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The role of London airports in providing connectivity for the UK: regional dependence on foreign hubs

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ABSTRACT

In a context of ongoing debate about the future UK aviation policy and its implications for regional economic development, this paper discusses the role of London Heathrow and the South East airports in providing connectivity for the UK, with particular focus on the international markets that originate from regional UK airports. Using an MIDT dataset of worldwide passenger itineraries served by the European airport network during May 2013, we first establish whether London Heathrow can currently be considered the most important hub for the UK, in terms of traffic generation, connectivity, and centrality, while also measuring the dependence of UK regions on foreign airports and airlines to remain connected with the rest of the world. Results show that, despite the competition, London Heathrow benefits from its massive traffic generation to remain the most central gateway for overall UK air transport markets. However, when only regional markets are considered, significant dependence on foreign hubs appears in many destinations, particularly to Asia–Pacific or the BRIC countries where above 80% of passengers use transfer flights. These results fit nicely with the observed trends of seat de-concentration and hub-bypassing in the airline industry. While dependence on foreign hubs can be interpreted as a sign of vulnerability, there is also the argument that bypassing Heathrow allows regional airports to develop new markets and reduce the level of congestion in the London airport system.

1. Background

The urban hierarchy in the UK has changed substantially over the past decades and the most important centres, especially London and the South East, have enhanced their economic performance with respect to the rest of the country (DCLG, 2011; Taylor et al., 2009; Parkinson et al., 2006, and Hall et al., 2001). This situation can be illustrated by the development of air transport services in the UK. The UK airport system is the busiest in Europe,[1] and the distribution of passenger traffic is anything but balanced (Table 1). In 2013, approximately 62% of all traffic served by the UK system (138 million passengers) travelled through one of the five main airports in South East England: Heathrow, Gatwick, Stansted, Luton, and London City (CAA, 2014). These five airports combined offered flights to 399 international destinations in 106 countries all over the world (Source: Official Airline Guide). In contrast, all remaining airports outside the South East region combined (they will be referred throughout this paper as "regional airports") provide direct flights to only half the number of destinations (200 international destinations in 52 countries). These figures support the view that London airports, from their central position in the UK urban hierarchy, may play a key role in providing worldwide connectivity for the other UK regions.

The existing literature has already established the influence of air traffic services on economic development and the attractiveness of a region (e.g., Goetz, 1992; Brueckner, 2003; Green, 2007; Bel and Fageda, 2008; Bilotkach, 2013). Furthermore, air transport connectivity is a crucial factor influencing the position of regional population centres in the world-city hierarchy (Zook and Brunn, 2006; Derudder and Witlox, 2008), and their integration in the globalisation dynamics (Goetz and Graham, 2004; Cidell, 2006; Otiso et al., 2011). Whilst UK regions have become well connected to many European destinations with the growth of low-cost airlines, their weak position in the UK urban hierarchy limits their ability to capture direct air services to intercontinental destinations, along with the added value they bring (Shin and

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[1] In 2013, the UK system served approx. 25% of all air travellers in Europe (EU-28) (Eurostat, 2014).

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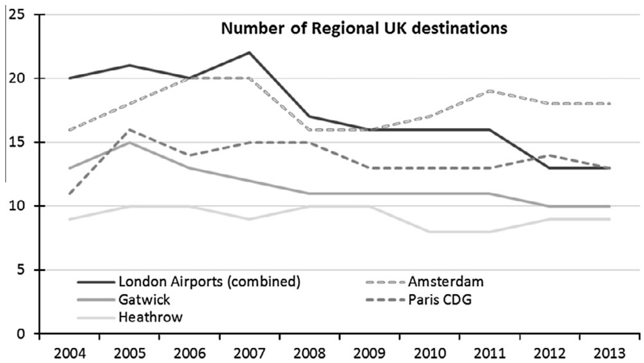

Fig. 1. Evolution of regional UK destinations served from selected airports 2004–2013. *Source:* OAG, own elaboration.

Timberlake, 2000; Hall, 2009; Bentlage et al., 2013). Currently, these markets are accessible indirectly via a hub airport, for which the natural choice seems to be Heathrow (ITC, 2013). This view is explicitly stated in the UK Aviation Policy Framework document, which points out that "continued connectivity to London is essential to regional economies and national cohesion" (UK Government, 2013).

Indirect connectivity through hubs is a way to significantly increase the overall connectivity of regional airports (Suau-Sanchez and Burghouwt, 2012). However, it could also be argued that this places those regions in a vulnerable position as their connectivity is dependent on the decisions taken at the hub airport. This is evidenced by the evolution of traffic at the five main London airports during the last decade, which shows a steady decrease in the number of annual flights available to other UK regions, from 74,875 in 2004 to 51,647 in 2013 (a 31% drop). A similar trend is observed in the number of regional UK destinations that are connected by air to the capital. Fig. 1 shows that, since 2009, the five main London airports combined are connected by air to less cities in the rest of the UK than Amsterdam and, as of 2013, they reach the same number of cities as Paris-Charles de Gaulle (CDG). Both European hubs combined offer 35,308 annual frequencies to UK regions, which represents 68% of what is offered by the London airports.

The shortage of runway capacity in the South East can be cited as the cause of the problem. Although the system has capacity to accommodate some additional passenger growth in the short-term (e.g. at Stansted, Luton, or Southend), Heathrow, which is by far the busiest airport in the UK and home of the flag carrier British Airways, is already operating at full capacity and presents important expansion difficulties due to the urban developments around the airport.[2] Given its level of saturation, in order to continue growing, airlines have given up feeding services from the rest of the UK and, by relying on the strong London market, have substituted them with long-haul services that are offered using larger aircraft that accommodate more passengers (Table 2). In addition, the lack of room for new route developments at Heathrow has led to an evident stagnation in the number of destinations served during the last decade, especially in comparison with other European and Middle Eastern hubs. These figures challenge the traditional status of Heathrow, not only as one of the world's main international gateways, but also as the main hub "for the UK".

This situation, in combination with the strong competition for passenger traffic that exists between UK, European, American, Middle Eastern, and Asian major carriers – which seek to transport passengers via their hubs (ITC, 2014) –, is changing the way air transport demand from UK regions is being served. Recently, the Airports Commission (set up by the UK Government to provide advice on airport expansion options[3]) alerted to the risk of "decoupling" UK regional airports from London in an effort to improve their indirect connectivity and competitiveness[4]. This is evidenced by an increasing number of regional passengers in international routes connecting through hubs other than Heathrow, such as Amsterdam, Paris, or Dubai (Airports Commission, 2013). The two main consequences of this possible "demand leakage" were pointed out by the Independent Transport Commission (ITC).[5] First, the reduction in the number of flights between the UK regions and London would constrain domestic connectivity. Secondly, the UK would become dependent on foreign aviation policies to guarantee future regional connectivity to worldwide markets (ITC, 2013). While the problem has indeed been identified, no detailed measurements of the scale of this "decoupling" have been produced, mainly because of the lack of appropriate data on passenger itineraries and actual hub choices on intercontinental routes.

Within this context of debate on the future UK aviation policy, this paper aims to measure the role of airports in South East

Table 1
Passenger traffic of UK airports, 2013. *Source:* UK Civil Aviation Authority.

Airport	Passengers	Share (%)
Heathrow	72,367,054	31.7
Gatwick	35,444,206	15.5
Stansted	17,852,393	7.8
Luton	9,697,944	4.2
London City	3,379,753	1.5
Southampton	1,722,758	0.8
Southend	969,912	0.4
Other	8,575	0.0
Total South East England	141,442,595	61.9
Edinburgh	9,775,443	4.3
Glasgow	7,363,764	3.2
Aberdeen	3,440,765	1.5
Prestwick	1,145,836	0.5
Inverness	608,184	0.3
Highlands/Islands/Other	941,637	0.4
Total Scotland	23,275,629	10.2
Cardiff	1,072,062	0.5
Total Wales	1,072,062	0.5
Manchester	20,751,581	9.1
Birmingham	9,120,201	4.0
Bristol	6,131,896	2.7
Newcastle	4,420,839	1.9
East Midlands	4,334,117	1.9
Liverpool	4,187,493	1.8
Leeds Bradford	3,318,358	1.5
Exeter	741,465	0.3
Doncaster Sheffield	690,351	0.3
Bournemouth	660,272	0.3
Norwich	463,401	0.2
Other	1,034,358	0.5
Total England (Ex-South East)	55,854,332	24.4
Belfast International	4,023,336	1.8
Belfast City	2,541,759	1.1
Derry	384,973	0.2
Total Northern Ireland	6,950,068	3.0
Total UK	228,594,686	100.0

[2] The smaller London-City Airport is also operating close to full capacity.

[3] The Airports Commission was set up in September 2013 by the UK Government to provide independent advice on "identifying and recommending options for maintaining the UK's status as an international hub for aviation and immediate actions to improve the use of existing runway capacity" (Airports Commission, 2013).

[4] Suau-Sanchez and Burghouwt (2012) also report the increasing role of foreign hubs in shaping the accessibility between Spain and the rest of the world.

[5] The ITC is a research charity land use and transport think tank. It was launched in 1999 in response to the Government's Transport White Paper.

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