

TSUG

Transport Statistics Users Group

Monthly Review: April 2018

This month's review has shown that Estonian transport enterprises served the same number of passengers in 2017 as in 2016. NO₂ concentration at platform level in Birmingham New Street Railway Station in November 2016 - January 2017 was 178 to 508 $\mu\text{g}/\text{m}^3$. Elizabeth Line is forecast to carry 258m passengers by 2020/21 and to earn £817m. Metra, in the Chicago area, has seen that over the past 5 years, its ridership has dropped 4.4% - 2.2% in 2016 alone. Station Records in UK show 12 different types of interesting statistical data including the greatest number of stations you can stop without changing train is 50, the longest journey you can take on a National Rail Service is 13hrs 58mins, and the longest station name has 33 letters excluding the spaces. In the decade since completion of the Barcelona-Madrid High Speed Line, 85.5m passengers have travelled on it. IATA Statistics showed that in Q4 of 2017 industry-wide profit margins remained the same as in Q4, 2016 at around 10.7% of revenue. In UK, in the first year since new penalties came into force, more than 26,000 motorists have been caught using a handheld mobile phone while driving. A third of road deaths in the EU are caused by Single Vehicle Crashes. Road accidents are reducible by measures like seat belts, helmets, speed limits, law on drunk driving. There is an earnings gap of 7% between male and female Uber drivers. Also we have got Kit Mitchell's Statistics Digest

Dr Shanta Bir Singh Tuladhar and Andrew Sharp

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Dates of the next TSUG seminars

Date	Venue	Topic
Wed-18-Apr	TfL	Trade Data, Trade and Transport
Wed-16-May	TfL	Transport Staffing: Supply, Demand and Changing Labour Market
Wed-20-Jun	TfL	Low Cost Airlines
Wed-11-Jul	TfL	Transport Appraisal

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

Statistics Digest

STATISTICS DIGEST April 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	
9 March	Road safety factsheets and ad-hoc data https://www.gov.uk/government/statistics/road-safety-factsheets-and-ad-hoc-statistics
22 March	Road freight statistics: July 2016 to June 2017 https://www.gov.uk/government/statistics/road-freight-statistics-july-2016-to-june-2017
28 March	Shipping fleet statistics: 2017 https://www.gov.uk/government/collections/maritime-and-shipping-statistics
29 March	National Travel Survey factsheet https://www.gov.uk/government/collections/national-travel-survey-statistics

Forthcoming releases from Department for Transport

12 April	Vehicle licensing statistics: 2017 https://www.gov.uk/government/collections/vehicles-statistics
12 April	Road freight statistics: October 2016 to September 2017 https://www.gov.uk/government/collections/road-freight-domestic-and-international-statistics
26 April	Journey time statistics https://www.gov.uk/government/collections/journey-time-statistics
3 May	Renewable Transport Fuel Obligation: Year 10 (2017 to 2018) report 3 (15 April 2017 to 14 April 2018 supply) https://www.gov.uk/government/collections/biofuels-statistics
30 May	Seafarer statistics 2017 https://www.gov.uk/government/collections/maritime-and-shipping-statistics
May	Road traffic estimates in Great Britain: 2017

	https://www.gov.uk/government/collections/road-traffic-statistics
May	Road lengths in Great Britain: 2017
	https://www.gov.uk/government/collections/road-network-size-and-condition
May	Travel time measures for the Strategic Road Network and local 'A' roads: April 2017 to March 2018
	https://www.gov.uk/government/collections/road-congestion-and-reliability-statistics
May	Provisional road traffic estimates, Great Britain: April 2017 to March 2018
	https://www.gov.uk/government/collections/road-traffic-statistics

Release from Office for National Statistics	
22 March	Revised population estimates for England and Wales: mid-2012 to mid-2016
	https://www.ons.gov.uk/releases/revisedannualmidyearpopulationestimates2012to2016
27 March	Vehicle enforcement data for Great Britain
	https://www.gov.uk/government/statistical-data-sets/vehicle-enforcement-data-for-great-britain
27 March	Commercial vehicle testing data for Great Britain
	https://www.gov.uk/government/statistical-data-sets/commercial-vehicle-testing-data-for-great-britain
27 March	MOT testing data for Great Britain
	https://www.gov.uk/government/statistical-data-sets/mot-testing-data-for-great-britain

Seminar Write-up

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

Seminar on 21st March 2018

The topic of the Seminar was '**EU Wide Comparative Statistics**'. There were 3 speakers viz. Kit Mitchell (Email: kitmitch@googlemail.com), Nikos Roubanis (Email: Nikolaos.Roubanis@ec.europa.eu) and Mario Barreto (Phone: +33 (0)1 45 24 97 22, Email: Mario.barreto@oecd.org). The brief summaries of the presentations are as follows.

1 **Kit Mitchell** spoke on '**Sources of International Statistics**'. He presented International Statistics based on Domestic Transport and 'EU Transport in Figures' based on Eurostat Data. Cross-national comparisons were presented on 1) Car ownership and travel by car, 2) Density of motorways and traffic flows, 3) Road traffic fatality rates, and 4) Car driver casualties for older drivers.

2 **Nikos Roubanis** from the European Commission, Eurostat – Transport Statistics delivered on '**Eurostat Transport Statistics**'. He presented on 1) The role and mode of operation of Eurostat, 2) Regular production of transport statistics based on 5 statistical Regulations on: Road freight, Railway, Inland Waterways, Maritime, and Aviation, 3) Regulated transport statistics by mode 4) Voluntary data collections, 5) Statistical development projects and 6) How to ensure quality and comparability of international statistics

3 **Mario Barreto** from International Transport Forum at the OECD (2 rue Andre Pascal 75775 Paris, Cedex 16 France) presented on **ITF statistical activities with International Comparisons – European Statistics**. He spoke on

- 1) The ITF mission - 59 member countries, goal is to help shape the transport policy agenda on a global level,
- 2) ITF statistical activities - Regular Data Collections on modes A – Rail, B – Road, C - Inland Waterways, D - Pipelines (Oil & Gas), E – Maritime, F – Air, and G - Intermodal,
- 3) ITF Transport outlook 2017,
- 4) Work on accessibility - ITF approach for measuring accessibility: Accessibility to shops by car within 15 minutes (Berlin), and Accessibility for amenities in cities within 30 minutes by car, and
- 5) Next ITF meetings: a) 24 April: Working Group on Transport Satellite Accounts (TrSA)-Paris, Explore the possibility to define harmonised TrSA, b) 25-26 April: 5th ITF International transport Statistics–Paris Investment in transport infrastructure, safety in all transport modes, Big Data, innovation in transport measurement, Glossary and c) 22-25 May: ITF Summit in Leipzig Transport Safety and Security.

General News

Transport in Estonia

Source: <https://news.err.ee/688433/passenger-numbers-of-transport-companies-more-or-less-unchanged-in-2017>

According to Statistics Estonia, the number of passengers served by Estonian transport enterprises remained at the same level in 2017 compared to the previous year. Road goods transport decreased, but in rail freight transport increased.

In 2017 the number of passengers carried by Estonian transport enterprises was 208.3 million, with the majority carried by road. In road transport (including trams and trolley buses) there were almost as many passengers carried as in 2016, but the number of passengers increased in the sea, rail, and air transport sectors. In 2017, passenger transport amounted to 5.9 billion passenger-kilometres, 9% up on 2016.

Bus companies served 190.4 million passengers in 2017, and 87% (approximately 165.4 million) used urban transport: the 2016 figure was almost the same. The number of passengers was approximately 14.9 million on county lines (5% less than in 2016), 4.1 million on domestic long-distance lines (down by 3%) and approximately 1.4 million on international lines (up by 12%). In 2017, passenger road transport demand was approximately 2.9 billion passenger-kilometres (domestic traffic down by 6% and international traffic up 7%).

In 2017, Estonian sea transport enterprises carried 9.4 million passengers, 3% more than in 2016. The number of passengers carried by domestic sea transport was 2.5 million (up by 7%) and by international sea transport roughly 7 million (up by 2%). Passenger kilometres by sea increased by 13% year on year, and was nearly 1.3 billion in 2017. International sea traffic accounted for 98% of the passenger traffic volume.

Last year 7.4 million passengers were carried by rail, 7% more than in 2016. 7.3 million domestic passengers (up by 7%), and 107,400 international passengers (up by 4%) were carried. Rail passenger kilometres increased by 16% year on year, totalling 366.7 million in 2017.

In 2017, Estonian air transport enterprises carried 946,700 passengers, 66% more than in 2016. 61% of the passengers were carried on regular (presumably scheduled) flights. Air passenger kilometres increased by 38% year on year to approximately 1.3 billion.

According to preliminary estimates, in 2017, Estonian road freight vehicles and rail, sea and air transport enterprises carried 55.2 million tonnes of goods, of which a half was carried by road and nearly a half by rail. The preliminary estimate for freight traffic in 2017 is nearly 8.6 billion tonne-kilometres.

According to preliminary estimates, Estonian road freight vehicles carried approximately 27.7 million tonnes of goods in 2017, which is a fifth less than in 2016. The volume of freight in tonnes fell mainly in the second half of the year. 21.9 million tonnes of goods were transported domestically by road (down by 21%) and 5.8 million tonnes internationally traffic (down by 17%). Road freight decreased by 13% compared to 2016, and totalled 5.9 billion tonne-kilometres.

In 2017, the volume of goods carried by rail was 7% more than the year before, at 27.3 million tonnes. Of these, 18.1 million tonnes of goods were domestic (up by 15%), with the majority contributed by oil shale transport. 9.2 million tonnes of goods were international: this was down by 5% compared to 2016. Rail freight tonne kilometres decreased by 1%, and amounted to 2.3 billion tonne-kilometres. Of the international rail freight transport, 7.6 million tonnes were goods in transit, imports amounted to 1.3 million tonnes and exports to 0.3 million tonnes. Carriage of goods in transit by rail decreased again by 5% year on year, mainly due to a decrease in the carriage of liquid refined petroleum products. Imported goods were 7% less and export goods 23% more than in 2016.

Rail

Birmingham New Street Pollution



A report, "Evaluation of air quality at the Birmingham New Street railway station" by Hickman and colleagues was published earlier this year for the IMechE.

It is based on a series of measurements taken at Birmingham's main station, heavily used by both diesel and electric powered trains and mostly under a low roof.

Virgin Voyager at New Street

The Non-Road Mobile Machinery Regulations (NRMM) regulate emissions from trains (among other things). They came into force for railway diesel engines in 2006 so many of the trains using New Street are not bound by them: only the class 172 and 185 dmus are covered. Outside air quality is regulated under EU Directive 2008/50, but railway stations are not covered by this.

The station, the busiest outside London, handles 170,000 passengers on an average day, and on 19 November 2016 saw a record 230,000. The enclosed space has 12 platforms: it is 5m high, 160m wide and 240m long – big, but smaller than Paddington. Approximately 600 diesel powered trains use the station each day.

Researchers sampled air using diffusion tubes at three positions on each platform, in three places on the concourse and outside the station. This was done for two 2-week periods between November and January. Average NO₂ concentrations at platform level ranged from 178 to 508 µg/m³ (EU standards say an hourly average of 200 µg/m³ should not be exceeded on more than 18 occasions a year). There were considerable variations between sites, between platforms and between days. The average outside the station was 62 µg/m³. Particulate emissions are likely to have exceeded the 50 µg/m³ limit on several days, and are likely to breach annual limits at most of the platform level sites. Christmas Day and Boxing Day were included in the periods under study: all emissions dropped dramatically on those two train-free days.

Pollution levels are higher when wind speeds are low.

On one day, there was a minute-by-minute analysis of a specific pair of platforms: it was clear that Class 220/1 Voyagers resulted in higher concentrations of NO₂.

As a result of the research, investigations are under way into remedial measures. Can diesel engines be switched off when trains are stationary for a long time? Can diesel trains stop beyond the low ceiling?

The researchers say that New Street is in some way unique, with large numbers of diesel trains under a low roof, so results cannot be generalised.

Elizabeth Line

According to a report in the Financial Times for 26 February 2018, Crossrail is forecast to be carrying 258m passengers by 2020/21, and to earn £817m.

That's an average fare of £3.16 – which probably implies short distance commuting will predominate.

Readers' thoughts welcome.

Evaluation of Improvements to Rail Services in the Welsh Valleys



Pacer train in the Welsh Valleys

A report, “Valleys rail strengthening final evaluation: final report” was published by the Welsh government in late January.

This research looks at the impact of reopening the line between Ebbw Vale and Cardiff, and to a lesser extent the impact of increasing the Welsh Valleys dmu fleet (together known as the Valleys Rail Strengthening Project, or VRS). The project was intended to encourage modal

shift, to enhance sustainable access to employment opportunities, and to reduce congestion and greenhouse gas emissions. It cost £22.7m, of which £8.5m came from the ERDF. Research (a key component being on-train surveys) was undertaken in 2015, 4½ years after project completion. Questionnaires were offered in English and Welsh: 2 Welsh ones were completed.

Passenger services were restored to the line between Ebbw Vale Parkway and Cardiff in February 2008 after an interval of 46 years. The line was extended to Ebbw Vale Town in May 2015. Hourly services (alternate hours on Sunday) are provided. The funding also allowed 12 morning peak and 11 afternoon peak trains to be lengthened.

The area was facing socio-economic problems and high levels of economic inactivity: regeneration and the reduction in barriers to travel was seen as one solution. Car ownership was relatively low.

The target was to increase train kilometres by 0.75m/year (0.22m through strengthening and 0.53m from the new Ebbw Vale service) and seat kilometres (and I found this section very difficult to follow). The former was achieved.

In the 12 months to 9 January 2016, there were 632k trips on the line, of which 90% had Cardiff Central as an origin or destination: it was estimated that 20.5m passenger kilometres of train travel were experienced on the line itself. Since 2008/9, there has been a significant growth in travel on the line. Station entries and exits increased by 30% between 2007/8 and 2012/3. The DfT's forecast of demand for 2008/9 was 45k passengers: the actual number was 252k.

Growth has not been at the expense of other lines in the area,

Nearly 80% travel on anytime singles, returns or day returns, with 10% on weekly or monthly season tickets. Main journey purpose was shopping (35%), VFR (16%) and leisure (15%). Commuting accounted for 14% of journeys. About a third of respondents travelled at least once a week: 29% travelled between once a week and once a month and 29% less often. 21% use the train three or more times a week. 88% were satisfied or very satisfied with the service. 36% walked to the station: 31% drove to and parked at the station while 23% were dropped off. 26% of respondents said that the new line was a factor in deciding to move to the area.

Previous travel mode (before reopening) was car (43% as driver, 11% as passenger), bus (19%) or drove to another station (18%). If the train service had not been introduced, 22% would have driven all the way and 10% would have been a car passenger: 21% would have used the bus. The bus service between Ebbw Vale and Cardiff reportedly lost between 30% and 35% of its market share in the first 12 months of the train service.

It was estimated that the train service reduced car kilometres by 13.8m, with a gross value (ignoring indirect taxation and subsidy) of £1m.

The lack of a direct connection to Newport, the traditional focus of the Ebbw valley, was criticised (although it was recognised that Cardiff was the correct choice). The cause was rail capacity: there is thought to be latent demand for a direct connection to Newport.

The line is obviously valuable to the Cardiff leisure market: it is well used at weekends.

In the local catchment area, employment increased by 11%. 17% fewer walked to work, implying a switch from local employment to rail commuting.

The research found it difficult to isolate the benefits of strengthening train services in other parts of the Valleys network.

Metra Travel Trends

From <http://www.chitranspo.com/metra/whats-metra-ridership/>



A recent article about Metra, operator of suburban (as opposed to subway) trains in the Chicago area, asked, “Is Metra alarmed that ridership is quickly declining while employment in downtown Chicago is steadily rising?”

It commented that, over the past five years, Metra’s ridership has dropped 4.4% - 2.2% in the last year alone. The Electric District line,

Metra Commuter Train at O'Hare Transfer Station, Chicago

serving the South Side and suburbs, dropped by 14.7%, the worst fall of Metra’s 11 lines. Only one line, the Heritage Corridor, serving the Southwest Suburbs, showed healthy increases, up 3.3% during the last five years. But the Heritage Corridor is Metra’s least-used line, with only 2,400 weekday riders. The Union Pacific West line, serving the western suburbs, showed a 1% increase over the last 5 years.

The data were presented to Metra’s Board by their Director of Strategic Capital Planning. Key points were as follows.

- Metra provided 78.6m trips in 2017, down from 83.4m trips in 2014 - and a record 86.8m trips in 2008.
- Ridership on Metra’s busiest line, the BNSF to Aurora and Naperville (63,900 weekday rides), dropped 2% over five years.
- Metra’s peak period ridership levels held steady over the past five years, but off-peak levels fell - are these people driving Downtown?
- Metra paid an outside consultant to discover that for every fare increase of 10%, the agency sees a ridership drop of 2.2%. Metra has raised fares four times in four years.
- The employment rate in downtown Chicago — the destination for most of Metra’s riders — rose 0.3% in 2016, continuing a seven-year upward trend.
- Metra says 90% of all its trips are made by commuters. It provides 709 weekday trains carrying 288,000 weekday riders.

Here are some factors affecting Metra ridership.

- More people are telecommuting. Conductors are seeing fewer riders on Fridays than they do on Mondays, and monthly pass purchases are down, while 10-Ride ticket sales are rising.
- Cold weather depresses ridership.
- Gasoline prices are much more reasonable now than they were a few years ago (\$2.40/gallon compared with \$3-\$4/gallon).
- Some new technology is good for Metra: Ventra, Metra’s mobile ticketing app, has proven quite popular with riders, and ride-sharing apps Uber and Lyft are helping provide “last-mile” assistance to Metra riders.
- Some new technology is bad for Metra: Apps that direct motorists to in-city parking availability and travel apps, such as Google maps and Waze, are taking some of the unpredictability out of driving.

Station Records

From Citymetric, by someone else with WAY too much time on their hands

“Recently, someone on Twitter asked CityMetric’s editor about the longest possible UK train journey where the stations are all in progressive alphabetical order. Various people made suggestions, but I was intrigued as to what that definitive answer was. Helpfully, National Rail provides a 3,717 page document containing every single timetable in the country, so I got reading!

(Well, actually I let my computer read the raw data in a file provided by ATOC, the Association of Train Operating Companies. Apparently this ‘requires a good level of computer skills’, so I guess I can put that on my CV now.)

Here’s what I learned:

1) The record for stops in progressive alphabetical order within a single journey is: 10

The winner is the weekday 7.42 Arriva Trains Wales service from Bridgend to Aberdare, which stops at the following stations in sequence:

- *Barry, Barry Docks, Cadoxton, Cardiff Central, Cardiff Queen Street, Cathays, Llandaf, Radyr, Taffs Well, Trefforest*

The second longest sequence possible – 8 – overlaps with this. It’s the 22:46 from Cardiff Central to Treherbert, although at present it’s only scheduled to run from 9-12 April, so you’d better book now to avoid the rush.

- *Cardiff Central, Cardiff Queen Street, Cathays, Llandaf, Radyr, Taffs Well, Trefforest, Trehafod*

Not quite sure what you’ll actually be able to do when you get to Trehafod at half eleven. Maybe the Welsh Mining Experience at Rhondda Heritage Park could arrange a special late night event to celebrate.

There are 15 possible runs of 7 stations. They include:

- *Berwick Upon Tweed, Dunbar, Edinburgh, Haymarket, Inverkeithing, Kirkcaldy, Leuchars*
- *Bidston, Birkenhead North, Birkenhead Park, Conway Park, Hilton Square, James Street, Moorfields*
- *Bedford, Flitwick, Harlington, Leagrave, Luton, St Albans City, St Pancras International*

There is a chance for a bit of CONTROVERSY with the last one, as you could argue that the final station is actually called London St Pancras. But St Pancras International the ATOC data calls it, so if you disagree you should ring them up and shout very loudly about it, I bet they love it when stuff like that happens.

Alphabetical train journeys not exciting enough for you?

2) The longest sequence of stations with alliterative names: 5

There are two ways to do this:

- *Ladywell, Lewisham, London Bridge, London Waterloo (East), London Charing Cross* – a sequence which is the end/beginning of a couple of routes in South East London.
- *Mills Hill, Moston, Manchester Victoria, Manchester Oxford Road, Manchester Piccadilly* – from the middle of the Leeds-Manchester Airport route.

There are 20 ways to get a sequence of 4, and 117 for a sequence of 3, but there are no train stations in the UK beginning with Z so shut up you at the back there.

3) The longest sequence of stations with names of increasing length: 7

Two of these:

- *York, Leeds, Batley, Dewsbury, Huddersfield, Manchester Victoria, Manchester Oxford Road*

- *Lewes, Glynde, Berwick, Polegate, Eastbourne, Hampden Park, Pevensey & Westham*

4) The greatest number of stations you can stop at without changing trains: 50

On a veeeeery slow service that calls at every stop between Crewe and Cardiff Central over the course of 6hr20. Faster, albeit less comprehensive, trains are available.

But if you're looking for a really long journey, that's got nothing on:

5) The longest journey you can take on a single National Rail service: 13 hours and 58 minutes.

A sleeper service that leaves Inverness at 19.17, and arrives at London Euston at 9.15 the next morning. Curiously, the ATOC data appears to claim that it stops at Wembley European Freight Operations Centre, though sadly the National Rail website makes no mention of this once in a lifetime opportunity.

6) The shortest journey you can take on a National Rail service without getting off *en route*: 2 minutes.

Starting at Wrexham Central, and taking you all the way to Wrexham General, this service is in place for a few days in the last week of March.

7) The shortest complete journey as the crow flies: 0 miles

Because the origin station is the same as the terminating station - the journey is on a loop.

8) The longest unbroken journey as the crow flies: 505 miles

Taking you all the way from Aberdeen to Penzance – although opportunities to make it have become rarer. The only direct service in the current timetable departs at 8.20 on Saturday 24 March. It stops at 46 stations and takes 13 hours 20 minutes. Thankfully, a trolley service is available.

9) The shortest station names on the network have just 3 letters

Ash, Ayr, Ely, Lee, Lye, Ore, Par, Rye, Wem, and Wye.

There's also I.B.M., serving an industrial site formerly owned by the tech firm, but the ATOC data includes those full stops so it's not *quite* as short. Compute that, Deep Blue, you chess twat.

10) The longest station name has 33 letters excluding spaces

Okay, I cheated on this and Googled it – the ATOC data only has space for 26 characters. But for completeness' sake: it's Rhoose Cardiff International Airport, with 33 letters.

No, I'm not counting that other, more infamous Welsh one, because it's listed in the database as Llanfairpwll, which is what it is actually called.

11) The highest platform number on the National Rail network is 22

Well, the highest platform number at which anything is currently scheduled to stop at, at least".

The Impact of the Barcelona - Madrid High Speed Line

An article in Global Railway Review recently reported on the decade since completion of the high speed line between Madrid and Barcelona. 85.5 million passengers have travelled on the high-speed rail service, and the use of the line is still growing.

The high-speed rail service has generated a huge movement of travellers by train in the main corridor in Spain. Before these services came into operation, only 1.98 million passengers used the line, so demand has multiplied nearly six times with the new routes to Barcelona.

Almost 66 million people have travelled between Barcelona and Madrid on high-speed rail, almost 11 million passengers used services between Barcelona and the Basque Country, Navarra, Galicia and Castilla y León and just over 9 million customers used the connections between Barcelona and Andalusia.

RENFE's AVE services have a 63% share of the rail+air market.

It is estimated that €1.3 billion has been saved during the 10 years of the high-speed line's operation in terms of climate change impacts, reduced accidents and reduced pollution. The environment has been spared 4.2 million tonnes of CO₂, equal to almost 1 million tonnes of oil.

Air

Dubai's Southern Runway to close for 45 Days



Emirates A380 at Dubai International Airport

The southern runway at Dubai International Airport, which handled over 88 million passengers last year, is "nearing the end of its design life" and will close for 45 days in April and May next year for resurfacing and replacement of ground lighting.

The reduction in capacity is expected to be approximately 43% during the 45-day period.

Some airlines may decide to use larger aircraft if possible, while some

could see their load factor increase.

In 2014 the airport's northern runway underwent a similar programme: passenger numbers were then around 65 million. The closure reportedly cost Emirates \$467m in lost revenue. But today, the airport handles more than 30% more people.

The airport handles 1100 movements a day, mostly wide-bodied aircraft. No doubt more use will be made of the Al Maktoum airport at Jebel Ali.

Dubai has an extensive operation from six UK airports: Gatwick, Heathrow, Birmingham, Manchester, Newcastle and Glasgow. Dubai is the hub for the Emirates and will launch flights from Stansted this year.

The timing has been chosen when the passenger traffic historically ebbs due to seasonal lull.

Recent Airline Statistics

IAG, owner of BA, Aer Lingus and Vueling, published its 2017 and Q4/2017 figures recently.

Looking at 4-quarter moving averages, several are moving upwards – just not the right ones!

Passenger revenue, at £20,245m, is at its highest since the year to Q4, 2016 – but in the year to Q2, 2016 it was £20,770m. Revenue passenger kilometres (RPK), at 252,819m are a record high as are available seat kilometres (ASK, 306,185m) and passenger numbers (104.8m).

But revenue/passenger is £193.12 (compared with £230.72 in the four quarters to Q4, 2015). Yield (revenue/passenger kilometre) is 8.01p compared with 9.19p in the four quarters to Q4, 2015). And average journey length is 2411 miles. All three of these statistics are the lowest I have recorded since the four quarters to Q4, 2015.

Air France/KLM is in a similar position. Passenger revenue is at its highest since the 4 quarters to Q1, 2016 (at €20,393m): passenger kilometres are the highest since my series began, at 248,474m. Capacity – available seat kilometres – is also at a record high (286,190m): so are passenger numbers (83.947m, compared with just over 79m when my series started in Q4, 2015). But revenue/passenger, revenue/passenger-km and average journey length are all down – at €243, €0.082 and 2960km respectively. Contrast these with the 4 quarters to Q4, 2015 - €260, €0.087 and 2983. The best that can be said is that the decrease in yield is slowing down.



By contrast, on **Air Canada** almost everything is on the up and up. Revenue at C\$16,312m is above the C\$16,000m level for the first time since my series started in the 4 quarters to Q4, 2015. Passenger miles (85,137m) are at a record high. The available seat miles figure is also a record (103,492m) as are passenger numbers (above 48m for the first time – 41m when the series started). Revenue/passenger was C\$337 when I started the series: it dropped

Air Canada Boeing 787 Dreamliner at Heathrow Terminal 2

steadily to C\$326 in the 4 quarters to Q1, 2017 but has grown steadily since then to just short of C\$339. Revenue/passenger mile (C\$0.19) is about the only less good figure: journey length is 1769 miles (1642 when the series started).

The same is true at **Finnair**. For the four quarters to Q4, 2017 revenue, at €2493m, is above €2400 for the first time since my series started. RPK at 29,452m is again a new high: ASKs, at 35,510m are above 35,000m for the first time. Passenger numbers are 11,547 – another high – as is journey length (2583km). Revenue/passenger at €215.91 is its third highest: only yield (revenue/passenger-kilometre) is trending downwards at €0.0835 (€0.0881 in the 4 quarters to Q4, 2015).

On Time

On 21 February, I flew back from Toulouse to Heathrow – and the flight was on time.

When I say it was on time, it took off at the time specified in the timetable (11:20) and came to a stand at the gate at Heathrow at the time specified in the timetable.

I do not think that has ever happened to me before. I've been recording this kind of information since 2004 (mainly because airline colleagues had the nerve to criticise railway punctuality). I've had a handful of flights which took off less than five minutes behind schedule, but for one to take off precisely on schedule is a first.

Now aforesaid airline colleagues will point out that this isn't the right measure – airlines measure from chocks-off to chocks-on. But railways are moving to 'on time to the minute' measurements, so why not airlines? And if you say you are leaving at 11:20, leave at 11:20. Even push-back at 11:20 is 'late', especially since it might take half an hour before the flight actually leaves the ground (as happened to the outbound flight: to be fair the aircraft was on stand at the north side of Terminal 5 and took off to the west on the southern runway, so it had to go from one corner of the airfield to the other).

And there was even a bigger fly in the ointment of the on-time flight back. At Toulouse airport, there was a 17 minute wait at security, followed by a 13 minute wait for passport control. And it took 11 minutes to board, most of the time waiting on the jetway.

Time to spare – go by air!

Recent IATA Statistics

IATA published its Airlines Financial Monitor for December-January in mid-February. Key points were as follows.

In the fourth quarter of 2017, industry-wide profit margins remained the same as in Q4, 2016 at around 10.7% of revenue.

Global airline share prices rose 2.9% in January, with increases in Europe and Asia offsetting falls in North America.

Yields (earnings/passenger-km) remained broadly stable in late 2017.

Passenger and freight volumes grew in 2017 by 7.6% and 9.0% respectively.

Premium passenger traffic accounted for 27% of international passenger revenues in the first 11 months of the year, compared with 25.9% for the first 11 months of 2016.

What's a Slot Worth?

The value of a slot pair (the right to land and take off) varies by airport and by time of day.

The 2016/7 "Greener by Design" annual report 2016/7 notes that Scandinavian Airways sold two slot pairs at Heathrow for \$75m: last year Kenya Airways sold its only slot pair for the same amount. It was particularly valuable to the purchaser (Oman Air) who wanted the early arrival time for onward connections.

Road

Driving and Mobile Phones

Source: gov.uk email

In the first year since new penalties came into force, more than 26,000 motorists have been caught using a handheld mobile phone while driving. Among these are 500 novice drivers who have had their licences revoked for using their phone behind the wheel in their first two years of driving.

On 1 March 2017, the penalties for this offence doubled from £100 and three penalty points to £200 and six points.

A further 1,997 motorists were handed fines as part of a national crackdown by traffic officers between 22 and 28 January 2018, which was choreographed by the National Police Chiefs' Council. Of those caught, 74% were male.

The maximum penalty for being in the way of an inattentive driver is, of course, death.

Recycled?

The Hong Kong based cycle hire company Go Bee had a disastrous launch in France.

Within a very short time of starting up, 60% of their fleet of bikes had gone. 3400 had been damaged and over 1000 had been stolen.

Many – presumably of the stolen ones – had been 'privatised': they had been parked at home by a hirer and were presumably inaccessible.

Single Vehicle Crashes

A third of road deaths in the EU are caused by collisions that involve a single motorised vehicle where the driver, rider and/or passengers are killed but no other road users are involved.

Nearly 7300 road users lost their lives in 2015 in single vehicle crashes (SVCs) in the EU. Around 94,800 people have died in such collisions in the last 10 years. Across the EU, the total number of people killed in SVCs was cut by 43% over the period 2005-2014. Deaths caused by collisions of this type have fallen a bit faster than road deaths overall (-41%) but slower than road deaths caused by multi-motor vehicle collisions (-44%).

Over 60% of deaths in SVCs occur on rural roads. However, safer infrastructure and appropriate speed limits have helped reduce deaths on rural roads. In the EU, 68% of all deaths in SVCs are car occupants. Powered two wheeler (PTW) users represent around 20% of deaths in SVCs, while the distance travelled on these vehicles remains low compared to other modes of transport. Truck occupants account for 7% of all deaths in SVCs with buses and coaches accounting for less than 1%.

Young drivers and riders are at a greater risk of becoming involved in fatal single vehicle collisions than any other road user age group. This risk is twice as high for the 18-24 age group compared to the 25-49 age group.

Data available from a few countries suggest that the range of casualty characteristics vary from country to country. But the most common fatal SVC scenarios are the vehicle leaving a straight road or leaving the road when driving on a bend.

An in-depth study conducted in the Netherlands in 2011 found that distraction was the most frequent contributory factor related to human behaviour, involved in 31% of the SVCs studied. This was followed by speeding (27%), alcohol use (19%) and fatigue (17%). Young drivers appear to be involved in SVCs when distracted, choosing inadequate swerving manoeuvres to avoid another road user or object or when they incorrectly assess the traffic situation.

Tech Shuttles

From the San Francisco Chronicle

Tech companies like Google and Apple are unwilling to share information about their shuttle buses, so the Santa Clara Valley Transportation Authority (VTA) set up cameras to determine how many buses are on the road. Tech shuttles – shuttle buses organised by companies to transport their staff - have long been a controversial topic in San Francisco, where they're blamed for clogging neighbourhood streets and causing house prices near stops to increase. They operate a network of buses throughout the Bay Area, picking up employees from points south and east of their headquarters.

VTA is examining the impact of corporate bus fleets as part of a study that will analyse potential transit projects on Highway 85. The buses are popular with workers because of the lack of convenient connections from major rail lines like Caltrain (suburban) and BART (subway) - to corporate campuses. Offices of Facebook and Apple are each about 6.5km from the closest rail station.

VTA set up cameras on two days in November at six places. Finding out more information about the buses could help VTA better determine how to improve traffic. Potential projects that could be explored include light rail, dedicated bus roads or even a bus-only lane that the tech shuttles could also use.

The agency estimates that companies spend roughly \$249,000 a year to operate each shuttle, with an annual cost of \$12,000 to \$15,000 for each rider. At peak times, in the northbound direction, there were 111 shuttles on Highway 85 at El Camino Real in the morning and 130 buses in the evening, according to the agency's study. At Middlefield Road, there were 97 shuttles northbound at peak times in the morning and 106 shuttles in the evening. Peak times were from 6:00 to 10:00 and 16:00 to 20:00. The study also noted that half of the shuttle trips during peak times had no passengers, as the buses returned empty to pick up more passengers.

VTA asked companies for shuttle bus data through the Silicon Valley Leadership Group and the Bay Area Council but did not receive it. The firms may not want the public to know how many employees work in each location, information that could be deduced from shuttle counts.

The initial phase of the Highway 85 study cost \$400,000, including the tech bus data.

“The High Toll of Traffic Injuries – Unacceptable and Preventable”



Traffic in Bangkok

This fascinating report was published by the World Bank Group in 2017. It tries to evaluate the effect – in particular, on GDP - of reducing road accidents in middle- and low-income countries. Road accidents are reducible, by measures we can easily take for granted – seat belts, helmets, speed limits, laws on drunk driving – so this makes them a good target for reducing premature deaths. They are avoidable.

There is a lot in this report: it is impossible to do justice to it in this summary. If you are interested in the subject, you need to read it.

Low to middle income countries (LMICs) have half the world's motor vehicles but suffer 90% of the world's 1.25m traffic deaths and 20m-50m of its non-fatal road crash injuries. Between 1990 and 2015, deaths from road traffic injuries (RTIs) dropped from 22/100,000 population to 8/100,000 in the OECD countries.

The World Health Organisation estimates that RTIs account for the greatest share of death and long-term disability in the 15-29 year old age cohort. 75% of road fatalities are male: in many societies, men are the primary source of cash income.

The report tries to estimate the impact on GDP growth and in terms of costs and benefits of reductions in RTIs. Both measures are looked at because, for example, payments for medical treatment after an accident contribute to total GDP. It looks at five representative countries (China, India, the Philippines, Tanzania and Thailand) where the number of traffic deaths and injuries varies considerably but overall accounts for 5% of all deaths and fatal injuries.

The analysis used economic simulations to measure the change in GDP/head under different scenarios of reduction in RTI mortality and morbidity, and the effects on economic welfare of substantial reductions in RTIs. It looked at reductions of 25%, 50% and 75%. These make a small but significant impact on growth rate and income/head. For example if Tanzania were able to reduce RTI impacts by 50%, it would increase GDP by 7.1% over the study period (24 years).

The work was significantly constrained by data gaps – things like the value of a statistical life, for example, is not available for many LMICs, so a range of realistic figures was used. In addition, much of the evaluation looked only at fatalities, and not injuries – very much a cost which could be reduced.

Safety enhancements will be geographically specific, depending on the underlying distribution of RTIs by road user group (like pedestrians, cyclists) and risk factors (speeding, drunk driving). Generally, reducing speed is valuable (an increase of 1 km/h in mean speeds increases the number of crashes resulting in injury by 3%, and fatal crashes by 4%-5%). Improving public transport can reduce car use and collision frequency – a study in Guadalajara (Mexico) showed a 46% decrease in crashes after a new Macrobus system was introduced. Setting and enforcing motor-cycle helmet use laws has also been effective – reducing deaths by 52% in Cali (Colombia), deaths by 21% and injuries by 41% in Thailand, injuries by 16% and deaths by 18% in Vietnam and 27% reduction in injury and 35% reduction in fatalities in Malaysia.

A reduction of RTI mortality by 25% is estimated to improve GDP/head by between 2.5% (the Philippines) and 7.5% (Thailand – which has the highest RTI mortality rate of the five countries) over 24 years. Reducing morbidity – non-fatal accidents – has the potential to increase GDP by 2.5% in the Philippines and 7.6% in Thailand.

The paper has much discussion on evaluation and sources.

Unequal Uber

Uber cooperated with researchers to investigate the pay of more than 1m of its US-based drivers. In theory, there should be no gender bias – the algorithm which assigns drivers to customers has no information about the drivers' gender, the fee is the same for everyone, and there are no constraints on working hours.

Yet there is an earnings gap of about 7%/hour between male and female drivers.

There are three factors which explain this. First, men drive 2.2% faster than women, so they can do more trips/hour. They also have more experience – and drivers who have completed more than 2500 trips make nearly 14% more each hour because they have worked out how to maximise earnings. Finally, men tend to drive in more lucrative parts of a town – possibly women drivers consider these less safe.