 |
| 22 | Dusseldorf International | 6.811 | -2,2 |
| 23 | Berlin Tegel | 6.754 | 3,3 |
| 24 | Lisbon | 6.288 | 6,6 |
| 25 | Helsinki | 5.959 | 5,2 |

Tab. 2: Number of monthly Take-offs on the biggest Airports in Europe

Source: OAG 2014/15, DLR 2014/15

| Rank | Airline | 12/2015 | Growth rate |
|------|------------------------------|---------|-------------|
| 1 | American Airlines | 193.475 | 79,0 |
| 2 | Delta Air Lines | 150.574 | 1,6 |
| 3 | United Airlines | 137.939 | -5,7 |
| 4 | Southwest Airlines | 109.595 | 7,1 |
| 5 | China Eastern Airlines | 55.576 | 11,4 |
| 6 | China Southern Airlines | 55.488 | -3,1 |
| 7 | Air Canada | 46.319 | -0,5 |
| 8 | Ryanair | 43.637 | 18,7 |
| 9 | Turkish Airlines | 38.731 | 11,8 |
| 10 | Air China | 37.298 | 7,3 |
| 11 | Lufthansa German Airlines | 37.114 | -2,2 |
| 12 | easyJet | 34.061 | 5,0 |
| 13 | All Nippon Airways | 32.278 | -5,7 |
| 14 | Alaska Airlines | 29.479 | 6,7 |
| 15 | JetBlue Airways Corporation | 28.571 | 6,4 |
| 16 | Gol Transportes Aereos | 27.901 | -4,6 |
| 17 | British Airways | 27.856 | 2,3 |
| 18 | Air France | 27.737 | -5,6 |
| 19 | Azul | 24.174 | -1,0 |
| 20 | Qantas Airways | 23.314 | 1,1 |
| 21 | Aeroflot Russian Airlines | 23.087 | 2,0 |
| 22 | Japan Airlines International | 22.874 | 0,1 |
| 23 | AVIANCA | 22.646 | -2,1 |
| 24 | TAM Linhas Aereas | 21.467 | -9,6 |
| 25 | SAS Scandinavian Airlines | 21.179 | 3,4 |

Tab. 4: Number of monthly Take-offs by the biggest Airlines in the World

| Rank | Airline | 12/2015 | Growth rate |
|------|---------------------------|---------|-------------|
| 1 | Lufthansa German Airlines | 22.512 | -2,0 |
| 2 | Air Berlin | 8.081 | -5,7 |
| 3 | germanwings | 5.922 | -22,2 |
| 4 | Ryanair | 2.741 | 61,4 |
| 5 | easyJet | 2.036 | 3,9 |
| 6 | Eurowings | 2.001 | --- |
| 7 | Turkish Airlines | 1.330 | 12,6 |
| 8 | British Airways | 1.174 | 1,6 |
| 9 | KLM-Royal Dutch Airlines | 1.174 | -2,8 |
| 10 | Air France | 1.066 | -3,7 |
| 11 | Swiss | 967 | 3,1 |
| 12 | Condor Flugdienst | 900 | -5,3 |
| 13 | SAS Scandinavian Airlines | 856 | -2,7 |
| 14 | Austrian Airlines AG | 771 | 5,3 |
| 15 | Aeroflot Russian Airlines | 722 | -1,5 |
| 16 | Wizz Air | 587 | 32,5 |
| 17 | TUIfly | 570 | 21,3 |
| 18 | Germania | 507 | 65,1 |
| 19 | SunExpress | 427 | 24,1 |
| 20 | Alitalia | 411 | 58,7 |
| 21 | Flybe | 402 | 15,2 |
| 22 | Pegasus Airlines | 383 | 26,0 |
| 23 | Iberia | 369 | 5,4 |
| 24 | Air Dolomiti | 341 | -24,6 |
| 25 | United Airlines | 337 | -0,9 |

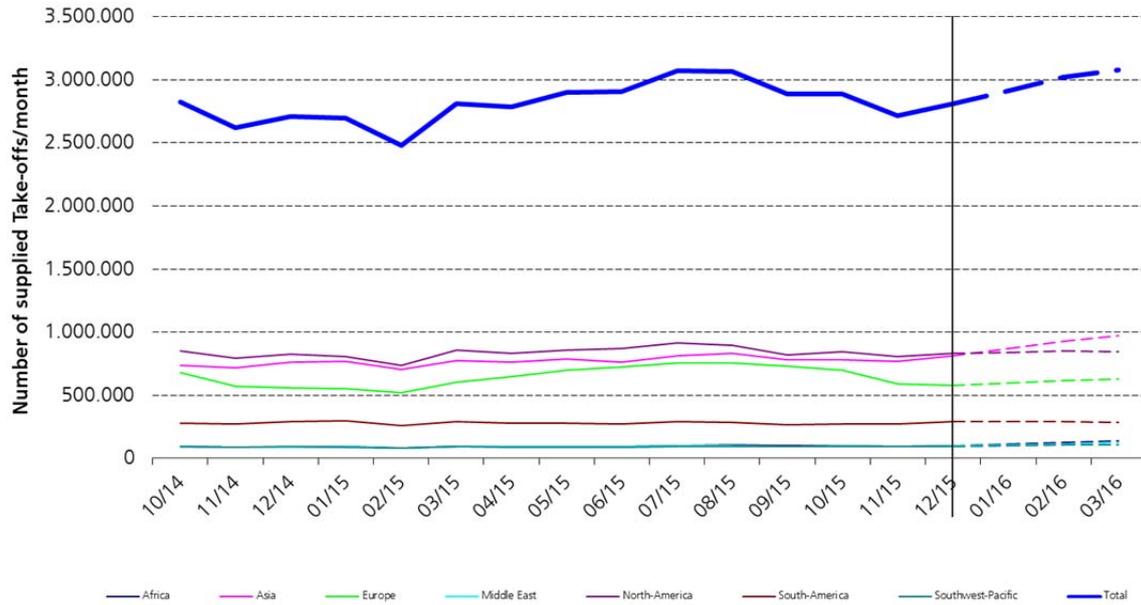
Tab. 6: Number of monthly Take-offs by the biggest Airlines in Germany from German airports

| Rank | Airline | 12/2015 | Growth rate |
|------|---------------------------|---------|-------------|
| 1 | Ryanair | 42.960 | 19,0 |
| 2 | Lufthansa German Airlines | 33.909 | -2,3 |
| 3 | Turkish Airlines | 33.708 | 12,7 |
| 4 | easyJet | 33.453 | 5,2 |
| 5 | Air France | 24.248 | -6,2 |
| 6 | British Airways | 22.743 | 3,0 |
| 7 | SAS Scandinavian Airlines | 20.866 | 3,2 |
| 8 | Aeroflot Russian Airlines | 19.496 | 2,3 |
| 9 | KLM-Royal Dutch Airlines | 15.577 | 0,6 |
| 10 | Alitalia | 15.015 | 15,2 |
| 11 | Iberia | 14.268 | 6,9 |
| 12 | Flybe | 13.564 | 1,4 |
| 13 | Pegasus Airlines | 11.909 | 23,8 |
| 14 | Air Berlin | 11.831 | -7,0 |
| 15 | Vueling Airlines | 10.877 | 4,2 |
| 16 | Swiss | 10.739 | 2,5 |
| 17 | Wideroe's Flyveselskap | 10.600 | 1,0 |
| 18 | Wizz Air | 9.835 | 24,2 |
| 19 | Norwegian Air Shuttle | 8.580 | -25,8 |
| 20 | germanwings | 8.290 | -27,2 |
| 21 | TAP Air Portugal | 8.244 | 1,2 |
| 22 | Finnair | 8.181 | 16,1 |
| 23 | Austrian Airlines AG | 8.005 | -0,1 |
| 24 | Aer Lingus | 7.070 | 5,0 |
| 25 | HOP! | 6.755 | 7,2 |

Tab. 5: Number of monthly Take-offs by the biggest Airlines in Europe from European airports

Source: OAG 2014/15, DLR 2014/15

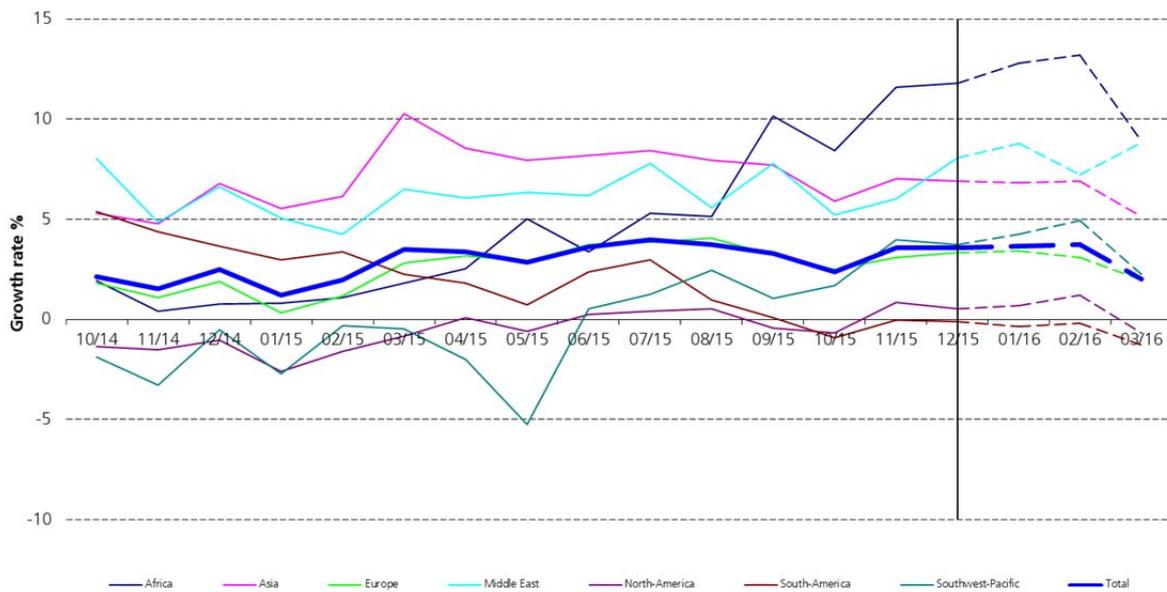
Development of the Global Air Transport Supply



Source: OAG 2014/2015, DLR 2014/2015

Fig. 1: Development of the Global Air Transport Supply

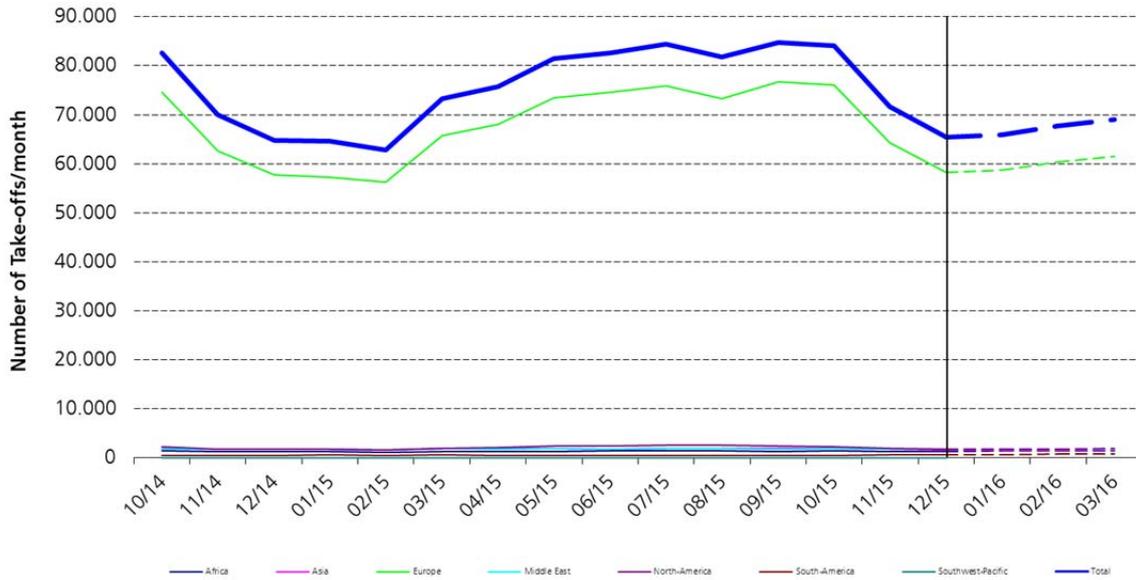
Changes in the Global Air Transport Supply



Source: OAG 2014/2015, DLR 2014/2015

Fig. 2: Changes in the Global Air Transport Supply

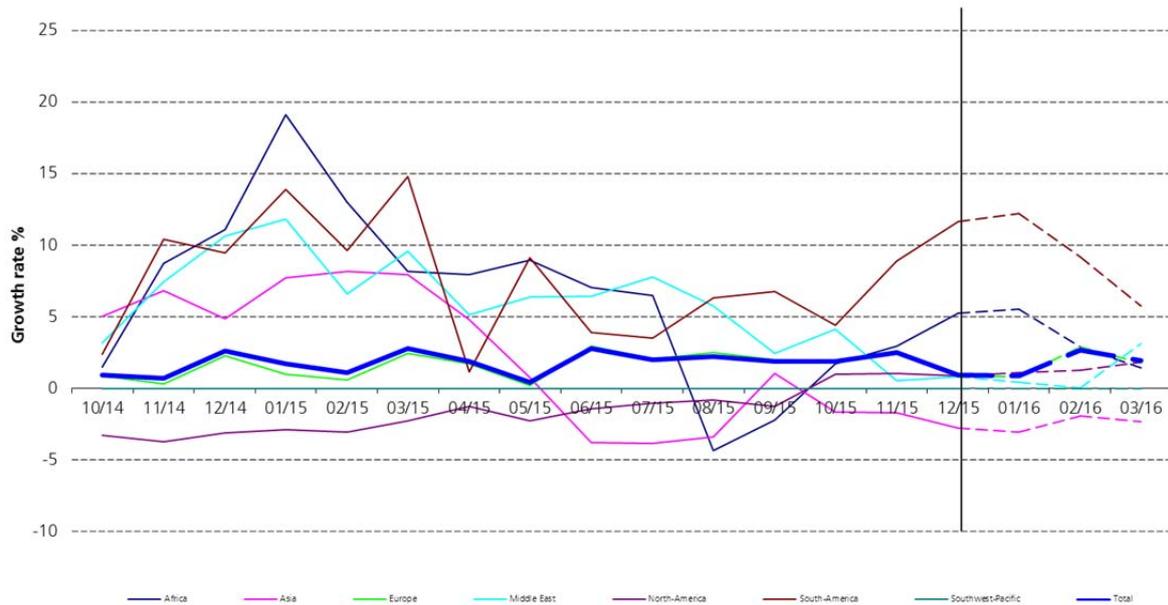
Development of the German Air Transport Supply



Source: OAG 2014/2015, DLR 2014/2015

Fig. 3: Development of the German Air Transport Supply

Changes in the German Air Transport Supply



Source: OAG 2014/2015, DLR 2014/2015

Fig. 4: Changes in the German Air Transport Supply

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