TSUG

Transport Statistics Users Group

Monthly Review: December 2018

This month's review shows that Amsterdam is 349km away by air and 585km by rail. In Scotland, car traffic on all roads has increased by 7.2% over the last five years. Cycle mileage has decreased by 6.5%, Scotrail passenger numbers have increased by 17.4%, bus ridership has gone down by 9.5%, ferry passengers have increased by 5.9% and air passengers by 29.8%. In US, 95% of transportation fatalities were the result of highway crashes, which accounted for 37,133 people - 673 fewer than the previous year. In FY 2018, Amtrak's total revenue was $3.38 billion – up 2.2% over FY 2017. Total ridership of Brightline, a new regional railway operating in Florida, for the first half of the year was 180,870, In Q3, Eurostar's passenger numbers were up 12% on the same quarter the previous year and revenues were up 17%. In Q3, Eurotunnel – now known as GETLINK – carried 415k lorries, 907k cars, 10k coaches, 500 freight trains and 3.005m Eurostar passengers. The forecast in Kaliningrad, an isolated Russian enclave on the Baltic, is that 365 trains between China and Europe will use it this year. 21% of past LA Metro users stopped riding because they felt unsafe. Virgin Trains has scrapped Friday afternoon peak restrictions from London Euston permanently from 2 November 2018. Demand for passenger rail services in the UK rose by just over 3% during second quarter of 2018. Gatwick surface access trends are that rail use by air passengers was at a record high. UK consumers may be paying £160m - £390m/year for allocated seating: of those, 2/3 paid £5 - £30/seat and 8% £30 or more. A number of airlines, Air Canada, Air France/KLM, Westjet, Singapore Airlines, IAG and Southwest, reported an increase in revenue in Q3. Annual growth in industry-wide RPKs slowed to an eight-month low of 5.5% in September (down from 6.4% in August). Car drivers may soon have to pay to drive into France's big cities. In UK, In 2017/18 overall satisfaction of national road users was 88.7% - down from 89.1% in 2016/17 and 89.3% the previous year. In 2011-12, it was 91.5%. Highest performing region was the South East, at 91%: in the North West, it was 78%. The arrival of ride-sharing services has resulted in an increase fatal traffic accidents in U.S. cities. On-demand services like Uber and Lyft provide transportation in neighbourhoods underserved by transit or taxis; safe rides home for late-night workers and partiers; and increased ease of access for people with disabilities. In US, the heaviest use of TNCs is during the evening and at weekends (Friday and Saturday evenings between 19:00 and midnight, with the peak around 21:00 – 22:00). Post-Panamax container ships – those too big to pass through even the newly widened Panama Canal - can take up to 20,000 TEU In EU, in 2017, there were 3301 maritime casualties and incidents (slightly below the 4-year average). The Port of Hamburg achieved a total throughput of 100.8m tons. We have Letter to the Editor and also Kit Mitchell's Statistics Digest.

Dr Shanta Bir Singh Tuladhar and Andrew Sharp

Contents

Our seminars can be booked through the TSUG website at www.tsug.org.uk/seminars.php

Statistics Digest

STATISTICS DIGEST December 2018

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

Recent releases from Department for Transport	
1 Nov	Renewable Transport Fuel Obligation: Year 10 (2017 to 2018) report 5 (15 April 2017 to 14 April 2018 supply)
https://www.gov.uk/government/statistics/biofuel-statistics-year-10-2017-to-2018-report-5	
1 Nov	Renewable Transport Fuel Obligation: Year 11 (2018 to 2019) report 1 (15 April 2018 to 31 December 2018 supply)
https://www.gov.uk/government/statistics/biofuel-statistics-year-11-2018-report-1	
7 Nov	Final sea passenger statistics: 2017
https://www.gov.uk/government/statistics/sea-passenger-statistics-all-routes-2017-final	
8 Nov	Reported road casualties Great Britain, provisional estimates: year ending June 2018
https://www.gov.uk/government/statistics/reported-road-casualties-in-great-britain-provisional-estimates-year-ending-june-2018	
15 Nov	Road goods vehicles travelling to Europe: October 2017 to September 2018
https://www.gov.uk/government/statistics/road-goods-vehicles-travelling-to-europe-october-2017-to-september-2018	
29 Nov	Blue badge scheme statistics: 2018
https://www.gov.uk/government/collections/disabled-parking-badges-statistics	

Forthcoming releases from Department for Transport	
4 Dec	Rail factsheets: 2018
https://www.gov.uk/government/collections/rail-statistics	
6 Dec	Transport Statistics Great Britain: 2018
https://www.gov.uk/government/collections/transport-statistics-great-britain	
12 Dec	Seafarers in the UK Shipping Industry: 2018
https://www.gov.uk/government/collections/maritime-and-shipping-statistics	
13 Dec	Provisional road traffic estimates, Great Britain: October 2017 to September 2018
https://www.gov.uk/government/collections/road-traffic-statistics	
13 Dec	Travel time measures for the Strategic Road Network and local 'A' roads: October 2017 to September 2018
https://www.gov.uk/government/collections/road-congestion-and-reliability-statistics	
24 Jan	Road freight statistics: July 2017 to June 2018
https://www.gov.uk/government/collections/road-freight-domestic-and-international-statistics	
Jan 2019	Road conditions in England: 2018
https://www.gov.uk/government/collections/road-network-size-and-condition	

Jan 2019	Annual bus statistics: year ending, March 2018
https://www.gov.uk/government/collections/bus-statistics	

Releases from Office of Road and Rail	
28 June 2018	Disabled Persons Railcard (DPRC) in circulation and issued 2017-18
http://orr.gov.uk/__data/assets/pdf_file/0014/28103/DPRC-factsheet-2017-18.pdf	
28 June 2018	Rail passenger assists 2017-18
http://orr.gov.uk/__data/assets/pdf_file/0013/28102/assists-factsheet-2017-18.pdf	

Forthcoming release from Office of Road and Rail		
4 December	Rail Statistics Compendium Great Britain 2017-18 Annual	
http://orr.gov.uk/statistics/published-stats/statistical-releases		
11 December	Estimates of Station Usage - Official Statistics 2017-18	
http://orr.gov.uk/statistics/published-stats/statistical-releases		

Recent release from Office for National Statistics	
7 November	Is there a gender commuting gap?
https://www.ons.gov.uk/releases/isthereagendercommutinggap	
19 November	Analysis of increases in the net capital stock of transport equipment for non-financial corporations
https://www.ons.gov.uk/releases/analysisofincreasesinthenetcapitalstockoftransportequipmentfornonfinancialcorporations	

Recent releases from Eurostat	
14 November	Key figures for Europe 2018
https://ec.europa.eu/eurostat/web/products-statistical-books/-/KS-EI-18-101?inheritRedirect=true&redirect=%2Feurostat%2Fpublications%2Fstatistical-books	

Members can find past seminar slides here: http://www.tsug.org.uk/past_seminars.php

Members' Forum

Letter to the Editor

Dear Editor

(1) The assertion attributed to WisDOT that in 2017 "Wisconsin law enforcement agencies reported 20,482 deer-motor vehicle crashes, which resulted in nine fatalities – six of them motorcyclists" seems highly unlikely, unless the fatalities in question are only those suffered by humans. In which case, out of compassion for the unfortunate deer involved, I think WisDOT should say so.

(2) Depending on how many changes you are prepared to make, and how circuitous a route you are prepared to follow, there is a vast number of different ways of travelling by rail between Kings Cross St Pancras and Waterloo, extending as far afield as Inverness and Swansea. But if the choices are limited to a single change, Waterloo East is regarded as part of Waterloo, and permitted out-of-station interchanges are included, it is possible to make this trip via Baker Street (Bakerloo), Baker Street (Jubilee), Bank, Elephant & Castle, Embankment (Bakerloo), Embankment (Northern), Euston, Euston Square/Warren Street, Green Park (Piccadilly), Green Park

(Victoria), Kennington, Kentish Town, Leicester Square, London Bridge (Jubilee), London Bridge (SouthEastern), Monument/Bank, Oxford Circus, Stockwell, Vauxhall, West Hampstead, Westminster and Wimbledon. Bon voyage.

Regards
John Cartledge

General News

Amsterdam

Amsterdam is 349km away by air (according to OAG) and 585km by rail (according to Railvolution).

Presumably the air distance is from Heathrow (24km west of London) to Schiphol (14km south of Amsterdam). You are reasonably likely to take off heading west, and land from the north (because of the prevailing winds) so your actual journey might well be longer.

The rail mileage will include heading north out of St Pancras (briefly) then south of east to Lille and Brussels before turning north to Amsterdam.

Transport and Travel in Scotland 2017

This was published by Transport Scotland at the beginning of September.

Car traffic on all roads has increased by 7.2% over the last five years. Cycle mileage has decreased by 6.5%, Scotrail passenger numbers have increased by 17.4%, bus ridership has gone down by 9.5%, ferry passengers have increased by 5.9% and air passengers by 29.8%. It is not clear from the report what the air figure includes – Scottish domestic, UK domestic or all Scottish flights – but some digging in Scottish Transport Statistics suggests that it is all passengers departing from Scottish airports, regardless of destination.

73% of adults travelled on the day before they were surveyed. 25% of journeys were for commuting, 23% for shopping and 10% for visiting friends and relations.

62% of respondents usually drove a car to work: 5% were car passengers. 12% usually walked, 10% travelled by bus and 5% by rail. 3% usually cycled. These proportions have changed little over the past decade, although bus use has shown some decline. Very few change the way they travel to work, especially those who drive.

15%-16% of journeys took place on each weekday, with 12% on Saturdays and 11% on Sundays.

52% of journeys in 2017 were made as a car or van driver, with 13% being passengers. This figure has increased over time. 21% were made on foot: this figure is decreasing. 8% were made by bus, under 3% by rail and 1.5% by bike. 3% of journeys were multi-stage (mainly two stages).

Where individuals had used ordering services to get goods delivered the previous day, 73% reported fewer trips that day.

70% had a driving licence – 75% of men and 64% of women were licensed to drive. 31% of the 17-19 age group had a driving licence.

63% drove at least once a week, with 42% driving daily. Average car occupancy was 1.5. 66% drove alone.

Estimated traffic volume on Scotland's roads was a record 48bn vehicle-km. The provisional figure for road casualties reported to the police is 9391, 14% down on 2016. There were 146 fatalities, 24% fewer than in 2016.

0.7% owned an electric car, up from 0.3% in 2016.

69% were very or fairly satisfied with public transport, compared with 72% in 2016. 28% of adults used the bus at least once a month.

Scotrail carried 98m passengers in 2017-8, up from 94m in 2016-7 and 74m in 2007-8. 9% used the train at least once a week.

The report contains a wealth of tabular data at the end.

US Transportation Fatalities 2017

The National Transportation Safety Board produced its annual release of transportation fatalities in 2017 in early November.

95% were the result of highway crashes, which accounted for 37,133 people. This was 673 fewer than the previous year. The breakdown of the 2017 figure is:

Passenger Cars	Light Trucks and Vans	Pedestrians	Motorcycles	Cycles	Medium and Heavy Trucks	Buses	Others
13363	10183	5977	5172	783	841	44	765

There were 350 fatalities in the aviation system, 330 of them in general aviation. Of the 761 in the rail system, 512 were trespassers. 273 were killed at level crossings, but these are included in highway and rail totals. I couldn't immediately see why there were fewer rail fatalities than level crossing and trespasser fatalities – any ideas?

Rail

Amtrak in FY 2018

Amtrak reported record revenue and earnings for year ending September 30, 2018. Preliminary results for Fiscal Year 2018 are as follows.

Operating earnings at $193.7 million were 13.3% better than last year's $168.0 million.
Ridership at 31.7 million customer trips was 1% down largely because of service disruptions.
Total revenue was $3.38 billion – up 2.2% over FY 2017.

Capital investment was $1.46 billion, the highest in recent Amtrak history. This included state-of-good-repair work on the Northeast Corridor, equipment refreshes, station upgrades, technology improvements and other customer-friendly benefits that support the long-term future and growth of intercity passenger rail.

Northeast Regional and State Supported lines saw growth in ridership, while Long Distance ridership was down 3.9% due to the hundreds of trains truncated or cancelled due to weather events, infrastructure outages, planned repairs, and poor on-time performance across much of the host railroad network used by Amtrak trains.

Brightline Data
From Forbes

Brightline is a new regional railway operating in Florida.

Total ridership for the first half of the year was 180,870. This was significantly less than projections, but Brightline started carrying passengers in January, and only ran its full schedule from early August, when its daily service went from 11 round trips to 16 round trips between West Palm Beach and Miami. Fare revenue increased to $1.54 million in the second quarter, up from $663,667 in the first quarter.

The line is being extended north to Orlando International Airport, then west to Tampa.

The Virgin Group now has a 10% stake in the company, which is to be rebranded Virgin Trains USA.

Eurostar Q3 Results

Eurostar reported good Q3 results recently.

Passenger numbers were up 12% on the same quarter the previous year (3.00m compared with 2.69m) and revenues were up 17% (£247m compared with £211m).

Business travel grew by 21%, a key factor in the increase.

Two Eurostars at Paris Gare du Nord

Since the Amsterdam service started in April, 130,000 people have used it. A third daily service will run from June, with a fourth when border controls are introduced in the Netherlands at the end of next year. A fifth is an ambition for the future.

This is the highest Q3 figure I have recorded in my database for passengers and revenue, although the database is incomplete.

Eurotunnel Q3, 2018

Eurotunnel – now known as GETLINK – reported Q3 results at the end of October.

They carried 415k lorries, 907k cars, 10k coaches, 500 freight trains and 3.005m Eurostar passengers.

The latter figure was up 12% on Q3, 2017, but most other figures were high too. Numbers of lorries and cars were the highest Q3 figures I can find in my (admittedly incomplete) database. The number of coaches has been dropping for some time – it was 17.3k in Q3, 2006. Freight train numbers are up on recent third quarters – 458 in Q3, 2016, for example – but this is lower than some years ago (681 in Q3, 2014). Freight train tonnage is no longer quoted in Getlink's press release.

Kaliningrad Hub

Kaliningrad is an isolated Russian enclave on the Baltic, bounded by Lithuania in the east and Poland in the south. This has a geographical advantage, as was demonstrated recently.

Two container trains recently ran between Europe (Duisburg) and China (Chongqing). The one from China ran on Russian 1520mm gauge tracks through Russia and Lithuania to Kaliningrad, where it met the other which had run through Germany and Poland on 1435mm gauge tracks. Containers were swapped between trains, and the two trains returned the way they had come – each with (it is hoped!) a completely different set of containers.

Each train carried 41 40-foot containers: the two-way trans-shipment took four hours.

The route obviously has potential: the forecast is that 365 trains will use it this year.

Los Angeles Metro Transfers Guide

Earlier this year, the LA Metro published its "Transfers design guide: improving connections for a seamless trip". It's an interesting and useful document for those interested in designing interchanges, but it also has some interesting – if slightly scary – statistics.

21% of past Metro users stopped riding because they felt unsafe.

Los Angeles Metro, Aviation Station
(near Los Angeles International Airport)

In 2016, traffic deaths in the city increased by 43%: half were pedestrians.

64% of riders transfer between vehicles as part of their journey.

Of more than 15,000 sidewalk stops and stations, 8% have high ridership (>500 boardings/alightings each day). These account for 61% of daily boardings.

In California, 67 of the 450 most dangerous intersections are within 500 feet (170 metres) of Metro's high ridership stops or stations.

Peak Off
Source: Virgin Trains

Virgin Trains has scrapped Friday afternoon peak restrictions from London Euston. Restrictions were removed permanently from 2 November 2018, following a 13 week trial that has also helped dramatically reduce congestion on key evening services.

During the trial, the popular 19:00 London Euston to Manchester service saw the average maximum number of passengers fall by 61%. Normally this would be the first service available for passengers with off-peak tickets. Similar benefits were seen on the West Midlands route where the average maximum number of passengers on the 19:03 London Euston to Birmingham New Street fell by 75%.

Over the course of the trial over 3,500 additional journeys were made each Friday, as visitors went to places like Manchester, Birmingham and Glasgow for a weekend break. But as well as driving up numbers travelling, the promotion has also led to a reduction in congestion by spreading passenger demand more evenly throughout the day.

While the cheapest tickets are always available in advance, those who decide to travel on the spur of the moment can now secure a cheaper off-peak ticket any time after 9.30 on a Friday, instead of waiting until 19:00. A customer arriving at Euston Station at 16:00pm and buying a ticket for the next train to Manchester will see their fare reduced by £125.55.

Average load factors (%) at the busiest parts of the journey for this year and last year for end-of-peak trains are as follows.

Train (from Euston)	Last Year (2017)	This Year (2018)
18:46 Preston	90	37
19:00 Manchester	113	51
19:03 Birmingham	113	39
19:07 Liverpool	109	53
19:10 Holyhead	123	85

UK Rail passengers Spring 2018
From Rail Professional

Demand for passenger rail services in the UK rose during the spring quarter, despite the severe problems over the new timetables. Overall, demand rose by just over 3% during second quarter of 2018, according to National Rail Trends statistics, published by the Office of Rail and Road (ORR). Only three TOCs – Caledonian Sleeper, Great Western and Northern – saw any reduction in passenger numbers.

The provisional figures were published in September, and cover the first quarter of fiscal year 2018/19, finishing at the end of June. Across the network, 428.2 million passenger journeys were made during the twelve-week period, up from 415.3 million in 2017. Between them, passengers rode 10.25 billion passenger miles, and paid a total of £2.5 billion in fares, 6.4% more than in 2017.

London and Southeast services led the way, with a 3.5% increase in passenger numbers. The pre-Crossrail TfL Rail franchise saw the largest growth, recording a 12.4% increase over the 2017 figure (which was depressed because of work on the

GWML for Crossrail). The new West Midlands operation came next on 7%, closely followed by Chiltern on 6.8%. Even Govia Thameslink (GTR) saw a 4.8% rise. Greater Anglia was 4.4% ahead, whilst others also saw smaller increases.

Long distance InterCity services saw a 2.6% increase. Ironically, the largest growth came on the East Coast route, just as Stagecoach were handing back the operation to the state. During their last period, they presided over a 6.7% rise in patronage. Virgin West Coast patronage was 4.7% up. Other long-distance routes are operated by Cross Country (2.8% up) and East Midlands Trains, who saw 2.4% growth. Great Western, also very much a mixed franchise, saw a 1% fall.

In the regional sector, demand was 2.1% up on the previous year. TransPennine led the way with a 10% growth, whilst Merseyrail bounced back by 9.4% despite industrial action.

Arriva's Welsh operation, now in their final months before handover to the new operator, recorded 4.2% more passenger journeys, whilst ScotRail carried 1.5% more. Northern, with continuing strikes and the timetable problems, recorded a 2.4% fall.

Revenue rose in this quarter after some declines. Overall, income grew by 6.4%, driven by rises of 6.8% on the InterCity routes, 6.4% in London and the Southeast, and 5.6% on the regional routes.

Short term effects can affect a single quarter's figures, so it is often better to look at the figures over a rolling year. Here, demand was basically flat, with a small fall on the commuter routes. The national totals for the 12 months ended June 30 2018 show the number of passenger journeys rising by a barely perceptible 0.04% to 1,718.4 million. Passenger kilometres travelled rose by 0.7% to 65.9 billion, whilst passenger revenue was 3.5% higher at £9.8 billion. The rise in the latter was insufficient to deliver real-term growth: after allowing for inflation, revenue was 0.1% lower in real terms.

Revenue yields were up by 2.7% in cash terms. There were increases in all three markets, with regional services leading the way on 3.3%, followed by London and the Southeast (3%) and InterCity (2.2%). After allowing for inflation, yields fell in real terms in all sectors and the overall reduction was 3.5%.

In London and the Southeast, the number of passengers carried was the second highest on record, being beaten only once before in 2016, when just over 298 million passenger journeys were recorded. The three operations south of the Thames all saw growth after shedding several million passenger journeys between them over the past two years.

FirstGroup will have been heartened by the double-digit growth achieved in TransPennine during the quarter, and nearly beat their all time record for a summer quarter of 7.21 million journeys set in 2015. This was one of the TOCs named as being potentially in difficulty at the height of media speculation following yet another early franchise termination on InterCity East Coast.

Air

Gatwick Airport – Access Modes

Gatwick published its surface access strategy in May this year.

Highlights in surface access trends are that rail use by air passengers was at a record high. The 2017 CAA figure, 39%, was the same as last year and the highest I have recorded. In 1978 it was 38%, 1987 26%, 1998 20.4%, 2008 29.9%. It then climbed every year to 2017.

Gatwick Airport's Fire Station

The private car (and hire car) percentage is at a record low – 39.5%. Between the early 1990s and 2008 it was over 50%, but has dropped steadily since then.

Taxis carried 5% in 1972 – presumably a reflection of the nature of the airport's traffic then. It was at 12% in 1997 and 19% in 2001. Since then it has hovered around the 15% mark – 15.4% in 2017.

Bus use has been between 6% and 15%. It was 10% in 2000, and has declined to around 6% since: the 2017 figure was 5.9%.

Paid for Allocated Seating in Aviation: An Update

The CAA published this report (CAP 1709) in October, which drew on a range of research. Points of interest – both to statisticians and consumers – are as follows.

In a survey of recent fliers about unfair treatment, having to pay to choose a seat in advance of a flight was one of the top three unfair aspects identified. This was unexpected: it hadn't been asked or highlighted to participants.

The probability of group members being separated if they don't pay for allocated seating varies, as shown in this table.

Airline	Respondents who flew with this Airline	% of People who didn't pay to sit together and were separated from their Group
British Airways	456	15
easyJet	930	15
Emirates	100	22
Flybe	144	12
Jet2	343	16
Ryanair	617	35
Thomas Cook	275	15
TUI	383	12
Virgin Atlantic	131	18

CAA calculated that UK consumers may be paying £160m - £390m/year for allocated seating: of those, 2/3 paid £5 - £30/seat and 8% £30 or more. 61% of respondents paid because they did not want to risk being seated apart: 46% felt negatively

towards the airline when they realised they would have to pay more to sit together. 35% wanted to sit together but thought it was too expensive to pay to do so.

Charges to select a seat range from £1.99 to £100 (on some long-haul business flights): the price is for one seat and one sector. Of the 10 airlines spoken to by the CAA, six said the price depended on location within the cabin, three said it depended on the route, two referred to flight length, two that it depended on demand, one mentioned class of cabin and one said it depended on departure date (peak or off peak).

One airline said it assigned seats randomly if passengers did not pay for allocated seating: this gives a low probability of sitting together.

27% of respondents were travelling with children: 48% of these were separated from one or more children. Nine of the 10 airlines said they look out for information about passengers with particular needs. While four said passengers had to input it themselves, it wasn't clear whether this was the case for the other five. Moreover, it wasn't clear whether policies were in fact being implemented.

CAA's evidence shows 45% of total paid-for seat allocations may not be necessary: these people would have been seated together anyway. That's 6.8m – 10.4m passengers paying £74m - £175m extra each year. 34% of respondents to a survey of recent fliers paid extra to sit together. Allocated seating has to be selected relatively late in the process, which makes comparison between airlines difficult.

Recent Airline Statistics

*Air Canada Rouge Airbus A321
at Toronto Pearson Airport*

A number of airlines have recently reported their Q3 figures. As usual, to remove seasonal distortions I have cumulated the last four quarters and report on trends in key statistics.

Air Canada. Most of the figures seem to be going the right way for Air Canada. Operating revenue (passenger and cargo) is the highest I record since my series started in Q4, 2015: then it was C$13,868m and now it's

C$17,699m, having grown every year. Passenger miles are 90,955m, the first time it's been over 90bn. Available seat miles are 109,459m, the first time it's been over 108bn. Passenger numbers topped 50m for the first time: in Q4, 2015 it was just over 41m. Revenue/passenger is over C$350 for the first time at C$352.22. Revenue/passenger mile is C$0.1946: this is up from a low of C$0.1899 in the four quarters to Q2, 2017 – but in Q4, 2015 it was C$0.2053. Finally, average journey length is at a record high of 1811 miles – only the second time it's been over 1800. It was 1642 at the start of the series, and has grown steadily since.

Air France/KLM. A very similar story to Air Canada – passenger revenues at €20,995m are the highest I have recorded (€20,541m in the four quarters to Q4, 2015, dropping to €19,746m in Q1, 2017 before climbing steadily). Revenue

passenger kilometres (RPK) have shown a steadier line – less of a drop – and are now over 253,000m: this is the third consecutive 4-quarter period over 250,000m. Passenger numbers are at a high of 85.172m: this is the first time it has topped 85m. The Q4, 2015 figure was just over 79m. Revenue/passenger (€246.5) is at its highest since the drop to €242.93 in Q4, 2017 but still below the €259.96 in Q4, 2015.

Revenue/passenger-km has climbed a little from the trough of €0.08207 in Q4, 2017 to €0.08290: it was €0.08714 in Q4, 2015.

Finally, the average journey length has stayed just below 3000 km since my series started.

Westjet, the Canadian secondary carrier, also shows the same trends. Revenue is at a record high of C$4612m (compared with C$4029m in the year to Q4, 2015). So are passenger miles, at 27,861m (compared with 21,526m) and available seat miles (30,532m compared with 26,902m). Passenger numbers (24.9m) are also at a record high – 20.281m at the start).

Revenue/passenger is at a record low of C$185: it was C$199 at the start. Revenue/passenger mile has dropped from C$0.19 to C$0.165: average journey length has shown little change at just over 1000 miles (1119 in the latest four quarters: 1061 in the four to Q4, 2015).

Singapore Airlines use a financial year ending 30 March, so calendar Q3 = financial Q2. The figures for the year to that quarter are good. RPK was 98,703m, the highest since my series started in Q4, 2015 (when it was 94,267m). It dropped to 92,437m in the year to Q3, 2016 but has grown steadily since. Available seat kilometres (ASKs) were 119,637m: this statistic has shown the same trend. Passenger numbers are above 20m for the first time (19.029m at the start of the series, dropping to 18.904m in the year to Q3, 2016 before growing again). Average journey length has always been around 4,900 km: in Q4, 2015 it was 4954 dropping to 4890 in the year to Q3, 2016: it's now 4918.

IAG, owners of BA, Aer Lingus and Vueling, achieved a lot of record numbers in their results for the 4 quarters to Q3, 2018. Passenger revenue at €21,097m was the highest I record (series started in Q4, 2015). RPKs at 266,123m, ASKs at 319,111m and passenger numbers at 111.005m were also the highest I record. Revenue/passenger was €190: this has been on a steadily falling trend from €231 at the start of the series. Average journey length is below 2400km for the first time: it was above 2500 in the four quarters to Q4, 2015. Revenue/passenger-kilometre is up slightly on the previous four quarters (€0.0793 rather than €0.0789) but down on all previous four-quarter figures. In the year to Q4, 2015 it was €0.0918.

Southwest reported a similar trend. Revenue, revenue passenger miles, available seat miles and passenger numbers were all the highest I record since my series started in Q4, 2015. During this time, revenue/passenger has fluctuated slightly between $120 and $130: it's now $122. Revenue/passenger mile is above $0.15 for the first time since the four quarters to Q3, 2016. Average journey length is 812 miles – much the same as in the year to Q4, 2015. However, this represents a drop from more recent four-quarter figures – it was 865 in the year to Q2, 2017.

Recent IATA Statistics

In early November, IATA published its **Air Passenger Market Analysis** for September.

Key points were as follows.

Annual growth in industry-wide revenue passenger kilometres (RPKs) slowed to an eight-month low of 5.5% in September (down from 6.4% in August). The outcome was affected in part by weather impacts (in particular hurricanes and typhoons in the Far East), although the upward traffic trend slowed in Q3.

The industry-wide load factor fell in annual terms for the first time in eight months in September. Nonetheless, airlines based in Europe, Asia Pacific, and Africa all managed to post record-high passenger loads for the month.

Domestic India RPKs posted their 49th consecutive month of double-digit annual growth, while Latin American and African airlines posted the fastest international RPK growth rates.

In mid-November, the **Airlines Financial Monitor** for October was published. It noted that the initial airline financial results releases for Q3 2018 indicated that the squeeze on profits margins from higher input costs persisted into the quarter.

Global airline share prices fell by 10.1% in October – the biggest monthly decline since June 2016. Investor concerns over the impact of rising costs on industry profitability mean that the global airline share price index has underperformed the wider equity market since the start of 2018.

Oil and jet fuel prices both reached four-year highs during October, but have fallen back sharply since. At the time of writing, the Brent crude benchmark is around 20% lower than its early-October peak at around US$69/bbl.

Global passenger yields have continued to edge higher in recent months (the series covers base fares only). The premium cabin has provided a useful buffer for airline financial performance over the past year or so. Premium-class passengers accounted for 5.1% of total international origin-destination traffic in the first eight months of 2018. This proportion was unchanged from the same period a year ago. Premium-class passengers accounted for 29.6% of total passenger revenues over the first eight months of 2018, broadly unchanged from the outcome for the same period a year ago.

The industry-wide passenger load factor remains high by historical standards, although passenger demand momentum weakened in Q3. Meanwhile, although the upward trend in freight demand remains moderate, cargo yields are still holding up.

Single European Sky Performance Targets

At the end of September, the Performance Review Body (PRB) of the Single European Sky (SES) published "PRB advice to the Commission in the setting of Union-wide performance targets for RP3". RP is assumed to be Reference Period: the document doesn't say explicitly.

The current situation produced an average delay of over two minutes/flight (up to August 2018): this is four times the target for RP2. An even worse performance is forecast. Eurocontrol said that there were 9,760,443 flights in 2008 compared with 9,847,620 in 2017 in the SES.

One target was to minimise the difference between the planned trajectory and the great circle distance. In 2017, the former was 4.73% longer than the latter, against a

target of 4.10% and a RP3 proposal for the next five year period of 3.90%. Another was the actual trajectory compared with the great circle distance: the former is 2.81% greater than the latter, against a 2019 target of 2.60 and a proposal for the next five years of 2.40%.

Another target deals with delays on the way. In 2017 this was 0.94 minutes/flight: the 2019 target was 0.50.

One chart shows the monthly increase in traffic between 2017 and 2018 (January-September) and the air traffic flow management (ATFM) delays. Traffic has grown modestly, but delays have increased – especially in June and July (approximately 4m minutes and 5m minutes respectively this year, compared with 2m and 3m last year). Delays were particularly apparent at weekends
.
Targets by year are as follows

	Minutes of en-route AFTM delay/flight
2020	0.8
2021	0.7
2022	0.6
2023	0.5
2024	0.5

Taxi and Parking Costs at Airports

Business Traveller recently published a survey by FairFX about business travel costs. This included the cost of a week's premium parking and a taxi fare (one way, one person) between city and airport.

Fascinating. Heathrow Express is an absolute bargain!

Airport	Parking	Taxi
Amsterdam	£290.44	£53.28
Atlanta	£108.73	£24.72
Barcelona	£51.54	£17.98
Beijing	£61.56	£9.01
Belfast International	£53.99	£21.44
Birmingham	£79.99	£36.62
Bristol	£126.99	£29.87
Dubai	£150.11	£6.98
Edinburgh	£61.99	£21.72
Frankfurt	£139.76	£26.66
Glasgow	£75.64	£36.60
London City	£95.00	£67.38
London Gatwick North	£73.00	£210.53
London Gatwick South	£67.00	£210.53
London Heathrow T2	£87.60	£138.21
London Heathrow T3	£87.60	£138.21
London Heathrow T4	£94.60	£138.21
London Heathrow T5	£92.80	£138.21

London Luton	£104.99	£120.42
London Stansted	£79.00	£293.29
Manchester	£80.99	£24.76
Paris CDG	£166.84	£41.84
Singapore	£223.90	£8.66
Tokyo - presumably Narita	£72.71	£61.15
Toronto	£143.36	£35.99

Road

Congestion Charges in France
From City Lab

Car drivers may soon have to pay to drive into France's big cities, according to a report on a new public transport bill published in late October. A new law would allow any city of over 100,000 inhabitants to levy a congestion charge on vehicles entering their city cores. While the decision to introduce the charges would ultimately rest with local rather than national authorities, the bill could bring about major changes in driving habits and pollution levels across the country.

The charges laid out by the proposed law are fairly modest. Cities of over 100,000 residents would be permitted to charge cars €2.50 each time they enter a congestion-controlled zone; larger vehicles could be charged up to €10. All charges would be paid online, though the exact method is not stipulated and could vary from place to place. For cities of 500,000 or more, that charge could rise to €5, and up to €20 for trucks. Compared to London's £11.50 charge for cars to drive into the city core, this is fairly modest, but the cost is still high enough to act as a major deterrent for regular driving.

The draft bill contains wording that suggests these zones will be large—French media are discussing electronic toll barriers "at the entrance" to cities, rather than limited to only the busiest streets in a city's core. The government would also introduce a €400 tax bonus for commuters who cycled or car-pooled to work.

Whether local authorities would actually take up the government's offer and introduce the charges is not clear. In the past, the city of Paris has rejected the idea because it risks creating a two-tier system which prices out poorer drivers without deterring the wealthy. So far the city has preferred such measures as phasing out the most polluting vehicles, an approach also adopted in Lyon. Paris has also introduced car-free days and closed some congested routes entirely to vehicles.

Following the draft bill's release, however, Paris Mayor Anne Hidalgo said she was not necessarily against it. The measure might work if it were not restricted to Paris's official borders, but also covered parts of the wider metro area.

Greater Paris is far from being France's only heavily congested urban area. Traffic jams are even worse in Marseille, while congestion also slows road journeys in Bordeaux and Montpellier by a third. Any measure that abates that congestion and encourages a modal shift to cleaner transit will surely have an effect on pollution in general, and carbon emissions in particular.

Or would it? The lessons to be learned from London's experience with congestion charging are positive, but mixed. When the city started charging vehicles to enter a

central congestion charge zone in 2003, the number of private cars in the area did indeed drop, resulting in air quality improvements and less congestion overall. In the intervening years, however, traffic levels have crept up again, mainly because the use of delivery vehicles, taxis, and Uber vehicles has grown. London's example shows that road pricing can indeed cut private car use, but that other measures, such as surge pricing, might be needed to curb the commercial vehicle use that takes its place.

National Road Users' Satisfaction Survey 2017-18

This was published by Transport Focus in June. The survey (of 2000 users distributed throughout the country) measures users' satisfaction with the motorways and major A roads managed by Highways England: the target is 90% very or fairly satisfied. The overall satisfaction score derives from five components - journey time, safety, information/signage, roadworks management and general upkeep.

In 2017/18 overall satisfaction was 88.7% - down from 89.1% in 2016/17 and 89.3% the previous year. In 2011-12, it was 91.5%. Highest performing region was the South East, at 91%: in the North West, it was 78%.

Satisfaction with journey time was 88%, up from 87% the previous year. Satisfaction with roadworks management was at 63%, the same as last year; and with signage 92%, down from 92.5 in 2016-17. Satisfaction with signage has remained above 90% since 2011-12, except for a drop to 89% in 2014-15. Satisfaction with upkeep was 89%, down from 90% last year: 90% of users reported feeling safe, down from 92% the previous four years and 94% in 2011-12 and 2012-13.

On 26% of journeys, users reported experiencing delays – down from 30% three years ago. The main reasons are congestion and roadworks. Respondents said that they saw work being done in 39% of journeys which passed roadworks. 13% saw litter on major A roads and 16% on motorways. On 34% of motorway journeys and 21% of major A road journeys, respondents experienced poor driving by others: these proportions have been reasonably constant.

Arriving on time (whatever that might mean) is 'not at all important' to 53% of respondents on their outward journey and 77% on the return.

Commuters had lower expectations of journey time, with 26% typically allowing an extra 30 minutes for their journey.

Study finds Relationship between Ride-share and Traffic Accidents

https://thehill.com/policy/technology/413193-researchers-link-ride-share-companies-to-rise-in-fatal-traffic-accidents

The arrival of ride-sharing services has resulted in an increase fatal traffic accidents in U.S. cities, a recently released draft paper shows. The research, produced in collaboration between the University of Chicago and Rice University, shows that the ride-share apps are associated with a 2%-3% increase in the number of fatalities for both vehicle occupants and pedestrians.

In 2010, the total number of traffic fatalities reached its lowest since 1949 at 32,885, but since then those numbers have slowly begun to rise.

The yet-to-be-published research compares publicly available national traffic safety data to dates that Uber and Lyft started operating in each city analysed. It then looks at the accident rate/vehicle mile travelled in the city.

They did not consider the cost of non-fatal accidents, because "data is not readily available."

More On-demand Cars, more Accidents?
From City Labs

With ride-hailing, the positive benefits to users, and society at large, are several. On-demand services like Uber and Lyft provide transportation in neighbourhoods underserved by transit or taxis; safe rides home for late-night workers and partiers; and increased ease of access for people with disabilities, research has shown. There's also some evidence that they reduce drunk driving. Besides providing a service to millions of riders, these companies are increasing access to safe mobility for groups that haven't always had it.

But the growing demand for such transportation is coming from everybody, not just underserved riders. In cities, that is translating into more cars on the road. While the environmental and congestion impacts of this increase in vehicles have been discussed, the potential change in traffic fatalities has been one of ride-hailing's lesser-studied negative externalities. In a new working paper, a team from the University of Chicago's Booth School of Business is now attempting to evaluate this. The authors estimate that 2% - 3% of the number of crashes in a given area can be attributed to the introduction of ride-hailing.

To the extent that these apps are putting more cars on the road, they're also implicated in the number of deaths by cars.

Here's how they structured their research. Using the launch date of Uber and Lyft's services in every city with a population of at least 10,000 in the U.S., they measured scale of adoption in those areas (based on Google search volumes for the companies' names). They also looked at accident data from the National Highway Traffic Safety Administration and changes in the number of collisions around the advent of ride-hailing. They found that fatal traffic crashes sharply increase around the time that app-based rides were introduced into a given area, consistent with declines in gas prices, more vehicle-miles travelled (VMT), and increased traffic delays.

Their results stayed strong when the researchers controlled for time and place; rural areas saw a scant Uber/Lyft effect on their traffic death tolls, while denser cities with higher app adoption rates felt it more.

To be clear, the paper is not suggesting that ride-hailing drivers are getting into fatal crashes more than any other people on the road. Although the authors briefly consider how the average app driver might compare to the general population in terms of safety (and at least one report has suggested ride-hailing drivers are actually less likely to speed, drive aggressively, or fumble with their phones), that's not what this new study measures. The finding is more straightforward: To the extent that these apps are likely putting more cars on the road, they're probably also implicated in the number of deaths by cars.

"The fact is that ride-sharing allows for more VMT, and excess fuel consumption," said John Barrios, a finance professor at the Booth School and one of the lead

authors. "The technology makes it easier to be in a car and use it more than you would have before. The key thing is that there are externalities to that."

And those externalities are getting worse. U.S. road fatalities rose to 35,000 in 2015, a 7.2% increase over 2014, the largest jump in 50 years. In 2016, the death toll increased another 5.6%. Preliminary data suggests that number levelled out in 2017, but that's still about as high as it's been in a decade.

There is some debate over the biggest driver of these numbers, especially about the extent to which digital devices are pulling our eyes off the road. But the most obvious suspect is cheap gas, which is encouraging folks to do more driving, and in some places, to buy more cars where they might have used transit. Economic growth is also a recent contributor to the rise in VMT. In short, the more Americans drive, the more opportunities they have to kill someone. That trend is mostly about private vehicles; apps are a small part of it, the new paper is saying.

The study is not perfect. For example, Uber and Lyft are famously loathe to release ridership data, so the study's measurements use Google searches as proxies for levels of app adoption across the country. That's not ideal. Also, a more robust version of this paper could include a narrow look at whether ride-hailing is linked to more deaths at the times and places when the service is especially popular, including late at night and around airports.

Both companies dispute the findings. "Uber has contributed to safety in many ways and we take our responsibility to help keep people safe seriously," an Uber spokesperson told *Business Insider*. On *Streetsblog*, a representative for Lyft called the study "deeply flawed," and said that "numerous studies have shown that rideshare has reduced DUIs, provided safe transportation in areas underserved by other options, and dramatically improved mobility in cities." [DUI – driving under the influence]

That may be, but those benefits are all linked to two simple facts: Ride-hailing is growing, and it happens in cars. No matter who's driving them, until there are fewer vehicles on the road—thanks to market forces, or regulations like the new "Uber cap" in New York City—society probably can't expect to stop losing lives. Now there are some cold economics.

Urban Mobility Trends in the US

TCRP Research Report 195, "Broadening understanding of the interplay among transit, shared mobility and personal automobiles", was published earlier this year. It looked at the evolving urban mobility situation in the US, especially with the development of app-based transportation network companies (TNCs).

In summary, the heaviest use of TNCs is during the evening and at weekends (Friday and Saturday evenings between 19:00 and midnight, with the peak around 21:00 – 22:00). Most TNC trips are short (3-7km) and concentrated in the downtown core: the major exception is airport-based trips. There is no clear relationship between the level of peak-hour TNC use and long-term changes in public transport usage. People habitually drive or use transit: TNCs are used on a much more occasional basis. Transit travel and wait times were top concerns of people who moved from transit to TNCs (although commuting was not a major cause of taking TNCs). TNC use takes place at all income levels, and is widespread across communities. TNC use is associated with decreases in vehicle ownership and single-occupancy vehicle travel. The report recommends that public transport providers continue to prioritise rail,

BRT, bus-only lanes and other transit-centred approaches to move large numbers of people efficiently and effectively.

Hourly origin-destination TNC trip data were made available for five regions (Chicago, Los Angeles, Nashville, Seattle and Washington DC). A survey of over 10,000 transit and shared mobility users in eight metropolitan areas was conducted (the Shared Mobility Survey), transit rider surveys about TNC use were made in Atlanta, the San Francisco Bay Area, New Jersey and Washington DC. Note that the Shared Mobility Survey used email linked to an online form, which may affect the extent to which respondents are typical.

About 75% - 80% of TNC use occurred outside peak hours.

Between 2010 and 2016, transit ridership increased by over 10% in San Francisco, Seattle (where the increase was 24%) and Nashville. It declined by single digit percentages in Chicago, Los Angeles and Washington DC, although figures for the latter may have been distorted by major maintenance-related track closures in 2015 and 2016.

TNC use in the peaks tends to be for short trips between dense neighbourhoods or within dense suburbs. The heaviest peak-hour TNC trips are under 8km. All of the areas plotted had good public transport. Areas with highest peak-hour TNC volumes included high-income residential areas. Because of the granularity of the data, it is not generally possible to say whether trips are first mile/last-mile or complete journeys. However, transit connecting TNC trips are estimated to be between 3% (Washington DC) and 16% (San Francisco) of all TNC trips.

Chicago, Los Angeles and Seattle all show distinct peaks of trip lengths in early mornings (2:00 – 5:00): this is thought likely to be driven by airport trips as well as the unavailability of frequent public transport at that time. Airports appear to be the major non-core areas for TNC trip activity. Los Angeles international airport is the most frequent origin or destination in the entire TNC dataset: Reagan National airport in Washington DC is the fifth. 25% of trips made by TNC rather than transit in San Francisco were to or from the airport. TNCs are changing the revenue mix at airports – in particular, away from parking and surcharges on dedicated public transport links.

Only in Nashville was TNC the top shared-use mode: in the other five cities it was rail or bus – by a substantial margin.

The Shared Mobility Survey suggested that TNCs are used more for gap-filling than for daily use. Fewer than 10% of respondents reported using TNCs weekly or more often (in line with figures for bike-sharing and car-sharing). Speed and reliability were the main reasons for using TNCs.

Taxis are being heavily negatively impacted. In Washington DC it is notable that there is a large net decrease attributed to TNCs in the use of all other modes.

Vehicles and People in Bristol
Source: Bristol transport strategy: tackling congestion and making Bristol a better place for all. Draft for consultation July 2018

Page 32 of this report shows traffic on the A38 North, a major access route into the city. The percentage of people and vehicles is shown separately.

Type	Vehicles %	People %
Car	62	38
LGV	10	5
HGV	3	1
Bus	4	32
Cycle	20	9
Motorcycle	2	1
Walk	0	14

Sea

Container Capacity
From Railway Gazette International

Post-Panamax container ships – those too big to pass through even the newly widened Panama Canal - can take up to 20,000 TEU (20 foot equivalent units) but there is a prospect of 50,000 TEU vessels within 20 years.

On Indian Railways, 1500 metre long double stack container trains can take 400 TEU.

Singapore Container Terminal

EU Report on Maritime Safety

The Europe Maritime Safety Agency recently published its annual overview of maritime casualties and incidents (http://www.emsa.europa.eu/news-a-press-centre/external-news/item/3406-annual-overview-of-marine-casualties-and-incidents-2018.html). At 350 pages, I didn't read it, but headline figures are that in 2017 there were 3301 casualties and incidents (slightly below the 4-year average), 74 very serious casualties (continuing the decreasing trend), 61 fatalities, 1018 injuries (average for the 4-year period) and 12 ships lost (again, continuing a downward trend).

Statistics are from the investigation bodies of EU member states.

Hamburg, Q1-3 2018
From port.today

The Port of Hamburg

The Port of Hamburg has announced its results for the first nine months of 2018. The port achieved a total throughput of 100.8m tons. This is 3.4% below the 2017 level due to lower volumes of bulk cargo and containers, although conventional general cargo slightly increased.

Hamburg handled 6.6m TEU (20 foot equivalent units) in January-September 2018, 2.4% less than the same period of 2017. This decrease was mainly due to a drop in the empty boxes' volume: 830,000 TEU, a 10.1% downturn. The throughput of loaded containers (5.8m TEU) was 1.2% below the previous year's level.

The trend for loaded and empty containers in the first three quarters shows that the Port of Hamburg is handling less transhipment cargo, and fewer empty containers. In a tough competitive field, the proportion of loaded containers remains stable.

The Port of Hamburg records a strong growth of rail traffic: a total of 1.8m TEU were transported by rail between the port and inland intermodal terminals, a significant growth of 4.3% year on year. The rail traffic share increased from 42.5% to 44.9%.

Direct rail services between China and Hamburg also grew in 2018. Around 235 container train services run each week between Hamburg and 27 destinations in China.

In total, the port handled 4.1m TEU in landside seaport-hinterland traffic. The container segment's share in Hamburg's hinterland traffic rose to 62.1%.

The general cargo throughput was 68.6m tons (2.3% down on the previous year) and bulk cargo, which makes up one-third of total throughput, was 32.2m tons, 5.6% down due to market factors that caused downturns in both suction and liquid cargoes. The upward trend in conventional general cargo, seen initially in the last quarter of 2017, was maintained in the first three quarters of 2018: 6.6% up, to 1.2m tons. Here, heavy cargo imports increased by 32.2% (218,000 tons), those of metals tripled, to 115,000 tons and those of vehicles rose by 55% to 34,000 tons.

The report uses the unit 'tons' – I'm not sure what sort they are, sorry!