

Airports Commission Discussion Paper 02: Aviation Connectivity and the Economy – a response by Birmingham Airport

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1 Executive summary

- 1.1 The Airports Commission's definition of connectivity is too narrow. A more relative approach would demonstrate that the UK currently suffers an acute regional 'connectivity gap'. Improvements to domestic surface access are essential to overcoming this gap, and should be at the heart of the Commissions' short-term aviation strategy.
- 1.2 Evidence shows that the current alignment of UK connectivity and productive sectors is not maximising economic activity. To make the best use of airports with spare capacity, the UK's great cities need great airports. Only by having their own long-haul international gateways can each significant (and often discrete), regional economy support business activity and prosperity. A network of major international gateways is needed to empower businesses across the whole UK to attract investment and provide new markets for their goods and services.
- 1.3 There is a hegemonic perception that long-haul connectivity can only be delivered via a 'hub'. Research by the EEF and the Confederation of British Industry (CBI) challenges this belief. 'A network of international airports with links to high-growth markets increases consumer choice and competition, and reduces reliance upon a single hub, bolstering infrastructure resilience. These are all good for business.' All airports, and airport models, have a role to play. The limiting factors defining connectivity are an airport's catchment area, surface access and economic activity, not its operating model. Under these conditions, Manchester and Birmingham Airport have a significant role to play in delivering connectivity for their respective economies.
- 1.4 Research by the West Midlands Economic Forum (WMEF) shows that Birmingham Airport's catchment area has the potential to become the UK's major international gateway for manufacturing exports. Case studies presented confirm that limited connectivity from the Airport, and the relative difficulty of attracting large scale investment, are impeding the development of a vibrant economy with the potential to unlock sustainable long-term economic growth for the region, and the UK.
- 1.5 The WMEF report, "Exports, Economics and Connectivity", examines air freight and demonstrates that there is an established correlation between the air freight connectivity in a specific economy and the rate of real output growth in that economy. But without effective access, regional economies in the UK are constrained by their capacity to exploit available and potential export opportunities, and reduce costs by securing competitive imports.
- 1.6 The expansion of Birmingham Airport's runway could lead to a potential step-change in freight volumes at the Airport. The extended runway will be operational in 2014, at which point the WMEF estimates the Airport could have the capabilities to handle c. 800,000 tonnes of mostly long-haul belly hold freight. This represents 60% of Heathrow's current throughput and would give the UK an internationally competitive belly hold freight airport located in close proximity to the UK's productive sectors.
- 1.7 Birmingham Airport commissioned Capital Economics to undertake some innovative research that will shed fresh light on the relationship between connectivity and the economy for the UK. This research will be submitted direct to the Commission. The research will re-examine the spatial geography of catchment areas in the UK and how these will change with developments in public transportation over time; analyse the social and industrial structure of these new catchment areas; and analyse how the industrial structure of catchments is likely to change over time. This research will also reassess how this relates to long term global economic trends and what it means for long-haul air travel, as well as analysing the pressures that will be placed on airports in London and Manchester if Birmingham Airport does not pursue expansion.
- 1.8 The following organisations have endorsed Birmingham Airport's submission: Greater Birmingham and Solihull LEP, Birmingham Chamber of Commerce Group, Black Country LEP, Herefordshire & Worcestershire Chamber of Commerce, North Staffordshire Chamber of Commerce, Shropshire Chamber of Commerce, Black Country Chamber of Commerce, Coventry & Warwickshire Chamber of Commerce.

2 Response to questions relating to the nature of connectivity and its drivers

2.1 Response to question 5.4.1 - Do you agree with the definition of connectivity presented in the paper? What other factors, if any, should we take into account and how do they impact connectivity? / Question 5.6.1 - What is the best approach to measuring the UK's aviation connectivity?

Birmingham Airport regards the definition of connectivity outlined by the Airports Commission as too narrow. Connectivity is more than just the range of destinations and frequency of flights offered by an airport. Birmingham Airport recommends that the Commission expands the definition and meaning of connectivity. The Commission should:-

- i. Incorporate a **relative concept of connectivity based on the economic needs of a region, not just an absolute concept based on flights to and from the UK**. Wider recognition should be given to the fact that it is sub-optimal for connectivity to be concentrated in one geographical region when industries that require long-haul services to reach growth markets are primarily based in other regions. Research by EEF shows this can add costs to production and act as a barrier to business growth for export-intensive manufacturers.ⁱ The Commission refers to 'how accessible are airports from a passenger's origin or destination'; to maximise the value of any measurement of connectivity, indices should include information on whether it supports the growth of specific economic sectors from appropriate locations, at convenient times.
- ii. **Undertake a full analysis of UK connectivity, aligning the future need for international connectivity in terms of the Government's economic aspirations for UK Plc. and compare this against the current extent of connectivity**. Evidence shows that the UK is currently sixth in the European Union (EU) for destinations served, only offering direct links to three Chinese cities and no routes to twelve of the twenty-five cities forecast to experience strong growth to 2025. In contrast, the international connectivity offered from German airports helps explain why it accounts for one third of all EU trade with China. The UK has a similar experience with attracting Foreign Direct Investment (FDI) from Brazil, Russia, India, China (BRIC) economies. France's connectivity with Brazil has allowed French businesses to attract £500 million of FDI compared to the £1 million attracted by UK businesses.ⁱⁱ Poor connectivity helps explain why the UK is failing to attract similar levels of investment and trade as our main EU competitors. But there is also a relative dimension to this story. The UK's regionally located export-intensive sectors are not being given the type of direct connectivity they need to succeed. Taking a more relative approach to connectivity would demonstrate that the UK currently suffers not only from an absolute connectivity shortage, but also from an **acute regional 'connectivity gap'**. The Commission should make resolving this gap its short-term priority. Greater connectivity to and from our great cities and regions will help to grow the economy and the UK as a whole.

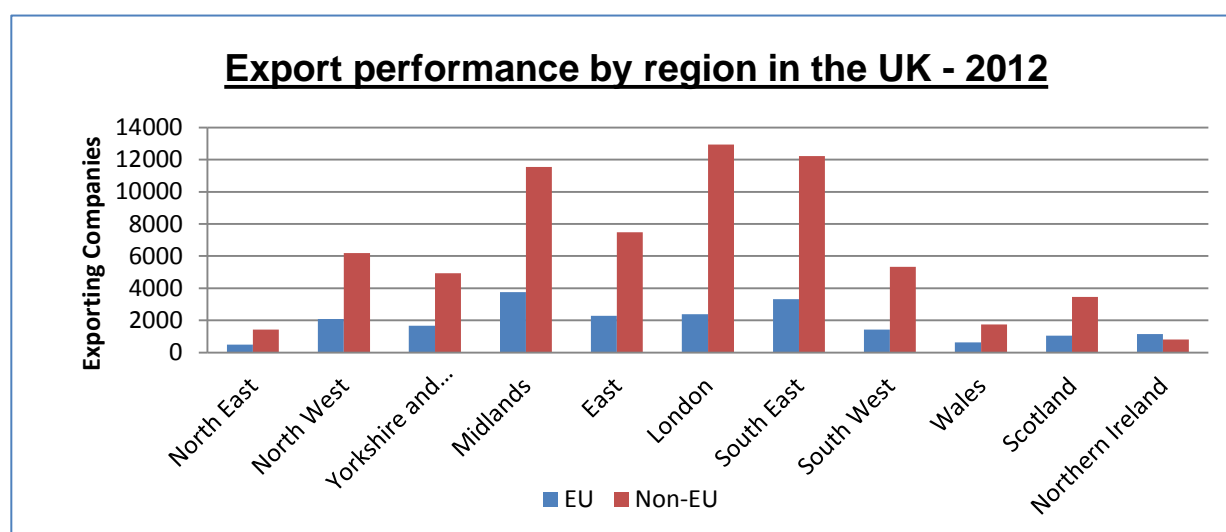
2.2 Response to question 5.4.2 - Do you agree with the assessment we have made of the UK's current aviation connectivity? / Question – 5.4.3 – What factors do you think contribute to the fact that the UK is directly better connected to some regions of the world than others?

2.2.1 Assessing the state of the UK's current aviation connectivity

The UK Government has responded to the country's economic malaise by trying to promote a geographic and sectoral rebalancing of the national economy away from financial services in the South East. Shifting economic activity towards the UK's productive sectors, such as manufacturing - which accounts for 11% of GVA - is a fundamental part of that strategy.ⁱⁱⁱ

The ability of export-intensive manufacturers to trade depends to a large extent on the state of the UK's international connectivity. For instance, 'trade between Britain and emerging markets that have a daily flight connection is twenty times higher than trade with countries only accessible via transfer'.^{iv} However, many economies outside the South East lack the direct, long-haul international connectivity needed to benefit from this relationship. Connectivity is acting as a barrier, not an enabler of growth. Overcoming this 'connectivity gap' is essential if the Government is serious about realising its rebalancing objectives.

The WMEF looked at UK export performance by region in 2012. In terms of visible export performance, it found that London ranked third with exports of £34.0 billion, the Midlands second with £39.7 billion and the South East top with £42.0 billion.^v



Source: West Midlands Economic Forum

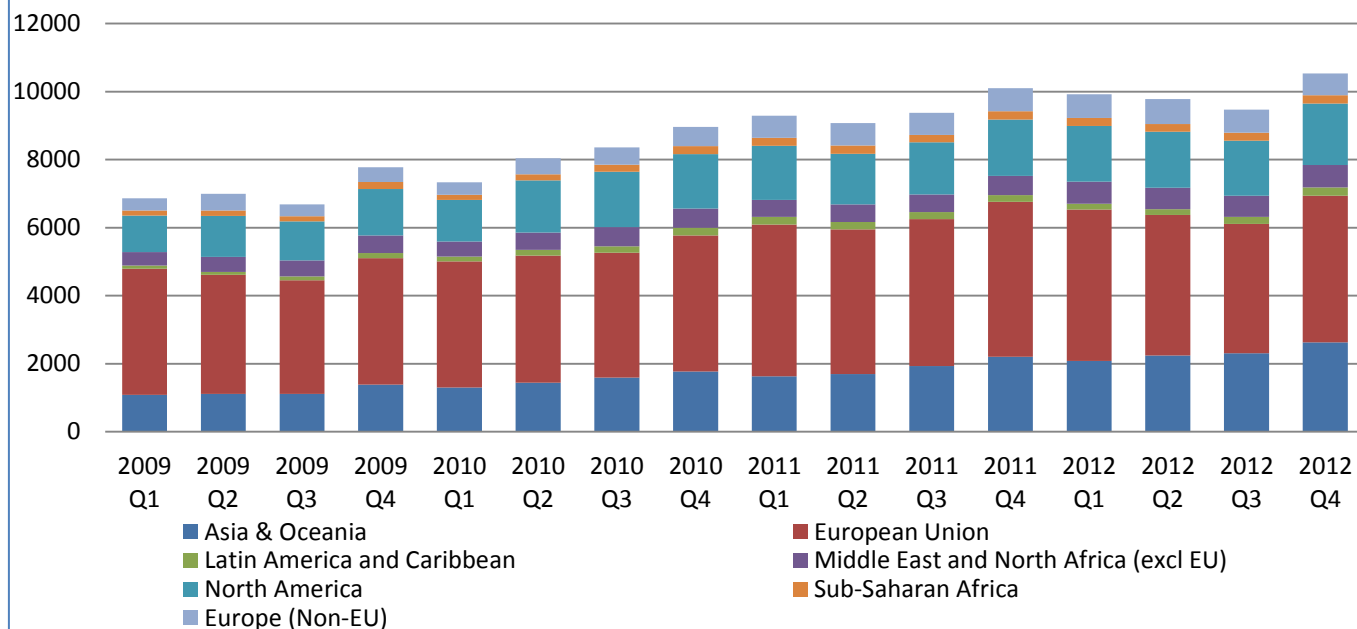
The dominance of London and the South East is expected. The Department for Transport found that the South East accounts for 87% of direct passenger flights to North America, 99% to the BRIC economies and 78% to the rest of the world.^{vi} The depth, range and extent of this international connectivity is causative, helping explain why businesses located in the Greater South East are more likely to be export-orientated than elsewhere in the UK. A recent study by the Greater London Authority (GLA) confirms this relationship. The study concluded that the positive stimulus on London's development from having direct access to global markets has enabled sustained capital investment in the region. This has increased London's productivity and competitiveness.^{vii}

Birmingham Airport's catchment area has a diverse economic profile. Overall, the WMEF designated catchment area – the “catchment economy” – generates £263 billion GVA per annum, 21% of UK GDP and its 14 million inhabitants account for 22% of national Gross Disposable Income^{viii}. This is despite the profound structural problems associated with the region's recent legacy of post-industrial under-investment and economic dislocation. This can be explained by the concentration of export-orientated manufacturing industries within the catchment area, which have been performing comparatively vigorously since 2009.

The Midlands economy has 12,260 companies involved in international trade. These companies consist of small-scale precision-based component manufacturers coupled with traditional craft-industries feeding into globally ranked prestige producers including Aston Martin, Bombardier, Jaguar Land Rover, Rolls Royce, Toyota, MG Motors and JCB. As a result, within the “catchment economy”, 92% of exports are value-added finished or semi-finished manufactured goods. Some of the relative growth in exports from the Midlands has resulted from the rapid and extended depreciation of Pound Sterling, but output performance has also been quite resilient. New orders have driven output expansion and improved business confidence. The latest quarterly survey from Birmingham Chamber of Commerce shows that sales figures have increased by 7% over the last quarter, out-performing the rest of the UK on exports and home sales.^{ix} However, the Midlands still generated an overall trade deficit of £10.8 billion in 2012. This is endemic of the UK's wider trade performance, and hides the positive trade story emerging in the Midlands.

The WMEF found that compared to 2009, when 49.6% of the region's exports went to non- EU economies, 58% of exports now go to non-EU countries - a rise 63.7% rise. This growth largely compensated for the recent drop in demand for UK exports in the EU and was the result of growth in 13 non-EU economies, none of which could accessed directly from the Midlands. This indicates that increased long-haul capability at Birmingham Airport would improve business-to-business contact and help reposition the Airport as a principal belly-hold freight node for the UK economy –see chapter 3.^x

Midlands Export Markets (£ Million) - 2012



Source: West Midlands Economic Forum

Aviation connectivity is an absolute barrier for the UK, but this barrier is far more acute for economies outside the South East where the current alignment of UK connectivity and productive sectors is not maximising economic activity. The UK needs a network of major international gateways, each capable of delivering the connectivity needed to support the economic activity in its region. This would help many businesses overcome the effects of the current 'connectivity gap', empowering them to attract investment and providing new markets for their goods and services.

If the Commission decides to further increase London's airport capacity without a complementary strategy for promoting connectivity for economies outside the South East, this will perpetuate the economic imbalance within the UK that current rebalancing policies are aiming to overcome. However, if the Commission pursues a balanced approach that bridges the regional 'connectivity gap', it will significantly improve the Government's chances of empowering the region's to achieve this objective.

2.2.2 The Commission's short-term strategy must address the connectivity gap outside the South East

The Commission's interim report will present ideas on how to make the best use of existing airport capacity. Hopefully, the Commission will try and overcome the effects of having over 90% of the UK's long-haul aviation connectivity concentrated in the South East – where capacity problems, notably at Heathrow, are unlikely to be resolved within the next decade. A meaningful short-term strategy must promote the growth of direct, long-haul international connectivity from the UK's major international gateways with full range runways and available capacity. Without action, evidence from *Frontier Economics* suggests that the UK could lose £14bn of trade over the next decade. The UK risks losing its position as Europe's premium 'hub' for aviation before any decision can be made about long-term additions to capacity.^{xi}

A central part of the Commission's task is to identify which airports can support the growth of connectivity in the near term. This will depend on whether an airport has the capabilities to cater for growth in the type of short, medium and long-haul connectivity the UK needs to support business. To qualify, an airport must have readily-available spare capacity, sufficient runway capability (which delivers range) and enough demand in the catchment area to support targeted route development. On this basis, only Manchester and Birmingham Airports qualify outside the South East, excluding Scotland. It is important to recognise that this is not an 'either, or' scenario. Both Manchester and Birmingham Airports have important complementary roles to play, despite inevitable competition for trade 'at the margins'.

The growth in connectivity will depend on a large part on the demand for services from an airport's catchment area. This demand is based on two main drivers:

- (i) **Surface access connectivity** - The easier and quicker it is to reach an airport by road and rail, nominally within one hour journey time door-to-door, the greater the demand potential for that airport. Previous Government strategy has focused on the need for everyone living within the UK to have access to an airport within two hours. But for customers, passengers and businesses to benefit from 'effective connectivity', they need to be within one hour of a major international gateway by road or rail. Policies that promote surface access connectivity to these gateways will therefore help airports to serve a wider population, and help airports attract airlines to offer new connectivity.^{xii} This will drive route development and benefit consumers, making surface access a key element for defining the overall level connectivity in relation to aviation.
- (ii) **Economic activity** - is not uniform across the UK. London is a global hub for professional and financial services, the greater Midlands are a European hub for advanced manufacturing and the North West is a hub for emerging forms of digital technology. While at this stage only London's aviation infrastructure and market may be big enough to attract very thin routes to 'pioneer markets' – such as Indonesia, Brazil and Mexico - the UK's other major (regional) economies have sufficient concentrations of population and economic activity to support routes to customers, investors and leisure destinations on 'thick routes' to established markets (North America, Europe), and on thinner, but not new, routes to high-growth markets with correlative supply chain activities, or leisure demand (Indian subcontinent, China).

2.2.3 All airports have a role to play in connecting the UK to growth

To make the best use of airports with spare capacity, the UK's great cities need great airports. Only by having their own long-haul international gateways can each significant (and often discrete), regional economy support business activity and prosperity. Yet there is an overriding, hegemonic perception that long-haul connectivity can only be delivered via a 'hub'. A recent report by the CBI, *Trading Places – unlocking export opportunities through better air links to new markets*, challenges this belief:^{xiii}

The CBI looked at the growth of traffic between hub and non-hub airports in Europe and ten key cities in high-growth markets. It found that the UK needs to re-orientate our trade to target expansion in high-growth markets, and that government must do all it can to facilitate such expansion. 'A new daily flight to the eight largest high-growth economies would generate an extra £1billion in trade a year' reflecting how the 'symbiotic relationship between air links and trade flows generates a virtuous cycle' of growth. Where it differs from widely referenced literature, notably *Frontier Economics* (2011) and *Oxford Economics* (2012), is in its treatment of the contribution that can be made to the national economy by connectivity from a few major non-hub airports – like Birmingham and Manchester Airports.^{xiv} Its results showed that **'hub-and-spoke and point-to-point models play equal and complementary roles in fuelling the expansion of connectivity... We cannot expect growth in one model to compensate for constraints in the other... all airports have a role to play'**.

The CBI report compared the growth of traffic to high-growth economies from European hubs and non-hub. It found evidence of 'dramatic growth in global air links across different operational models'. From 1993-2011, passenger demand for ten pairs of cities flying via hub airports grew by 128%, while passenger demand at non-hubs grew by 169%. This 'highlights the strength of demand for both models'. While the debate and possible expansion/ construction of hub capacity is important, having **'a network of international airports with links to high-growth markets increases consumer choice and competition, and reduces reliance upon a single hub, bolstering infrastructure resilience. These are all good for business.'** Air links and trade feed each other, in both direction, to create virtuous circle of activity that has commensurate benefits for the local and national economy.

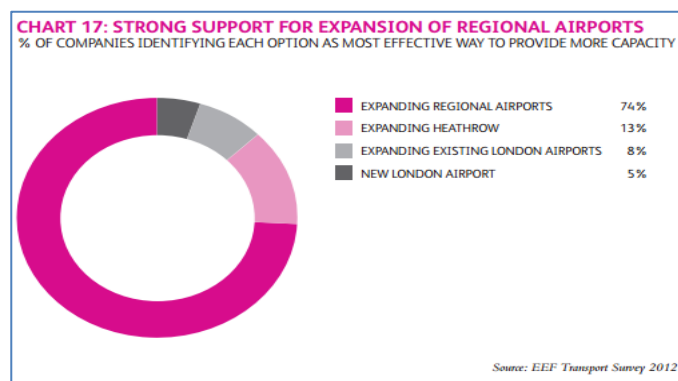
This conclusion should not be underestimated. It comprehensively breaks the hub-centric analytical trend and calls into question the notion that major non-hub airports cannot deliver, and sustain, long-haul connectivity for the wider UK economy. Securing connectivity to the markets analysed by the CBI – BRIC economies plus South Korea, Turkey, Mexico and Indonesia – and more established markets in North America, is possible from Birmingham and Manchester Airports. However, it is also worth noting that not every catchment area has the same economic profile, and different airports would seek to service overlapping but differentiated markets.

2.3 Question 5.4.4 – Given connectivity trends in the UK versus other European countries, how much scope is there in the route network available to UK residents to radically change over the coming years

2.3.1 The Midlands has a competitive advantage for manufacturing, but poor connectivity is acting as a barrier to growth

The previous sections have highlighted that the UK's major regional economies outside the South East are being let down by aviation connectivity. This is particularly the case with the Midlands, where the concentration of manufacturing exporters makes it one of the UK's principal, and most profitable, exporting regions. A recent report by EEF, *Transport for Growth*, revealed that manufacturers rely on international connectivity for three main reasons: deciding where to invest, identifying new business opportunities, and building, and maintaining, consumer relationships.^{xv}

The results of the EEF survey showed that the 'more a company exports, the greater the value it places on the international connectivity they provide' and 'three quarters of exporting manufacturers currently see aviation infrastructure as a barrier to relationship building'. A strategy that supports the growth of connectivity from the UK's major international gateways outside the South East, like Birmingham Airport, to key markets, would remove a major barrier to the future expansion of export-industries in those regions. It would start to plug that region's connectivity gap and be overwhelmingly supported by the UK's manufacturing community - 74% of respondents to the EEF survey identified the expansion of regional airports as the most effective way to provide more capacity. This figure increased to 78% for manufacturers based in the Midlands, with 70.3% of respondents identifying the air network as critical or important to their business.^{xvi}



Case studies of businesses in the Midlands revealed that some of the region's connectivity gap can be plugged by attracting services to established, short/ medium-haul markets across Europe and Russia. Until early 2014, runway constraints prevent the Airport from offering direct services to vital long-haul markets. The Airport is already investing heavily to overcome this barrier. The Airport's runway extension will be operational in spring 2014 and be capable of competing for direct services that connect the Midlands direct to established markets in North America. Demand for some of these key business and leisure routes is already 'thick' and simply requires an airline to take advantage of it, when the

runway is operational.^{xvii} But the airport will also be able to connect businesses and leisure passengers on thinner, but well established, routes to

BRIC economies. This is particularly the case with the Visiting Friends and Family (VFR) and business traffic from the Midlands to the Indian sub-continent.

To better understand how connectivity affects business decisions (3.24 – Commission discussion paper), the Birmingham Chamber of Commerce Group asked various businesses to provide examples where the availability of aviation links has directly influenced firms' supply chains and investment decisions (3.33 – Commission discussion paper). The case studies presented below clearly demonstrate that limited direct aviation connectivity:

(i) Is cited as a major barrier to future growth for established exporting businesses;

Case study: Delcam

Size of company: 260 staff in the UK. 650+ worldwide, with staff and partners based in 150+ locations.

Annual turnover: end user sales of over \$100m.

Number/types of trips abroad: 10 - 20 of our UK staff fly overseas each week, with a mix of short-haul European trips and long-haul trips to Asia and the America's. Between 5 and 15 overseas visitors fly here for meetings or training each week.

Rough value of export/import trade: to around 90 countries worldwide with exports representing about 85% annual turnover

"Delcam is an MSB based in Birmingham supplying manufacturing software to around 90 countries worldwide with exports representing about 85% of our turnover. Around one third of our international sales are in Asia.

"With so many staff in so many locations the whole team do a great deal of International travel each week. Each year we hold 2 key training events in the UK at which 200+ of our overseas staff and partners travel to the UK.

"There are very few direct flights from Birmingham to Asia: in most cases there is a choice between driving to Heathrow and flying from there, or flying from Birmingham via Amsterdam, Paris, or Dubai. The absence of direct flights means a lot of wasted time travelling to and sitting in airports for our staff when they travel to Asia and for our international staff when they travel to the UK. Obviously, all these people would prefer to use direct flights to and from Birmingham."

- Peter Dickin, Marketing Manager at Delcam plc



Case study: Worcester Bosch Group

Size of company: 1800 employees

Annual turnover: £300m+

Number/types of trips abroad: Trips to China via Heathrow

"There are additional financial and time costs in using LHR. We would use Birmingham Airport without a shadow of a doubt if we could." - Neil Schofield, Director of External Affairs Worcester Bosch Group



Case study: BSA Machine Tools

Size of company: 30 full time employees. 250 in the local supply chain

Annual turnover: £5m

Number/types of trips abroad: 6 sets of international flights for multiple numbers of BSA personnel in the first three quarters of 2012. This does not include visits from our overseas customers.

Rough value of export/import trade: 90% of the business is export trade, predominately to long-haul destinations.

"BSA Machine Tools Ltd is a local manufacturing company that produces quality machine tools. We are located within 5 miles of Birmingham Airport. Our customers are located globally: America, South-America and the emerging markets of Asia. Regular business trips are undertaken throughout the year by BSA personnel to our customers and vice versa.



At present, BSA use carriers to fly from Birmingham Airport to European hubs or to Dubai to connect with long-haul flights, as this is easier than travelling to Heathrow. When BSA visits customers in Taiwan, we do fly from Heathrow via Hong Kong but this incurs the added inconvenience of travelling to and from London: fighting through traffic congestion and incurring parking expense and hotel fees.

These difficulties also affect our overseas customers visiting our plant here in Birmingham. It would be of tremendous benefit and put Birmingham on the international map if Birmingham Airport could cater for long-haul point-to-point services." - Steve Brittan, Managing Director at BSA Machine Tools

Case study: Black Country Metals

Size of company:

Annual turnover:

Number/types of trips abroad: Weekly

"As a Midlands based exporter we use Birmingham Airport practically weekly, most of the time to fly via another hub abroad. This is a necessity for me to visit my export markets, but also for them to visit us.

"It takes time and extra money to travel in this manner, which can sometimes put our exporters off. Some of my potential customers have refused to visit because of the hassle that's caused by travelling up to Birmingham from Heathrow.

"It is essential that this manufacturing region has direct linkage with the Asian markets and with the North American markets. Direct connections will mean that more potential customers will be interested in doing business with us. "

– Peter Mathews CMG, President of the Midlands World Trade Forum, Chairman of the Midlands International Business Forum and lead on Black Country International Trade



Case study: TATA Motors European Technical Centre (TMETC)

Size of company: 300 staff
Annual turnover: £30.2m
Value of exports/ import trade: 90% company turnover
Number/types of trips abroad: 484 UK-India, 173 Rest of World

"The majority of flights used by TMETC are from Heathrow. Typically this incurs a penalty of two hours travel in either direction compared to the use of Birmingham. In addition, TMETC employ two full time staff and two company vehicles to transport long-haul passengers and visitors from India between TMETC and (primarily) London Heathrow.

TMETC's ideal scenario would be a direct overnight flight from Birmingham to Pune, although a direct Birmingham to Mumbai flights would be regarded as attractive. Backed by an overnight return flight, leaving India after midnight and arriving early morning in the UK."

- James Billingham, Purchase and Business Process Manager – Tata Motors European Technical Centre plc



Case study: Aston University

Number of students: c. 10,500
International students: c. 3,000
Significant student origin countries: China (500+), India (+200), Nigeria, Canada, Hong Kong, Malaysia, Russia, Japan

"The majority of our long-haul students have to fly into BHX via European hubs such as Amsterdam and Frankfurt; they report that their UK airport of preference is BHX (not Heathrow) but find the absence of direct long-haul flights an inconvenience.

We would strongly support any plans for the airport to become an International hub as this would enhance the city's standing in the wider region and in the UK, as well as facilitate our internationalisation agenda."

- Professor Georgina Rippon (Pro-Vice Chancellor, International)

"Staff from the International Office travel frequently throughout the year to around 45 countries in the last travel period. Whilst staff prefer to fly from BHX, there are occasions when they have had to fly from London, as there are simply more choice and better price options. Staff travel premium economy but there is limited carriers offering this choice from Birmingham International airport. Almost without exception, there are no direct flights from BHX to the destinations the staff travel to; this means a number of flight changes which lengthen the journey time."

- Quote from Head of International Office



(ii) Is one of the major reasons why some businesses choose not to locate/ invest in the Midlands

Marketing Birmingham

Airport connectivity is usually one of the first questions we are asked by any foreign investors – and the runway extension and what this means is a major selling point at present – however they are increasingly now pressing on what routes are being secured to Asia and wider US cities.

“We lost an investment from a USA Publishing firm who chose Manchester as a location purely based on direct flights to Chicago. They actually recruited 2 of their staff from Birmingham out of 4 initial hires. We scored highly on every other factor, but given they were a start-up, they would have a good deal of staff flying between the two.

“A major US Pharmaceuticals company have delayed a decision on establishing a UK operation because whilst they feel we have all that they require as a base – in particular connectivity to the rest of the UK, we don’t fly currently to Boston direct. We do fly to Zurich and Geneva, but the quality of the airline (EasyJet) also wasn’t a major appeal. They were keen to see more blue chip carriers between European locations.”



Two cases where the Midlands’ events industry failed to attract events include:

1. SAPPHIRE event from SAP international decided to stage their conference elsewhere ‘because Birmingham Airport was not considered international’ enough.
2. Birmingham’s ICC failed to attract the Airport Council International annual conference because of poor international connectivity.

The full results of a straw poll by Birmingham Airport asking local businesses which locations they would like to travel showed that clients wanted direct services to: **Mumbai / Bangalore, Shanghai, Hong Kong, Nice, Oslo, Helsinki, Gothenburg, Warsaw, Krakow and morning flights to Dubai/ Doha /Atlanta to access onward connections.** The poll also indicated strong demand for flights to **Delhi, Amritsar, Dhaka and the Caribbean** for VFR traffic.

Birmingham Airport’s catchment area has the potential to become the UK’s major international gateway for manufacturing exports, and a hub for leisure and business travel to/from the Indian Sub-continent. The case studies presented confirm that limited connectivity from the Airport, and the relative difficulty of attracting large scale investment, are impeding the development of a vibrant economy with the potential to unlock sustainable long-term economic growth for the region, and the UK.

2.4 Question 5.4.5 – To what extent do you consider indirect connectivity to be an important part of presenting an accurate picture of the UK’s nature of connectivity

Birmingham Airport’s *Eggs in Basket* report, demonstrates that an aviation model based around hubs is more likely to deliver indirect connectivity than a broader network approach.^{xviii} Concentrating traffic through hubs, via spokes, adds time to journeys, reduces the passenger experience and is less cost efficient for consumers. Giving the UK’s great cities, great airports would plug the ‘connectivity gap’ outside of the South East. It would improve the competitiveness of UK exports, boost employment in the region’s burgeoning productive sector and help to rebalance the economy.

Delivering better connectivity from outside the South East would make better use of the UK’s tourism assets and spread the economic benefit generated by tourism. Stratford-upon Avon was visited by over 850,000 tourists in 2011, with over a third of these originating from China and Japan.^{xix} Birmingham Airport is approximately 20 miles from the ‘Home of Shakespeare’ but interviews held by the Airport with Visit Britain indicate that tourists do not see the Airport as a viable tourism gateway because it lacks direct flights to long-haul tourists from Far East markets.

3 Response to questions on the assessment of how aviation connectivity supports economic activity

3.1 Question 5.5.1 - To what extent do you agree with evidence that aviation connectivity supports the UK's economic growth through facilitating (1)-(5)? To what degree can causality between connectivity and (1)-(5) be established?

Aviation connectivity supports growth through the mechanisms outlined in the Commission's discussion paper. The WMEF report, "Exports, Economics and Connectivity", examines air freight and demonstrates that there is an established correlation between the air freight connectivity in a specific economy and the rate of real output growth in that economy. But without effective access, regional economies in the UK are constrained by their capacity to exploit available and potential export opportunities, and reduce costs by securing competitive imports.^{xx}

Economies with good air cargo connectivity have competitive trade and production advantages over those lacking this connectivity. This competitive advantage is translated into GDP growth. Research by John Kasarda and Jonathan Green confirms this causative relationship. In the United States 1992-2002, GDP expanded by 38%, trade value by 57% and air cargo value by 83%. Similarly, in Hong Kong, air cargo's proportion of total trade value rose from close to 18% in 1992 to over 30% in 2003. And in a period of cyclical recession in aviation, air cargo is quicker to recover than passenger flows.^{xxi}

3.2 Question 5.5.3 - How effective do you consider that the aviation connectivity of the UK may facilitate economic growth now and in the future? What risks and opportunities does it present?

There are clear correlations between aviation connectivity and economic growth. In our answer to question 5.4.1 we note that France's connectivity to Brazil has allowed French businesses to attract £500 million of Foreign Direct Investment compared to the £1 million attracted by UK businesses. But, as we noted previously, there is also a regional dimension to this story, and the UK's regionally located export-intensive sectors also need connectivity to key and growing markets.

Adjusted for national inflation, growth rates in manufacturing by the Midlands economy have been slightly firmer than shown nationally. Output performance by the Midlands has also been stronger than national levels, powered by the depreciation of Sterling and changes in global supply chain management by multinational manufacturers. Aviation connectivity is central to this second consideration. Multinational companies have responded to recent interruptions in global freight flows, such as the Icelandic Volcano and Japanese Tsunami, by emphasising the need for greater proximity of supply and manufacturing to major production units. Paradoxically, this trend away from globalisation of production has increased the importance of the efficiency and effectiveness of local transport infrastructure around the remaining production sites. The contracting supply chain must still be able to access itself, and the expanding global consumer base.

Over the last 6 months, the economic performance of Midlands' manufacturers has been weak despite evidence of robust demand. There are two explanations for this recent trend. First, the inability of Midlands' manufacturers to capitalise on the increased servitisation of manufacturing. Second, unwillingness on the part of manufacturers to invest in plant capacity in response to demand.

Research by the WMEF reveals a recent trend towards the increased servitisation on manufacturing^{xxii}. Over the last few decades, post-production services have grown to account for c.40% of the total value of the manufacturing trade. According to a study by the University of Cambridge, Rolls-Royce derives close to 50% of its revenues from servicing. With long-haul connectivity, Birmingham Airport could give the region's flagship companies the capacity to have an engineer, technician or sales representative to a client within one-working day. This would put them on par with German, Japanese and American suppliers and is a necessary attribute to compete in future global export markets. Germany is particularly adept at orientating service provision and connectivity to benefit from this market – with Cologne (644,029 tonnes) and Leipzig (638,491 tonnes) carrying substantially more belly hold freight than any airport of corresponding size in the UK.^{xxiii}

However, poor integration of surface access connectivity with airport capacity and limited connectivity from the Midlands' major international gateway, Birmingham Airport, is restricting market access and constraining the ability of companies to

capture this market. Manufacturers are unable to benefit from this surge in demand for post-production service market as businesses and workers are forced to travel via Heathrow or a foreign hub. **This adds time and costs to business, both of which reduce labour-productivity and the overall competitiveness of advanced value-added manufacturers based in the Midlands.**

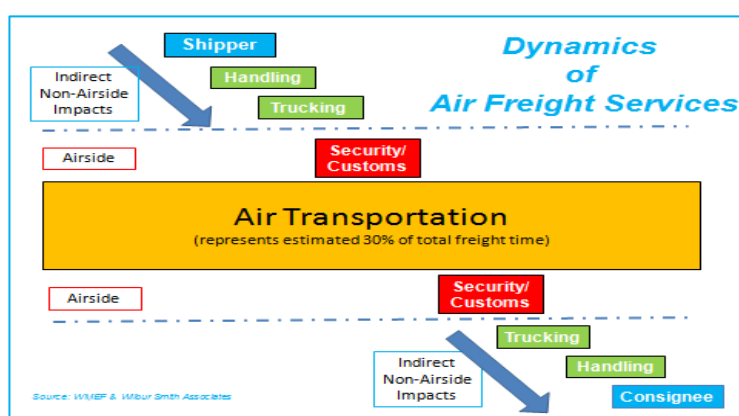
WMEF research shows that the Midlands specialises in precision manufacturing aviation components, manufacturing parts and specific fashion textiles, all of which would be boosted by enhanced air connectivity. Instead, firms are not benefiting from changes in global supply chain management. Existing multinationals are reluctant to expand production in the region until they are sure that their products and services can reach the desired markets. This is highlighted by the case studies in section 2. This 'location problem' is being compounded by an 'industrial capacity problem'. Evidence from WMEF suggests that manufacturers in the Midlands are at, or close to, maximum operating capacity. Low business confidence is preventing investment in plant machinery and the expansion of productive capacity. This negative propensity to invest can be partially explained by the unattractive domestic interest rates and the lack of alternative, non-bank funding sources for business. The other problem, as shown by case studies in section 2, is the unattractiveness of the region to overseas investors. This is driven by the lack of direct long-haul connectivity and is preventing FDI from flowing into the region.^{xxiv}

The combination of low business confidence, poor market access and limited capital availability is acting as a dead weight on the ability and capacity of Midlands manufacturers to penetrate the high value-added markets they hold a competitive advantage in. However, Birmingham Airport has considerable potential to be a major belly hold freight airport connecting the region to high-growth markets throughout the international marketplace.^{xxv}

3.3 Future growth in trade from Birmingham Airport

The expansion of Birmingham Airport's runway could lead to a potential step-change in freight volumes at the Airport. The extended runway will be operational in 2014, at which point the WMEF estimates the Airport could have the capability to handle c. 800,000 tonnes of mostly long-haul belly hold freight. This represents 60% of Heathrow's current throughput and would give the UK an internationally competitive belly hold freight airport located in close proximity to the UK's productive sectors.

WMEF analysis shows that air transportation only accounts for 30% of total freight time, while 70% is spent either airside, or travelling to/ from the Airport. This highlights the productivity gains and competitive advantage that could be generated by locating production close to an international gateway with a route to the main export markets.



To achieve maximum benefits from freight at Birmingham Airport, improvements need to be made to surface access connectivity. This includes a direct Metro-link to the Airport for worker access, and investment in South-West, North-East rail connectivity – potentially via the reinstatement of the Stonebridge Railway, known as the 'Whitacre Link'.^{xxvi} The Airport would also need a dedicated Air Cargo Village with the scale of pre and post-flight facilities for cargo processing needed to be able to handle the increased throughput. Establishing an integrated passenger and belly hold freight airport at Birmingham would also make flights with marginal passenger demand more viable. This would improve connectivity range for businesses and the service offer for passengers seeking to fly direct from the Midlands.

4 Response to questions relating to what the UK's objectives are for future aviation policy

4.1 Capital Economics research piece

Birmingham Airport commissioned Capital Economics to undertake some innovative research that will shed fresh light on the relationship between connectivity and the economy for the UK economy. This research was commissioned before the Connectivity discussion paper was published and will be submitted direct to the Commission. The following is a summary of the outputs and methodology from that report.

1. Outputs

- To re-examine the spatial geography of catchment areas in the UK and how these will change with developments in public transportation over time
- To analyse the social and industrial structure of these new catchment areas
- To analyse how the industrial structure of catchments is likely to change over time. Assessing how this relates to long term global economic trends and what it means for long-haul air travel
- To analyse the pressures that will be placed on London and Manchester if Birmingham does not pursue expansion

2. Methodology

2.1 Airport coverage

In the study, Capital Economics will cover Birmingham Airport, as well as the top eight airports in the UK based on runway length. These are: London Heathrow, London Gatwick, London Stansted, Manchester, Glasgow Prestwick/Glasgow, East Midlands and Robin Hood.

In the modelling we have used data for Glasgow Airport as a proxy for both Glasgow and Glasgow Prestwick. Although Glasgow Prestwick has a longer runway, we have based our analysis on Glasgow airport as it has better connectivity.

2.2 Data coverage

Steer Davies Gleave have provided data on the door-to-door journey times to each airport for every Lower Super Output Area in England and Wales (there are 34,753 LSOAs, with an average population of 1,500). (Note: the population of Scotland has been excluded as it has no relevance to the analysis of Birmingham airport). Journey times have been provided for the following specifications: current car travel, current rail travel, rail travel in 2019, rail travel in 2026 and rail travel in 2032.

2.3 Capital Economics' analysis

For the purposes of the study Capital Economics will focus on the 'best time' journey time, which measures the shortest journey time whether it is made by rail or by car. We will look at two different measures of an airport's catchment:

- Population catchment iso-chromes - The number of people within a specified journey time of each airport
- First choice airport catchment- The number of people for which a given airport is the closest available airport for long-haul flights

Capital Economics will also run our analysis with varying specifications for what is classed a viable airport for long distance travel. Both East Midlands and Robin Hood Airport have runways below 3km and it is unclear whether they really have the aspiration or potential to become a major hub for long distance passenger travel. We will therefore produce analysis for:

- All airports in sample
- Excluding East Midlands airport
- Excluding East Midlands and Robin Hood Airports

- ⁱ EEF, "Transport for Growth – Getting the economy moving", 2013.
- ⁱⁱ Confederation of British Industry, "CBI response to the Department for Transport's Sustainable Aviation Framework", 2012.
- ⁱⁱⁱ West Midlands Economic Forum, "Stimulating Revival – the role of Birmingham Airport in rebalancing economic growth", 2012.
- ^{iv} Frontier Economics, "Connectivity for growth: the role of Britain's hub airport for economic recovery", 2011.
- ^v Op. Cit. West Midlands Economic Forum, 2012.
- ^{vi} Department for Transport, Draft Aviation Policy Framework, 2012.
- ^{vii} Op. Cit. West Midlands Economic Forum, 2012.
- ^{viii} WMEF define the catchment area as any area within 100 minutes' drive time of Birmingham Airport.
- ^{ix} Op. Cit. West Midlands Economic Forum, 2012.
- ^x West Midlands Economic Forum, "Exports, Economics and Connectivity", 2013 – report available upon request.
- ^{xi} Op. Cit. Frontier Economics, 2011.
- ^{xii} Birmingham City Council, "Birmingham Airport – Its development potential and the UK airports capacity gap", *Atkins*, July 2012.
- ^{xiii} Confederation of British Industry, "Trading Places – unlocking export opportunities through better air links to new markets, challenges this belief", 2013.
- ^{xiv} Oxford Economics, "The value of aviation connectivity to the UK", 2012.
- ^{xv} Op. Cit. EEF, 2013.
- ^{xvi} Disaggregated data provided direct from EEF.
- ^{xvii} Birmingham Airport analysis of demand in the catchment area demonstrates that there is sufficient demand within an one hour car journey to satisfy daily or weekly flights to several long-haul destinations, like North America. The Airport would be happy to discuss this research with the Commission in private, but it is commercially sensitive and not suitable for public release.
- ^{xviii} Birmingham Airport, "Don't put all your eggs in one basket", 2012.
- ^{xix} Stratford-upon-Avon tourist office - http://www.stratford-upon-avon.co.uk/static_34.htm
- ^{xx} West Midlands Economic Forum, "West Midlands Metropolitan Freight Strategy 2030", 2013.
- ^{xxi} John Kasarda & Jonathan Green, "Air cargo as an economic development engine: A note on opportunities and constraints", *Journal of Air Transport Management*, 2005.
- ^{xxii} For a full explanation of the sectoral dependencies on air connectivity, the trend towards servitisation and opportunities for dynamic growth in the Midlands please refer to WMEF, "Exports, Economics and Connectivity", 2013.
- ^{xxiii} Op. Cit. WMEF, "Exports, Economics and Connectivity", 2013.
- ^{xxiv} Ibid.
- ^{xxv} Ibid.
- ^{xxvi} Birmingham Airport will be submitting a full report on schemes to promote surface access connectivity from the Airport as part of the response to the Commission's short-term paper, due 17th May 2013.