

Fig. 1 Total Number of Domestic Passengers in 12 months of 2016

Fig. 1 shows that a minority of routes (as shown in the right) are much more popular than others among UK domestic flights. The whisker is far higher than the boxes, which means the maximum volume of the airports is far larger than the 75th, 50th or 25th percentile of volume of all airports. Similar phenomenon is observed in international flights in Fig. 2 It can be concluded that a few popular routes constitute the majority of UK domestic traffic. The lines are often in pair and almost overlap each other, the similar number of passenger traffic in both ways show that people take return flights more often and less likely to take open-jaw flights. Although the data of international flights does not distinguish the outbound and inbound flights, it could be deduced that people take international flights also with the same practice.

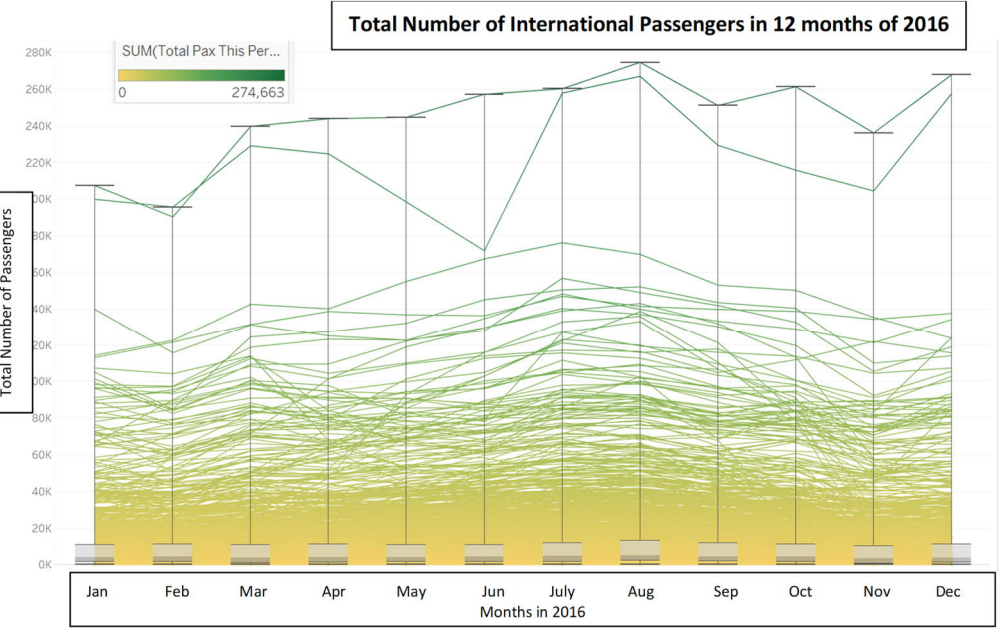


Fig. 2. Total Number of International Passengers in 12 months of 2016.

Overall pattern of air passenger traffic - International&Domestic

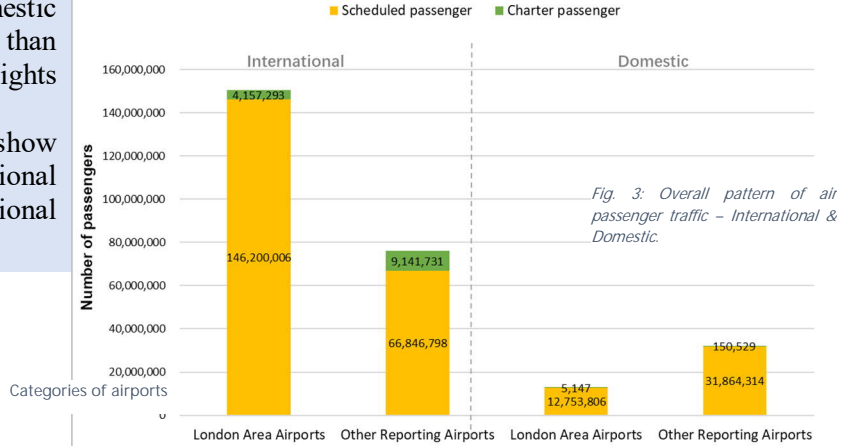


Fig. 3: Overall pattern of air passenger traffic - International & Domestic.

Overall pattern of international air passengers traffic

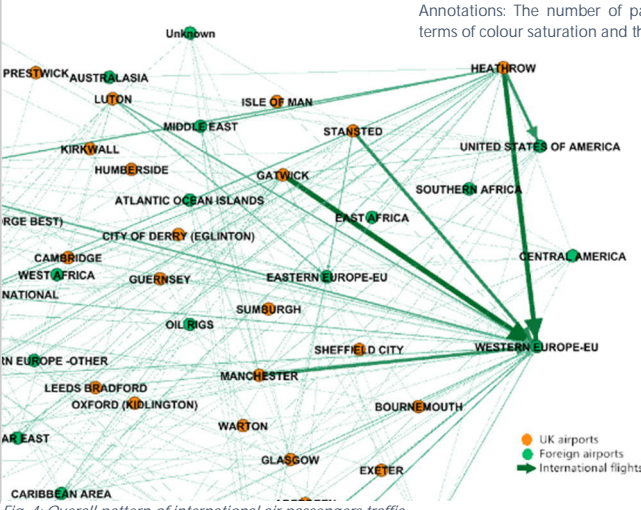


Fig. 4: Overall pattern of international air passengers traffic.

Overall pattern of domestic air passengers traffic

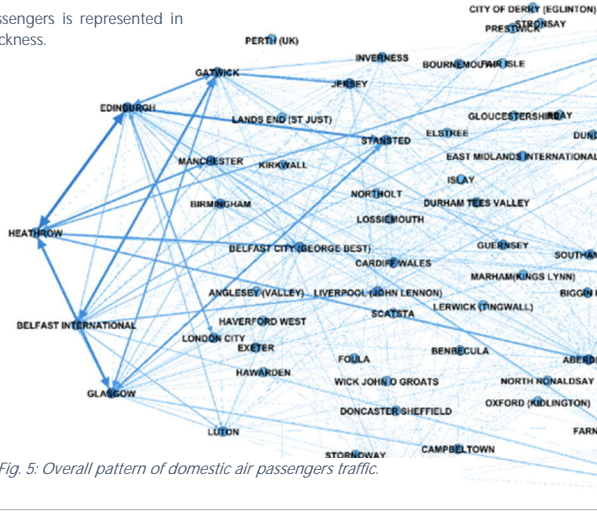


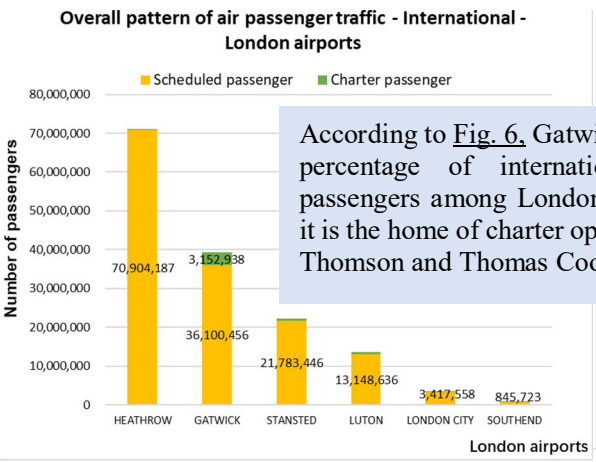
Fig. 5: Overall pattern of domestic air passengers traffic.

As Fig. 3 shows, scheduled passengers are far more than chartered passengers in both London and other airports, because chartered flights are only considered as urgent, time-sensitive and ad hoc air transportation. More importantly, London area airports concentrate on international flights while other reporting airports focus more on domestic flights.

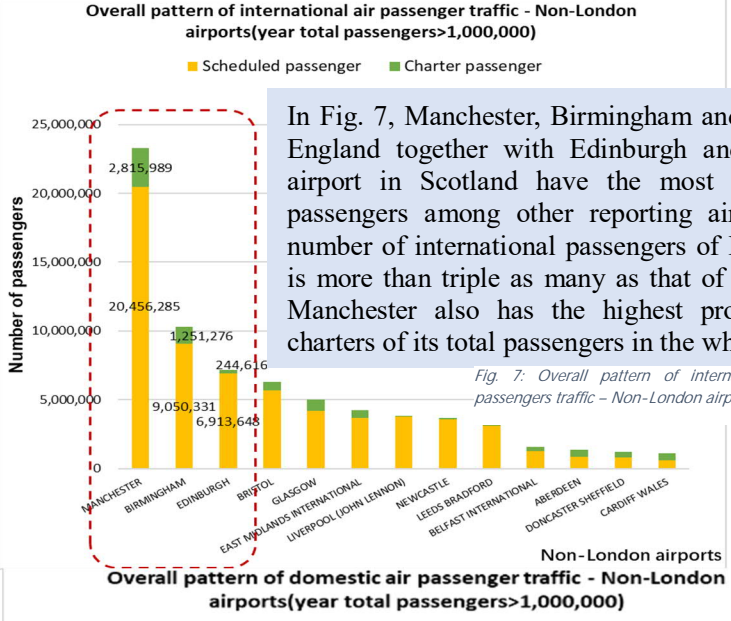
From Fig. 4 respecting international flights, in descending order of total number of passengers, Heathrow, Gatwick, Stansted and Manchester airports have far more flights and passengers than any other UK airports. Furthermore, Western Europe-EU has the most number of passengers and from other UK airports. Among these flights, Heathrow and Gatwick airports contribute the most passengers. For domestic flights in Fig. 5, Edinburgh, Glasgow, Heathrow, Gatwick, and Manchester airports have more passengers than all UK airports.



Fig. 6: Overall pattern of air passengers traffic – international – London airports.



According to Fig. 6, Gatwick has the most percentage of international chartered passengers among London airports, since it is the home of charter operations such as Thomson and Thomas Cook.



In Fig. 7, Manchester, Birmingham and Bristol in England together with Edinburgh and Glasgow airport in Scotland have the most number of passengers among other reporting airports. The number of international passengers of Manchester is more than triple as many as that of Edinburgh. Manchester also has the highest proportion of charters of its total passengers in the whole year.

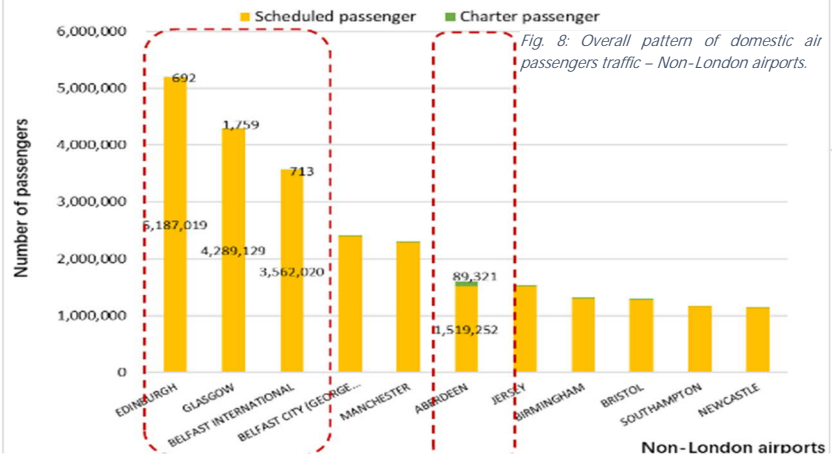
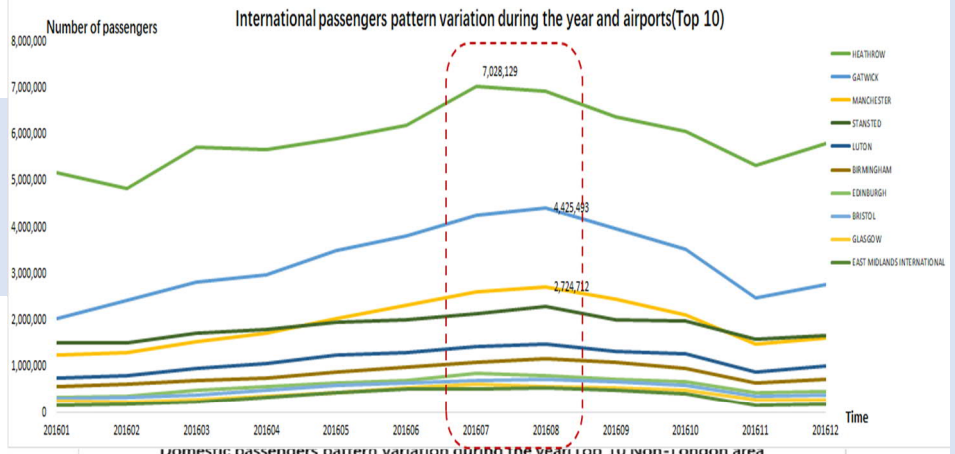
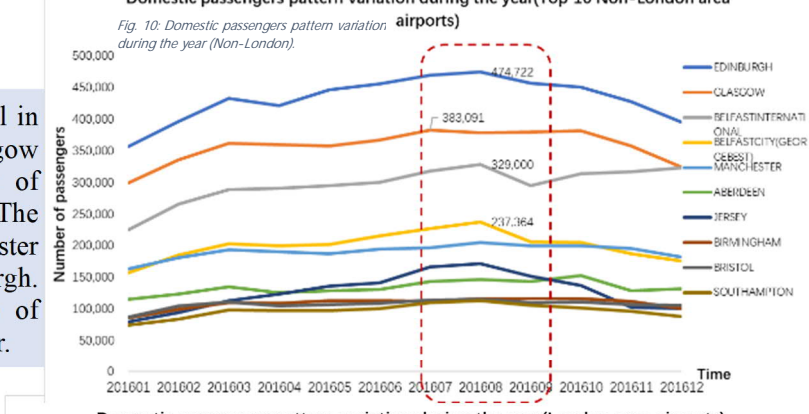


Fig. 8: Overall pattern of domestic air passengers traffic – Non-London airports.

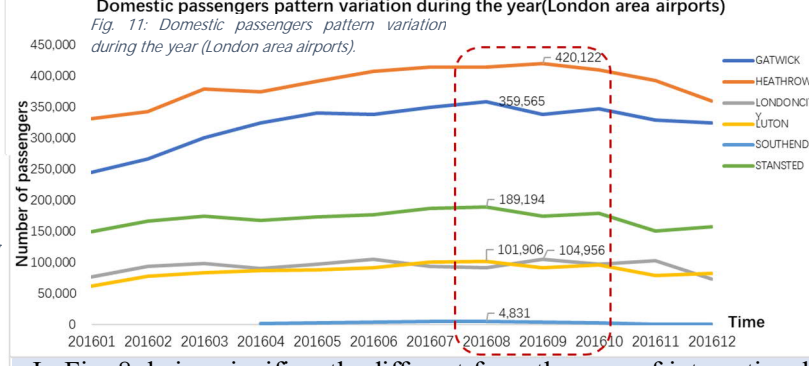
Fig. 9: International passengers pattern variation during the year and airports (Top 10).



In Fig. 9, the number of international passengers of each UK airport increases from April, when summer begins, peaks in July and Aug summer vacation and drops before Dec. It can be deduced that summer is a large factor for the increase in air traffic, maybe due to warmer temperature and a long holiday in July and August. Additionally, note that there are local maxima in Dec, Jan and March, when Christmas and Easter holiday take place. It could be concluded that holiday is another important factor for the rise in air passengers traffic.



In Fig. 10, The difference in the pattern of domestic passengers is that there is no local maximum in Dec. Assume that Christmas is the period for family reunion, maybe UK people do not live too far from family thus they do not need to take domestic flights, or even if they live far, they take domestic transportation other than flights.



In Fig 11, the number of passengers of Southend airport is far fewer than other London area airports. It even less than 63% Non-London area airports. The lines of Luton and London City intertwine with each other throughout 2016, i.e. when the traffic in one airport rises, the other would drop. The phenomenon could be explained by the two airports are competing for the same market of customers, and Luton successfully gains the larger market than London City in July, Aug and Dec, probably by promotion of vacation.

In Fig. 8, being significantly different from the case of international flights, Edinburgh and Glasgow airports in Scotland, Belfast airport in Northern Ireland have the most number of passengers among other reporting airports. In England, Manchester has the most number of passengers throughout 2016. The number of domestic passengers of Edinburgh even more than doubles to that of Manchester. Interestingly, Aberdeen has the highest proportion of chartered of its total passengers in the 2016. Aberdeen is not in the top 10 of Non-London airports group while has a relatively higher proportion of charter passengers than many airports. It is related to its history which is that helicopter operations began at Aberdeen in 1967 with the discovery of North Sea oil. As a result, Aberdeen became the largest oil-related center in Europe and the airport became the world's largest commercial heliport.