

# TSUG

Transport Statistics Users Group

## Monthly Review: February 2017

This month's review has a look at the air-rail competition in both the UK and the US. A subsequent piece examines rail's mode share as a means of getting to London and Manchester airports. We've also got Kit Mitchel's statistics digest and the write-up of the Q&A session from December's seminar on comparing and integrating different sources of data.

Calum Leslie and Andrew Sharp

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## Dates of the next TSUG seminars

Date	Venue	Topic
Wed-15-Mar	TfL	Maritime
Wed-19-Apr	TfL	Road Safety Data

The seminars can be booked through the TSUG website at [www.tsug.org.uk/seminars.php](http://www.tsug.org.uk/seminars.php)

## Statistics Digest

This digest lists major sets of statistics that have been released recently or which are due to be released. Regular monthly and quarterly releases are not included. The web links given allow free downloads of the documents cited.

Recent releases from Department for Transport	
7 Dec	Domestic waterborne freight 2015 <a href="https://www.gov.uk/government/statistics/domestic-waterborne-freight-2015">https://www.gov.uk/government/statistics/domestic-waterborne-freight-2015</a>
8 Dec	Transport statistics Great Britain <a href="https://www.gov.uk/government/statistics/transport-statistics-great-britain-2016">https://www.gov.uk/government/statistics/transport-statistics-great-britain-2016</a>
15 Dec	National Travel Survey 2015 infographic <a href="https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/551245/nts2015-infographic.pdf">https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/551245/nts2015-infographic.pdf</a>
12 Jan	Provisional Road freight statistics: July 2015 to June 2016 <a href="https://www.gov.uk/government/statistics/road-freight-statistics-july-2015-to-june-2016">https://www.gov.uk/government/statistics/road-freight-statistics-july-2015-to-june-2016</a>
25 Jan	Seafarer statistics: 2016 <a href="https://www.gov.uk/government/statistics/seafarer-statistics-2016">https://www.gov.uk/government/statistics/seafarer-statistics-2016</a>
26 Jan	British social attitudes survey: 2015 <a href="https://www.gov.uk/government/statistics/british-social-attitudes-survey-2015">https://www.gov.uk/government/statistics/british-social-attitudes-survey-2015</a>
Feb	Reported road casualties in Great Britain estimates, involving illegal alcohol levels: 2015 <a href="https://www.gov.uk/government/collections/road-accidents-and-safety-statistics">https://www.gov.uk/government/collections/road-accidents-and-safety-statistics</a>

Forthcoming releases from Department for Transport	
2 Feb	Reported road casualties in Great Britain estimates, involving illegal alcohol levels: 2015 <a href="https://www.gov.uk/government/collections/road-accidents-and-safety-statistics">https://www.gov.uk/government/collections/road-accidents-and-safety-statistics</a>
2 Feb	Renewable Transport Fuel Obligation: Year 8 (2015 to 2016) report 6 (15 April 2015 to 14 April 2016 supply) <a href="https://www.gov.uk/government/collections/biofuels-statistics">https://www.gov.uk/government/collections/biofuels-statistics</a>
2 Feb	Renewable Transport Fuel Obligation: Year 9 (2016 to 2017) report 2 (15 April 2016 to 14 April 2017 supply) <a href="https://www.gov.uk/government/collections/biofuels-statistics">https://www.gov.uk/government/collections/biofuels-statistics</a>
9 Feb	Provisional road traffic estimates, Great Britain: January 2016 to December 2016 <a href="https://www.gov.uk/government/collections/road-traffic-statistics">https://www.gov.uk/government/collections/road-traffic-statistics</a>
Feb	Travel time measures for local 'A' roads, England: January 2016 to December 2016 <a href="https://www.gov.uk/government/collections/road-congestion-and-reliability-statistics">https://www.gov.uk/government/collections/road-congestion-and-reliability-statistics</a>
Feb	Travel time measures for the strategic road network: January 2016 to December 2016 <a href="https://www.gov.uk/government/collections/road-congestion-and-reliability-statistics">https://www.gov.uk/government/collections/road-congestion-and-reliability-statistics</a>
22 Feb	Provisional sea passenger statistics: 2016

## Forthcoming releases from Department for Transport

	<a href="https://www.gov.uk/government/collections/maritime-and-shipping-statistics">https://www.gov.uk/government/collections/maritime-and-shipping-statistics</a>
Mar	Road conditions in England: 2016 <a href="https://www.gov.uk/government/collections/road-network-size-and-condition">https://www.gov.uk/government/collections/road-network-size-and-condition</a>
Mar	Port freight statistics: October to December 2016 <a href="https://www.gov.uk/government/collections/maritime-and-shipping-statistics">https://www.gov.uk/government/collections/maritime-and-shipping-statistics</a>
Mar	Shipping fleet statistics: 2016 <a href="https://www.gov.uk/government/collections/maritime-and-shipping-statistics">https://www.gov.uk/government/collections/maritime-and-shipping-statistics</a>
Apr	Journey time statistics: 2015 <a href="https://www.gov.uk/government/collections/journey-time-statistics">https://www.gov.uk/government/collections/journey-time-statistics</a>
Apr	Vehicle licensing statistics: 2016 <a href="https://www.gov.uk/government/collections/vehicles-statistics">https://www.gov.uk/government/collections/vehicles-statistics</a>

## Recent releases by Eurostats

13 Jan	Road freight statistics <a href="http://ec.europa.eu/eurostat/statistics-explained/index.php/Road_freight_transport_statistics">http://ec.europa.eu/eurostat/statistics-explained/index.php/Road_freight_transport_statistics</a>
23 Jan	Passenger Transport Statistics <a href="http://ec.europa.eu/eurostat/statistics-explained/index.php/Passenger_transport_statistics">http://ec.europa.eu/eurostat/statistics-explained/index.php/Passenger_transport_statistics</a>

## Seminar Write-up

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Members can find past seminar slides here: [http://www.tsug.org.uk/past\\_seminars.php](http://www.tsug.org.uk/past_seminars.php)

### Comparing and Integrating Various Sources of Data, December 2016

The question and answer session from December's seminar on comparing and integrating various sources of data is included below:

#### First Session with Peter White

**David Starkie** said that there has traditionally been a lack of coach data and asked if things have changed.

Peter said not really. The DfT ceased collecting operator data on express coach ridership many years ago. Data available thus depends on the willingness of National Express and other large operators to divulge information. The NTS gives an estimate but coach traffic is a very small share, hence year-by-year indicators may not be meaningful. Only in the CAA data for airport access are sample numbers for coach use large.

Another attendee asked if coach as a mode is being underplayed as a result of the lack of data. Peter said it is.

**Kit Mitchell** asked if the low (i.e. less than 10 trips) use of weekly tickets (leading to a shift to pay-as-you-go or contactless use), as described by the speaker, depends on the amount of home working, perhaps in combination with some of the other factors mentioned by the speaker.

Peter agreed, noting also that the fare structure in London is such that the discount for weekly tickets is less than in many other systems, making it worthwhile even for a five-days-a-week commuter to shift to PAYG.

#### Second Session with Kit Mitchell

## Seminar Write-up

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**Gordon Stokes** asked if the differences between the NTS and DVLA figures on licences are influenced by a lower response rate of some groups of NTS respondents, such as young men. Kit agreed.

**David Starkie** asked, as a follow-on to the above question, if it could be that some of the other answers are being affected by the age of speakers and their differential response rates. Perhaps those approaching their 70s have no disincentive to dissemble. General discussion followed.

**Peter White** said that biased statistics on the number of driving licences in use in the UK could be related to a) the number of driving licences being underestimated by not including foreign drivers whose driving licences would not be known to DVLA and b) by those holding driving licences but not driving, again with differential rates by age.

### Third Session with Peter Gordon

**Simon Lister** asked about the real value of the IPS, given that there is a widespread view that the sample is not large enough, especially to allow drilling down to the kind of detail that has been discussed.

Peter said that the IPS is useful but depends on the uses to which it is put. The real need, perhaps, was for a proper travel diary along the lines of the NTS. David Metz commented that the sample is already large and probably as large as the government is likely to pay for. Kit Mitchell commented that long-term trends at relatively high level (as he had discussed in his presentation) were the right way to use such a survey. There was a general discussion about the pros and cons of IPS and one point that was made was that since it was based on departure lounge populations the time of a passenger's arrival there could be crucial. Peter White made similar points – especially about the effect of a traveller from Britain visiting several countries in the same trip, and David Starkie drew some lessons from the Airport Commission and biases in data.

### General Q&A Session

**David Metz** said that what is needed is OD data, which is generally available for most modes but is crucially missing for road travel. He asked if we have any solutions for finding it.

A number of suggestions centred on using mobile phone data and one speaker said that most planners are now buying in mobile phone data; the Irish use it in their statistics

**Peter White** wondered if anybody had further thoughts on the possible impact of yield management schemes on revenue data, particularly where people buy several return tickets (as illustrated in his presentation).

No very specific ideas came up, but this led into a discussion about yield management and the relationship with load factor and average price, and whether maximising load factor was profit maximising. John Carr raised the question of the link between yield management and the earlier use of standby fares, which might be a more rational reflection of short-run marginal costs of otherwise unused capacity. Business travellers and the self-employed might be sensitive to price differentials between open returns and book-ahead singles.

### Berlin's local transport



Berlin S-Bahn at Charlottenburg

From Tramways & Urban Transit

The local transport network in Berlin carried 1.01bn passengers in 2015 (up from 977.8m in 2014 and 947.3m in 2013). Of these, 534.5m used the U-Bahn, 418.5m bus and ferry and 187.1m trams. Passenger kilometres were 4.4bn (4.26bn in 2014 and 4.16bn in 2013). The U-Bahn saw 2.43bn (2.35 in 2014, 2.28 in 2013) and the tram system 575.6m in 2015 (557.1m in 2014, 538.1m in 2013).

### Bike counting in Santa Monica

Lightly edited from [www.scpr.org](http://www.scpr.org).

The Californian city of Santa Monica launched a new system to count bikes on one of its major streets just before Christmas as part of its efforts to make the city more friendly to bikes, pedestrians and transit riders. The system uses a specialised sensor to detect people riding bikes on a section of Main Street near Olympic Boulevard and displays a daily and yearly count in real time to passers-by. "When people see themselves reflected back and they see themselves being counted, they know that it matters what they're doing, that their choices are important," said city planner Francie Stefan. She hopes the positive reinforcement will encourage more biking.

The bike counter is among the first of its kind in the Los Angeles area, where car traffic has been well-documented by sensors on streets and highways for decades. Data on car traffic guides decisions on road design and development, but little information has existed on pedestrian and bike traffic in most places. Stefan said the information collected by the bike counter will better inform planners on Santa Monica needs for future cycling infrastructure such as bike lanes. "What we count is what we plan for, and what we measure is what we pay attention to," said Stefan. Until now, she said, cars have had higher priority in most transportation planning, something she hopes is changing.

The Expo Line light rail section to Santa Monica which [opened in May 2016](#) made the city a hub for car-free travel, and the city has pursued measures to make its already walkable downtown even more bike and pedestrian-friendly.

Santa Monica was the first city in Los Angeles County to launch [bike sharing in 2015](#). It has been improving its bike safety infrastructure with brightly painted bike lanes and crossings, and protected cycle tracks. Census data shows Santa Monica's rate of bike commuting is already among the highest in the county. It has a 3.8% share of rides to work compared to the average 2% in the county.

A bike counter was installed at UCLA in 2013, but the technology is more common in biking hubs like Portland and Copenhagen. Stefan hopes collecting data on bikes and pedestrians will become more widespread in the county as it moves toward a less car-centric future.

### London-Edinburgh air rail competition

Edited from Travel & Tour World [http://www.travelandtourworld.com/news/article/one-million-virgin-trains-passengers-travelled-between-london-and-edinburgh-in-2016/?utm\\_source=iContact&utm\\_medium=email&utm\\_campaign=Travel%20And%20Tour%20World&utm\\_content=Brexit%2C+currency+and+oil+price](http://www.travelandtourworld.com/news/article/one-million-virgin-trains-passengers-travelled-between-london-and-edinburgh-in-2016/?utm_source=iContact&utm_medium=email&utm_campaign=Travel%20And%20Tour%20World&utm_content=Brexit%2C+currency+and+oil+price)

Virgin Trains has ended the year 2016 on a high after seeing 8% annual growth in customer numbers between the UK and Scottish capitals. Over a million Virgin Trains passengers are travelling between Edinburgh and London each year for the first time. This follows a series of timetable and customer service improvements introduced by Virgin Trains as part of a £140m investment programme on the east coast route. A key driver in the growth has been an increase in the number of passengers choosing train over plane, the result of a deliberate strategy by Virgin to win market share on the UK's busiest domestic air route.

Between January and September – the last month which comparable figures for airline journeys are available – the number of Virgin Trains passengers travelling between Edinburgh and London grew by 8.2% to 831,000. That represents 25% of the total air/rail market, or nearly a third once interlining passengers are excluded, an increase of two percentage points. Air traffic on the route remained broadly flat over the same period, reversing the trend seen in 2015, when growth on the Edinburgh-London corridor was driven by air. Overall, the air/rail market grew in both 2015 and 2016.

After taking over the east coast route in March 2015, Virgin Trains has worked to transform customer experience, with a number of key improvements being made this year. Two timetable changes have delivered an additional 45 services each week between Edinburgh and London, giving a half-hourly service through most of the day and more services at weekends. The entire fleet has been completely overhauled, while customers have benefited from free Wi-Fi through First and Standard Class and the introduction of BEAM, Virgin Trains' revolutionary on-board entertainment streaming service. Meanwhile, booking horizons have been extended to six months from the industry standard of three months, giving customers more time to plan ahead and find the cheapest fares. Virgin Trains has set out ambitious plans to gain half the air/rail market by 2023 following the introduction of the state-of-the-art Azuma fleet which will provide faster, greener, more comfortable journeys.

### The Boston-LaGuardia shuttle battle heats up

Edited from the Wall Street Journal <http://www.wsj.com/articles/the-boston-laguardia-shuttle-battle-heats-up-1482336839>



JetBlue A320

Prices are falling for flights between New York LaGuardia and Boston Logan, with new entrant [JetBlue Airways shaking things up](#). Even before that, airline passenger traffic on the route grew 7% in the 12 months ended June 30 and Amtrak has seen Acela Express ridership slip. The New York-Boston shuttle was once the jewel in the airline crown, a high-profile and often highly profitable service that gave an airline stature and loyalty from business travellers. Eastern Air Lines flew the 305 km route with widebody A300 jets in its heyday in the 1980s, letting passengers walk on and pay for their seats on-board. If no seats were left, both Eastern and Pan Am's shuttle promised another plane and

## General News

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crew in 15 minutes. The magnetism of the shuttle even enticed Donald Trump [into the airline business](#) for a few years starting in 1989.

But the shuttle has been a shadow of its former self since the September 11 attacks and Amtrak's introduction of high-speed Acela service 16 years ago. Security screening hassles and delays frustrated passengers and made travel by train, bus or car about as easy and quick. Airlines scaled back to small regional jets, and Amtrak now accounts for 56% of air-rail passengers between New York and Boston.

Much has changed to make planes more competitive with trains. PreCheck screening has eased security hassle and let travellers arrive closer to departure time. Delta and American have set up separate check-in lanes for shuttle passengers at a few airports. In-flight Wi-Fi has kept air passengers connected and airlines have reduced flight delays.

The short-haul flying rebound has led to Delta expanding its shuttle offerings, adding Seattle to its Los Angeles-San Francisco West Coast shuttle and New York-Chicago. American says it is studying the possibility of turning some of its short-haul markets into shuttle services.

Passengers on Amtrak's Acela Express trains now enjoy improved Wi-Fi service. But airlines have cut some of the advantages of rail with their own Wi-Fi, expedited security screening and improved reliability. Between New York and Boston, flying is now cheaper than Acela, and sometimes faster, too. Acela's basic one-way walk-up fare between New York and Boston is \$200. JetBlue, with six daily flights, set its walk-up fare at \$129 one-way and competitors matched on many flights. Acela schedules trains for a trip of about three hours and 40 minutes between those two cities. Airlines schedule the trip at 75 to 90 minutes. Allowing two hours for getting to and from the airport, flying can be faster. To make sure, American says it gives its shuttle flights priority over other planes when bad weather causes slowdowns.

The easy links to Washington, D.C. and New York helped Boston grow health care, defence, financial, advertising and publishing industries, says Thomas Glynn, chief executive of the Massachusetts Port Authority, which operates Logan. For airlines, shuttle services build business-traveller loyalty and corporate contracts. "The shuttle has been one of the most important things in our development as a city," he says.

Government data show the average one-way airline ticket price between New York and Boston was \$148 in the second quarter, the most recent reported. That was down 13% from \$170 in the same period two years earlier, according to consulting firm Oliver Wyman's PlaneStats. American has cut prices more aggressively than Delta and gained market share.

That's the end of the article but we've appended a **brief history of shuttles** below for those interested:

The Trump Shuttle flew from 1989, when Donald Trump bought the Eastern Shuttle and promised elegant service, until 1992 when creditors took control after large financial losses during a recession.

**Eastern Air:** 1961-1989

**Trump:** 1989-1992

**US Air:** 1992-2015

## General News

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**\*American:** 2015-present

**New York Air:** 1980-1986

**Pan Am:** 1986-1991

**Delta:** 1991-present

**Acela:** 2000-present

**JetBlue:** Launched Oct. 31

\*American ran a NY-Boston shuttle in the late 1960s

Acela ridership in the Northeast corridor, from Washington to Boston, was flat in the year ending 30<sup>th</sup> September and down 2% the previous year. Amtrak says when slower, cheaper Northeast Regional trains are included, ridership is actually up, and that improved Wi-Fi and future investment in the next-generation of high-speed rail show Amtrak is committed to strengthening its market position.

JetBlue began shuttle flights 31<sup>st</sup> October with fares as low as \$49. The airline isn't officially calling its service "shuttle," since it isn't running flights hourly, but executives informally refer to it as a shuttle. The \$129 unrestricted economy walk-up fare was the shocker. At the time, American and Delta had walk-up fares as high as \$443. American opted to match; Delta says it offered a sale as JetBlue launched, but thinks its customers will pay a premium for better service. Delta offers 17 flights daily in each direction between LaGuardia and Logan, while American has 15.

JetBlue, like Delta and American, offers free beer and wine on shuttle flights. A JetBlue shuttle boarding pass gets you a free cup of coffee at Au Bon Pain stores near shuttle gates. JetBlue has free broadband satellite Wi-Fi on its shuttle airplanes that can be used gate-to-gate, so passengers are never unconnected.

In October, the Federal Aviation Administration relaxed slot restrictions at Newark Liberty International Airport in New Jersey and JetBlue moved six daily flights to Florida from LaGuardia to Newark so it could create a shuttle.

### **Pocket Guide to Transportation 2017**

The US Bureau of Transportation Statistics published this handy pocket guide in January. It's also available on the BTS App. There's a lot in a small book!

The infrastructure section compares 2004 and 2014. Road, commuter rail, heavy rail and light rail mileages have increased. Class 1 freight railroad and Amtrak mileage has decreased. The number of certificated airports has decreased from 599 to 537; General Aviation airports have also reduced in number. There are more commuter rail, heavy rail and light rail stations but 11 fewer Amtrak stations. The air carrier fleet has gone down from 7764 to 6676. Amtrak has over 50% more locos – 428 instead of 276.

The Moving People section (comparing 2007 and 2014) shows fewer domestic aircraft miles (5947m, compared with 6733m), and an increase in all categories of rail vehicle miles (Amtrak, commuter rail, heavy rail and light rail). Air passenger miles are much the same, at 607,772m. Car, motorcycle and truck passenger miles are all down: bus passenger miles are up as are all categories of rail passenger miles.

There is an interesting table of daily passenger travel.

## General News

	1995	2001	2009
Daily person trips	4.3	3.7	3.8
Daily person miles	38.7	36.9	36.1
Daily vehicle trips/driver	3.6	3.4	3.0
Daily vehicle miles travelled	32.1	32.7	29.0
Average commute (miles)	11.6	12.1	11.8
Average commute (minutes)	20.7	23.3	23.9
<b>Percentage of trips by</b>			
Private vehicle	89.3	86.4	83.4
Bus	3.0	2.8	3.3
Rail	0.6	0.6	0.6
Walk	5.5	8.7	10.4
Bike	0.9	0.8	1.0
Air	0.1	0.1	0.1
Other	0.5	0.6	1.1

Average commute speeds seem to have decreased! I was also surprised to see that the percentage of trips by rail (all kinds) was around 6 times higher than the percentage by air. Walk and bike show healthy increases.

I did wonder about the choice of years – 2001, the year of 9/11, and 2009, the year after the Great Recession!

The Moving Goods section shows the top 10 container ports in the world, topped by Shanghai, Singapore and Shenzhen. Number 5 is Ningbo and number 7 is Quindao (Mr. Google prefers Qingdao – looking it up, I found it was the home of Tsingtao beer, highly recommended if you happen to be in China). Los Angeles is number 16, Long Beach 20 and New York/New Jersey 24.



Advertisement on a bus in Washington DC

The Safety section shows 35,092 fatalities on the highway network – up on 2014, but down from 2004's 42,836. There has been a steady increase in pedestrian fatalities – 4675 in 2004, 4910 in 2014 and 5376 in 2015. Of the 759 rail fatalities, 13 were in train accidents, 235 at level crossings and 459 were trespassers. There were nearly as many (640) fatalities in passenger vessel and recreational boating. There are charts of fatality rates by mode – but these only cover road and air.

For the last 15 years, the percentage of highway fatalities which were alcohol related has stayed constant at just over 30. About 10% are due to distracted driving – constant since 2010, when the methodology changed.

The environment section shows 85% of CO<sub>2</sub> emissions are from highway vehicles, 8% from air, 3% from rail, 2% from pipeline and 2% from water.

## Port Performance Freight Statistics Annual Report Released

Lightly edited from a BTS press release

## General News

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The U.S. Department of Transportation's Bureau of Transportation Statistics (BTS) has released [Port Performance Freight Statistics Program: Annual Report to Congress 2016](#). This report is BTS's first edition of the annual report on the [Port Performance Freight Statistics Program](#), established by the *Fixing America's Surface Transportation Act of 2015*. The goal of the program is "to provide nationally consistent measures of performance" of the nation's largest ports, and to report annually to Congress on port capacity and throughput. This annual report presents data and statistics on capacity and throughput at the top 25 ports by tonnage, 20-foot equivalent unit (TEU) and dry bulk tonnage; nationally consistent port performance metrics; and looks ahead at improving this statistics program. The report also includes detailed information on U.S. maritime ports and discussions of throughput and capacity concepts to provide a more complete picture of port activity and to place the statistics in context.

Note that the link in the press release is broken: the correct one is: [https://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/PPFS\\_Annual\\_Report.pdf](https://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/PPFS_Annual_Report.pdf).

## Rail

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### Russian Railways 2016

Edited from a Think Railways news item

Russian Railways (RZD) transported 1.04 billion passengers in 2016, an increase of 1.6% year on year. Long-distance passenger numbers amounted to 101.4 million, an increase of 3.6% on the previous year, while suburban commuters were up 1.4% to 935.7 million.

Passenger kilometers on the Russian Railways' network increased by 3.4% in 2016 compared to 2015 and amounted to 124.5 billion. Long-distance passenger travel increased 4.5% to 93.5 billion passenger-km, while suburban travel rose by 0.3% to 31 billion passenger-km.

According to the latest figures, the network owned by Russian Railways carried a total of 1.22 billion tons of freight in 2016, 0.6% more than in 2015.

In 2016, the Russian Railways' network loaded the following categories of freight.

Product	Million Tons	Change on previous year
coal	328.6	1.70%
coke	11.7	5.50%
oil and petroleum products	235.8	-6.10%
iron and manganese ores	109.5	0.50%
ferrous metals	71	-0.50%
ferrous metal scrap	15	0.30%
chemical and mineral fertilisers	53.5	4.00%
cement	26.7	-6.90%
timber	42.2	6.90%
grain	19	1.50%
construction materials	141	7.90%
non-ferrous ores and sulphur feedstock	21.1	3.10%
chemicals and soda	25.7	2.60%

Product	Million Tons	Change on previous year
industrial raw materials and moulded materials	35	0.30%

Freight turnover in 2016 amounted to 2.34 billion tariff ton-km, an increase of 1.6% compared to 2015. Freight turnover taking into account empty wagon runs amounted to 3.00 trillion ton-km, up 1.4% on 2015.

According to the latest figures, the loading volume on the network of Russian Railways in December 2016 amounted to 105.2 m tons, 0.9% more than in December 2015.

Freight turnover in December 2016 increased by 2.9% compared to December 2015 and amounted to 208.2 billion tariff ton-km. Freight turnover taking into account empty wagon runs in December 2016 increased by 3.1% and amounted to 267 billion ton-km.

## US rail freight in 2016

The [Association of American Railroads \(AAR\)](#) reported total 2016 figures on January 4, 2017.

Total U.S. carload traffic for 2016 was 13,096,860 carloads, down 8.2% or 1,169,152 carloads, while intermodal containers and trailers were 13,490,491 units, down 1.6% or 220,171 containers and trailers when compared to 2015.

In 2016, total rail traffic volume in the United States was 26,587,351 carloads and intermodal units, down 5% or 1,389,323 carloads and intermodal units from the same point last year.

The decline in movements of coal and to a lesser extent freight relating to the gas and oil industry has been a major contributor.

## Air

### Economic performance of the airline industry

A recent report from IATA gave the following. Figures for 2016 and 2017 are projections.

Worldwide airline Industry	2015	2016	2017
Spend on air transport, \$bn	750	732	769
% change over year	-4.40%	-2.40%	5.00%
% global GDP	1.00%	0.90%	0.90%
Return fare, \$/pax. (2015\$)	407	363	351
Compared to 1995	-57%	-62%	-63%
Freight rate, \$/kg (2015\$)	1.8	1.53	1.48
Compared to 1995	-61%	-67%	-68%
Passenger departures, million	3,568	3,773	3,959
% change over year	7.20%	5.70%	4.90%
RPKs, billion	6679	7075	7438
% change over year	7.40%	5.90%	5.10%
Freight tonnes, million	52.2	53.9	55.7
% change over year	1.50%	3.20%	3.30%
World GDP growth, %	2.60%	2.20%	2.50%

Worldwide airline Industry	2015	2016	2017
World trade growth, %	2.70%	1.70%	2.60%
Aircraft fleet	26,704	27,712	28,718
% change over year	3.30%	3.80%	3.60%
Available seats, million	3.7	3.9	4.1
% change over year	5.00%	5.20%	5.10%
Average aircraft size, seats	139	141	143
% change over year	1.70%	1.40%	1.40%
Scheduled flights, million	34.8	36.6	38.4
% change over year	5.50%	4.90%	4.90%
ASKs, % change over year	6.70%	6.20%	5.60%
Passenger load factor %	80.40%	80.20%	79.80%
Freight load factor, %	47.40%	46.00%	45.80%

### Mode share at major UK airports

The annual Transport Statistics Great Britain was published late last year. Table TSGB0207 shows mode share to the four major London airports and Manchester, over the decade 2005-2015. Figures are percentages of responses from departing air passengers (and there is some suspicion that they do not have exactly the same characteristics as **arriving** air passengers).

Over that decade, access by car (private car and hire car) has unambiguously declined. At Gatwick, 53% used those modes in 2005, while just 41% did in 2015. At Heathrow, the figures were 37% and 30%; at Luton, 59% and 53% and at Stansted, 52% and 39%. Manchester shows the smallest drop, from 60% to 58%.

Changes in rail use have been more varied. Gatwick's rail mode share increased from 25% to 39%. It will be interesting to see the 2016 figures, because that year may have been affected by the rail strikes which affected both Gatwick Express and Southern. The MD of Gatwick has said that there had been no impact, although anecdotally the closure of the Bakerloo Line station at Paddington last year had a big impact on Heathrow Express. Heathrow's rail mode share (main line and underground) was up from 23% in 2005 to 27% in 2015. Luton saw a drop, from 18% to 16%, while Stansted was 25% in both years (although it went down to 22% in 2013). Manchester increased from 7% to 13% and the Metrolink light rail service – not aimed at air passengers – recorded a further 1% in 2015. It opened in November 2014.

There has been a slight increase in taxi use at Heathrow (26% to 31%) and Luton (13% to 16%). Otherwise it has stayed fairly constant. Bus use has increased at Luton (10% to 15%) and Stansted (14% to 25%) but elsewhere remained much the same.

These are all 10-year comparisons. Doing a comparison of the two most recent years highlights an interesting statistical quirk. The figures in the table are rounded to the nearest whole number, and Gatwick's show car use dropping from 42% to 41% (with hire car being 1% and 2% respectively), rail use increasing from 35% to 39% and no other changes! So where has the increased rail share come from? Well, adding up the rounded figures gives totals of 98% in 2014 and 101% in 2015. If you look at the figures online, they are in an Excel spreadsheet and the display accuracy can be increased. Using two decimal places, one can see that private car use has gone down from 41.41% to 38.87% (2.54 percentage points) and rail use has increased from 34.98% to 38.50% (3.52 percentage points). Bus use has gone down from 6.39% to 5.63% – 0.76 percentage points – although both year's rounded figures are the same at 6%.

Taxi use has declined by 0.39 percentage points, from 15.49% to 15.10%. So rail has captured much of its increase from car, with a little from bus and taxi.

### **ACI traffic statistics for November**

For the 11 months to November 2016, global passenger traffic at the world's major airports rose 5.4% compared to the previous year. For the month of November, global passenger traffic increased 5.6% year-on-year.

International and domestic passenger traffic showed growth rates of 6.9% and 4.9% respectively for the same month. Despite economic and political uncertainty, global air travel continued to grow boosted by international traffic but at slower pace as compared to the previous year.

For the month of November, the Middle East led international passenger traffic growth (+12.7%), followed by Europe (+7.4%), Asia-Pacific (+5.9%), Latin America-Caribbean (+5.8%) and North America (+5.1%). The high growth in Europe testified to the recovery of international passenger traffic which had been adversely affected by the terrorist attacks in Paris in November 2015 and Brussels in March 2016. In Africa, international passenger remained flat at 0.2%.

Asia-Pacific and North America – the largest domestic passenger traffic markets – grew 7.8% and 2.6% respectively, in line with the year-to-date figures of 8.6% and 3.6%. Europe – the third largest market for domestic passengers – grew 8.3% during November and 5.2% on a year-to-date basis.

Africa was the only region where total passenger traffic contracted (-0.3%) during the month of November and during the eleven months since the beginning of the year (-3.5%). Total passenger traffic in the buoyant regions of Asia-Pacific and the Middle East grew at 9.1% and 9.4% respectively from January to November year-over-year, followed by Europe (+4.5%), North America (+4.0%) and Latin America-Caribbean (+2.4%).

At the country level, notable growth in passenger traffic was recorded for the major markets of India (+18.1% in November and +18.6% year-to-date), China (+10.6% in November and +8.3% year-to-date), and Spain (+10.3% in November and +10.9% year-to-date). India, China, Spain and the US were the key drivers of passenger traffic in 2016 and are expected to remain so in the near future.

At the individual airport level, notable growth was observed at Delhi (DEL, +8.9 million passengers), Seoul-Incheon (ICN, +7.8 million passengers) and Doha (DOH, +5.8 million passengers). Other airports with notable growth were Los Angeles (LAX, +5.5 million passengers), Shanghai-Pudong (PVG, +5.4 million passengers) and Dubai (DXB, +5.0 million passengers).

Air freight in November, largely driven by trade in consumer electronics and global digitization, grew 8.1% with notable growth of international (+9.2%) and domestic freight volumes (+5.6%). The global electronics market generated surge in air freight traffic due to close release dates for competing consumer products.

The three largest international freight markets – Asia-Pacific, Europe and North America – grew 11.2%, 10.7% and 6.3%, respectively, during November, while the year-to-date figures were not as robust, achieving 4.2%, 1.2% and 3.8%, respectively.

## Air

The largest domestic freight markets – North America and Asia-Pacific – grew 6.4% and 5.2%, respectively, in November, while Latin America-Caribbean contracted 1.4% due to the ongoing economic problems in Brazil.

Total freight was strong in Asia-Pacific (+9.5%), North America (+8.4%), Europe (+6.3%) and the Middle East (+9.9%). Latin America-Caribbean and Africa were behind at 2.8% and 3.1%, respectively. On a year-to-date basis, the highest growth in total freight was recorded at major commercial airports in the Middle East (+5.3%), Asia-Pacific (+4.0%) and Europe (+3.6%).

At the country level, all key air freight markets recorded freight volume hikes during November including China (+12.6%), Japan (+9.0%), Hong Kong (+7.1%), Korea (+9.1%), Chinese Taipei (+14.4%). China remains the fastest-growing air freight market in absolute terms (+over 550,000 tonnes), followed by the US (+over 300,000 tonnes) and Qatar (+270,000 tonnes).

At the individual airport level, Doha (DOH) was the world's fastest-growing freight hub (+270,000 tonnes), followed by Shanghai-Pudong (PVG, +133,000 tonnes) and Guangzhou (CAN, +110,000 tonnes).

While it is evident that passenger traffic was largely driven by international tourism and travel despite the continued threats of terrorism in certain parts of the world, as well as economic uncertainty since the Great Recession, air freight markets remained volatile and were strongly affected by the consumer electronics industry and dynamic consumer demand for these products.

### Top 20 Chinese airports

A recent issue of Jane's Airport Review gave passenger numbers at China's top 10 airports. Figures are in millions

Airport	2014	2015	Change
Beijing Capital	86.1	89.9	4%
Shanghai Pudong	51.7	60.1	16%
Guangzhou Baiyun	54.8	55.2	1%
Chengdu Shuanglia	38.0	42.2	11%
Shenzhen Bao'an	36.3	39.7	10%
Shanghai Hongqiao	38.0	39.1	3%
Kunming Wujiaaba	32.2	37.7	17%
Xian Xianyang	29.3	33.0	13%
Chongqing Jianbei	29.3	32.4	11%
Hangzhou Xiaoshan	25.5	28.4	11%
Xiamen Gaoqi	20.9	21.8	5%
Nanjing Lukou	16.3	19.2	18%
Wuhan Tianhe	17.3	18.9	10%
Changsha Huanghua	18.0	18.7	4%
Urumqi Diwopu	16.3	18.5	13%
Qingdao Liuting	16.4	18.2	11%
Zhengzhou Xinzheng	15.8	17.3	9%
Sanya Phoenix	14.9	16.2	8%
Haiku Meilan	13.9	16.2	17%
Tianjin Binhai	12.1	14.3	19%