



# Exports, Economics & Connectivity

The potential for, and impact of, enhanced aviation links on the Midlands economy

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## Preface



Mark Garnier MP

**The economy of Britain must become more diverse. Our Great Cities must play a part in delivering a more balanced economy. To do that, they need unprecedented levels of connectivity.**

We must act now to secure and consolidate new markets. We must also plan for prolonged growth.

If we delay, we will become an economic backwater.

More than ever, Great Cities need Great Airports.

Although the challenge to the Midlands is relatively clear and unambiguous, the solution is complex.

As a part of the evidence-based debate, the All-Party Parliamentary Group on the West Midlands economy commissioned the West Midlands Economic Forum to identify:

- The key attributes of the Midlands economy that will be revitalised by increased connectivity,
- The sectors that would be able to capitalise on improved access to export markets.
- Whether 'established wisdom' on airlines and operating models is valid.

The result is our report "Exports, Economics & Connectivity".

The report helps to inform the Airports Commission, at a time when traditional aviation operating models and locations are under scrutiny.

The Airports Commission must concentrate on the needs of Britain. That's why this report also challenges 'received wisdom' around aviation economics, outlines emerging new models, and shows that the Midlands already has a large and unsatisfied market for direct aviation to the rest of the World.

The Midlands has a rich legacy, but creating potential is equally important. Enhanced direct air connectivity, from our own region, will remove barriers to commerce..

UK Plc cannot remain hostage to the fortunes of any one Airport or Airline's business plan.

The need for a new hub airport is a matter of debate – yet it is evident that it would need to be sited in a central location that is easily accessible to the majority of the population. Birmingham must feature in that debate. We challenge The Midlands' policy-makers, Airlines and Airport to deliver connectivity now – and also to show how they can expand to facilitate growth towards the twenty-second century.



Lorely Burt MP



Ian Austin MP



# 1. Executive Summary



**Economies that fail to adequately respond to new economic and commercial imperatives are likely to be locked into extended periods of stagnation, or they will decline.**

Conversely, those that are able to respond innovatively and rapidly can be expected to realise substantive gains in competitiveness, productivity and output growth

The global aviation infrastructure reflects economic patterns that were predominant over 70 years ago; much of it no longer reflects global demand or new economic imperatives of the states which they serve.

Archaic and complex interstate traffic agreements, written when the UK had a national airline, hark back to protectionism and Empire, act as a tourniquet on the life-blood of the nation and strangle competitive forces. This must change, and Government must act – unilaterally if necessary.

The economic structure is becoming multi-polar, encompassing the dynamism of China, India, Asia, Russia, Eurasia, Brazil, Latin America, Turkey, the Gulf, the Middle East as well as Indonesia, and Africa. Air connectivity, as this paper identifies, is a critical success factor.

There is a close correlation between export performance, economic output and air connectivity. The experience of Germany over the past two decades, whose export profile that of the Midlands resembles, gives strong causal evidence that increasing air routes, especially combined passenger and freight, facilitates robust expansion of the export sector.

The economic catchment area of Birmingham Airport hosts some of the country's most successful manufacturing, logistics and service-sector operations as well as containing one of the largest concentrations of export-orientated companies.

Given the correlation between the air freight connectivity in a specific economy and the rate of real output growth in that economy, expansion of routes and infrastructure could lead to a potential step-change in 'belly hold' airfreight volumes with a range of potential competitiveness gains for local producers, and a stronger business case for airlines.

Such expansion also enables local industry to respond to the recent trend towards the increased servitisation of manufacturing. For many manufacturers, post-production services account for up to 40% of the total value of the manufacturing trade.

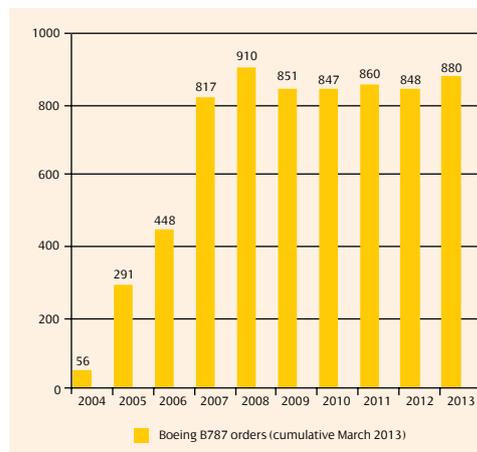
By 2014, the completion of its runway extension will cause a step change in the Airport's capability and help to enable the British economy to respond to new global opportunities.

New generations and types of aircraft entering operational services, with radically new flight and capacity profiles, will be able to enhance commercial viability of both thin and thick routes, and Birmingham Airport will be within range of intercontinental regions that cannot presently be served at full load.

These new aircraft types are particularly appropriate to 'behind-the-gateway' operations by the new alliance partnerships, as outlined in this report. Furthermore, the report raises the following points:

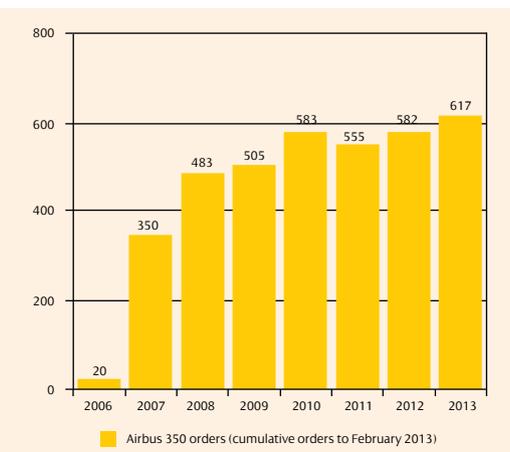
- It is no longer a question of which hub, but of which radial alliance or route pipe or even which reinvigorated point-to-point access that offers the best economic and commercial solution for an economy.
- It is also a question of which airline operators, and aircraft types, will be able to best respond, and benefit the wider economy.
- It is not a question of if, but how Birmingham Airport can be expected to become a significant component of the emerging new globalised aviation framework.

#### Boeing B787 orders



Source: Big Pond Aviation

#### Airbus 350 orders



Source: Big Pond Aviation

New aircraft types, such as the Boeing 787 and Airbus A350, will operate at a claimed cost saving of 25% compared to the current long range competitors. Critically, the volumes needed to fill these planes and operate economically, are far lower than current long-haul aircraft. In other

words, it will become far easier to serve 'thin' routes. The future prevalence of these aircraft relates directly to their potential deployment at Birmingham as point-to-point services or as part of a behind-gateway operation as described.

International aviation must be further encouraged to respond to meet new forms and locations of demand, as well as provide continued connectivity to sectors that are likely to emerge reinvigorated as the recovery gains pace. This implies that Airlines must not simply be given 'more of the same' by way of principal ports of entry (for example, Heathrow has around 30 flights a day on the profitable New York route, whilst overall connectivity from that airport has gone down).

Constrained access to global markets invariably contributes to compromised economic and trade performance. Additional aviation capacity must reflect the needs of UK's constituent regions and not the desire of Airlines to simply serve the very most profitable markets, or indeed of specific Airports to retain a virtual monopoly on access to the UK.

The needs of the UK demand a revision of aviation's current business model. Old thinking will deliver old results.

On the ground, transport planners and providers must provide strategies that ensure maximum opportunity and deliver maximum benefit from existing assets. For instance, the Rail Franchise process should take due regard of the potential demand for connectivity through key airports. In many cases this may require a review of service patterns (including 'first' and 'last' trains). The Department for Transport must adopt a less insular approach towards this need.

Schemes 'in the pipeline', such as HS2 and the Camp Hill Rail Chords must be 'future proofed' to ensure long-term integration and efficiency (rather than potential conflict) with airport and other developments, such as the 'Whitacre Link' rail proposal.

In the short term, the ability to interconnect between rail and air must be made more visible. In the case of Birmingham Airport, a long-running and unnecessary saga over the station name, and its invisibility as an 'airport station' must be resolved.

Airlines and Airports, including Birmingham, must embrace the new reality. They must respond to the Airports Commission with bold, imaginative and long-term thinking – which will carry UK Plc successfully towards the 22nd Century.



## 2. Air Connectivity – global trends

The framework of the global aviation industry reflects in part the demand structure and locus of growth in the world economy that has emerged over the past three decades, both in terms of geographic and sectoral bias. As countries outside the North Atlantic accumulate more economic weight and the sectoral distribution achieved under the recent period of globalisation is retextured, the current global framework of air transportation is likely to prove increasingly inadequate.



Since the 2007-08 financial crisis, and subsequent collapse of international trade in 2009, it is apparent that there is a fundamental rebalancing of the global economy taking place. Although, as all the factors are not yet fully articulated, not all potential opportunities are clearly defined. The pace of change however, is likely to accelerate as particular and specific economies take advantage of fresh opportunities to enhance competitiveness and consolidate comparative advantages. This ensure that economies that prove unable to position themselves to respond immediately and innovatively are likely to be left behind, in much the same way China and India stagnated and regressed from the 18th Century as a result of their inability to effectively respond to the incursions of the European economic powers.

Air connectivity can be expected to be a key driver in the development of a new world economic framework. Current flight patterns have and continue to provide growth stimulus to advanced producer services, including accounting, advertising, finance, insurance and legal services. In the next economic iteration, the aviation sector will also need to accommodate potential increases in demand from design, manufacturing services, high value-added and advanced manufacturing as well as niche manufactured products. Moreover, logistics, namely transportation, distribution and information communications sectors, will have the capacity to offer gains in competitiveness, through improvements in access and delivery times, to producers and providers in the adjacent vicinity of airport (i.e. within 100 minutes journey time).

Globalised demand has produced an airline industry, or at least the part represented by what have come to be known as *full-service*, *legacy* or *network* airlines (as opposed to *low cost* or *budget* carriers), that is organised into global alliances. Whilst airlines have been organising

themselves into alliances as long ago as the 1930s, it is only since the late 1990s that those formal alliances that function today were established – namely Star (founded 1997), Oneworld (1999) and SkyTeam (2000). Alliances in themselves are fluid, with membership changing (as airlines merge or disappear and new ones are added), and at least two other attempts to establish formal alliances have collapsed since 2000, namely Wings (KLM, Northwest, Continental and Alitalia) and Qualifyer (11 airlines led by Swissair). Alliances have also been formed between cargo airlines, most notably SkyTeam Cargo (prompted by Korean Air Lines, one of the world's biggest airfreight carriers), the ANA/UPS alliance and the WOW Alliance that brings together SAS and Singapore Airlines.

#### Composition of alliances, April 2013

Alliance	Star Alliance	Oneworld	SkyTeam
<b>Members</b>	Adria; Aegean; Air Canada; Air China; Air New Zealand; All Nippon Airways; Asiana Airlines; Austrian Airlines; Avianca-TACA; Brussels Airlines; Copa Airlines; Croatia Airlines; Egyptair; Ethiopian Airlines; LOT Polish Airlines; Lufthansa; SAS Scandinavian Airlines; Shenzhen Airlines; Singapore Airlines; South African Airways; SWISS; TAM (to join Oneworld by 2Q2014); TAP Portugal; Thai Airways; Turkish Airlines; United Airlines; US Airways	Air Berlin; American Airlines; British Airways; Cathay Pacific; Finnair; Iberia; Japan Airlines; LAN; Malaysia Airlines; Qantas; Royal Jordanian; S7 Airlines; Mexicana (inactive, service suspended).	Aeroflot; Aerolineas Argentinas; Aeromexico; Air Europa; Air France; Alitalia; China Airlines; China Eastern; China Southern; CSA Czech Airlines; Delta Air Lines; Kenya Airways; KLM; Korean Air Lines; MEA; Saudia; TAROM; Vietnam Airlines, Xiamen Air
<b>Prospective Members/ Members-elect</b>	Air India; Jet Airways	SriLankan Airlines; Qatar Airways	Garuda Indonesia

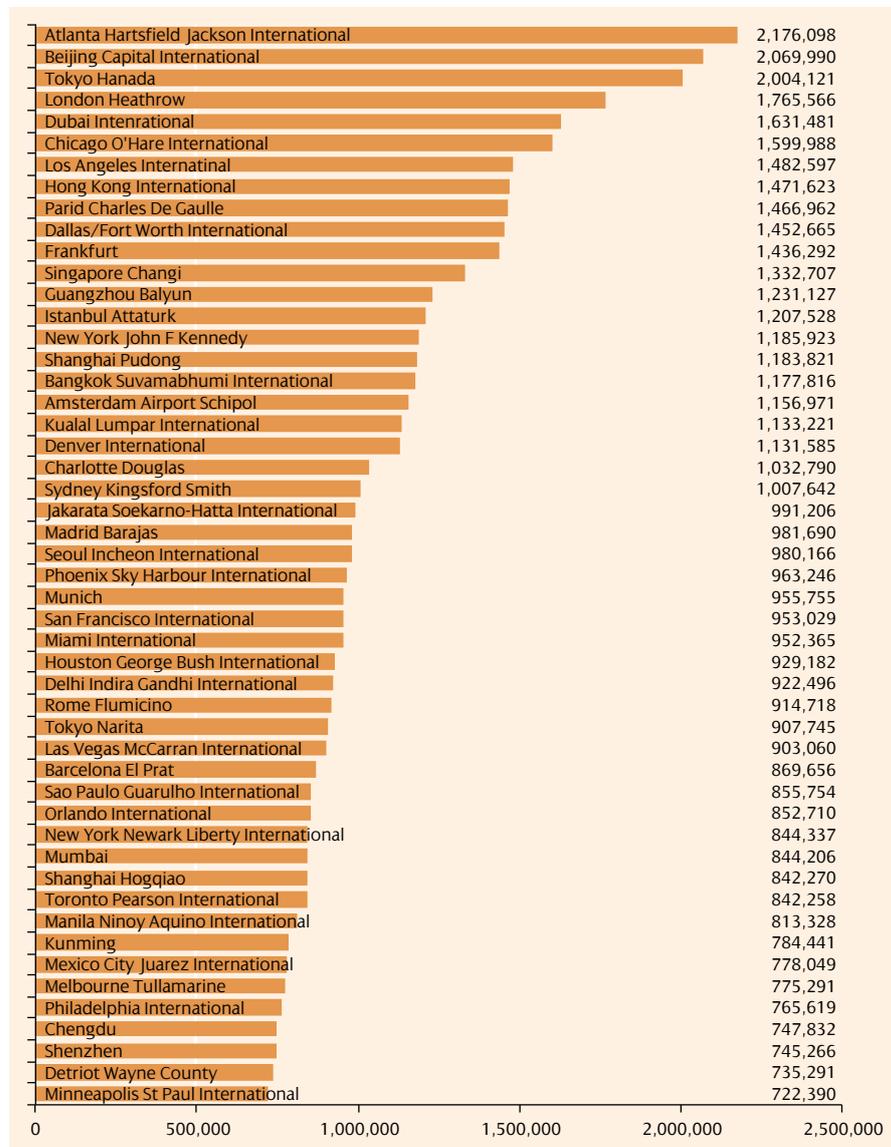
Source: Author research

Additionally airlines of a similar size and status often co-operated independently for mutual benefit, such as TWA/Northwest Orient in the US; Delta Air Lines, Swissair and Singapore Airlines straddling three continents; and British Airways, United Airlines, SAS and Thai Airways, also covering a large part of the world. Sometimes the partners were quite dissimilar, as in the case of an agreement between SAS and Continental Airlines, the former a high cost/service airline, the other (at the time) a low cost/price operator of indeterminate service standards. *The key factor and driver in these agreements was the ability to share airline codes thus multiplying the size of an individual airline's network without physically increasing the size of the fleet.* Some of these looser co-operation agreements continue and many are added each year, of the more notable is the agreement between Emirates (UAE) and Qantas Airways (Australia) in 2012 by which Qantas was able to reduce its exposure to very long routes from its home base to Europe by sharing its passengers with the Gulf-based carrier, which itself benefitted from exposure to an expanded Australasian marketplace. Coincidentally, that agreement led to the dismantling of a longstanding one between Qantas and British Airways, even though those two airlines are members of the same formal alliance, Oneworld.

The co-existence of both the *formal* and *informal* alliances adds complexity to the industry. Frequently airlines will co-operate formally within an alliance while pursuing a set of quite different agendas with other airlines, which may belong to other alliances, and/or which may

remain 'unaligned'. Several airlines have firmly resisted the concept of alliance building, including until recently Virgin Atlantic as well as Emirates and Etihad Airways. Brazil's Gol, a budget airline which took over state carrier Varig, prefers a loose partnership with Delta Air Lines. Individual airlines, whilst being members of an alliance, may also seek to secure extensive bilateral agreements with non-member airlines. Indeed, given the commercial and economic pressures on individual airlines, there is no evidence to suggest that the number of such apparently undisciplined agreements have diminished and there is no reason why they should have. The advent of the low cost carriers (LCC) and their remarkable growth post-crisis, has ensured a continuous requirement amongst network airlines to respond *tactically* as well as *strategically* to the LCC threat. The informal alliances are frequently the result of a tactical decision.

**Aviation Alliances Top 50 Bases (seat availability week 1-7 April 2013)**



Source: Innovata/CAPA

Nevertheless the three main global alliances currently dominate the global structure, with the top ten airports (by flight movement) for each of the three alliances an international hub airport, each hosting traffic of more than 20 million passengers per annum. Furthermore, the top 50 bases for all alliances as measured by seats offered in the period 01-07 April 2013 closely mirrors the list of the world's busiest airports.

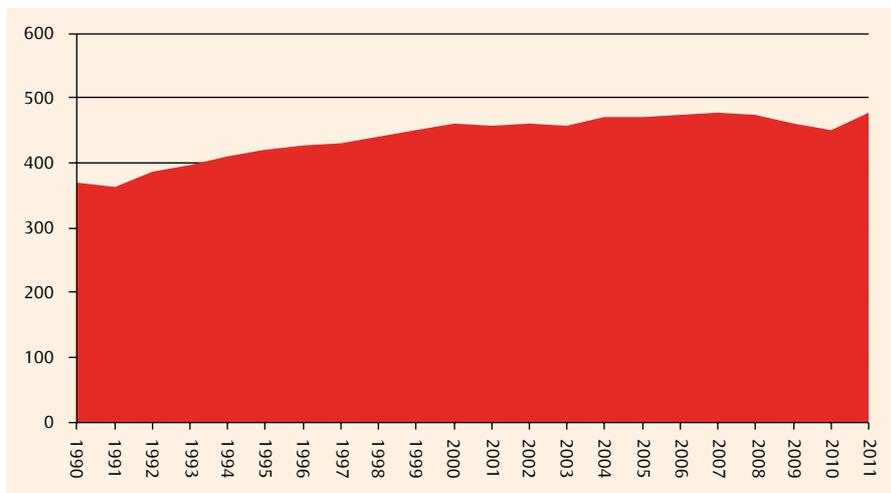
The three main alliances predominate global seat capacity. In the week 01-07 April 2013<sup>2</sup> Star offered 19,215,000 seats worldwide; SkyTeam 13,671,000 and Oneworld (with affiliates) 9,490,000; a total of 42,376,000 (53.6% of the global total). By comparison, global low cost carriers (which almost exclusively offer point-to-point travel wholly outside of the alliance system though occasionally one will join an alliance, such as Air Berlin), provided 20,799,000 seats (26.3%) and 'other' unaligned, mainly regional airlines, provided 15,939,000 seats (20.1%). However, the allocation of aircraft fleets does not quite match this distribution. As the category 'other' mainly includes small regional aircraft with less than 100 seats that category supplies the majority of the world's fleet, with 11,145 in service compared with 3,734 at the Star Alliance, 2848 in SkyTeam, and 2346 in Oneworld and its affiliates with 3686 in the low cost segment. *Thus the world's airline system can be seen as comprising three strata – alliance members (mainly primary international airlines); low cost carriers; and unaligned, mainly regional airlines. Furthermore, the three alliances between them offer the majority of aircraft seats globally momentarily but that they are concentrated within larger aircraft.*



### 3. The structure of UK Air Connectivity

In contrast, within the UK, in the same period, the airline seat capacity share was dominated by the low cost carriers, with almost half the market share (46.9%), where the alliances held just under 40% (Oneworld 23.9%, Star 10.2%, and SkyTeam 5.6%, an aggregate 39.7%) with other operators holding just over an eighth of the market (13.3%). This most probably reflects structural bottlenecks (over utilisation of existing capacity at Heathrow) coupled with probable reluctance of airline operators to commit to substantial long-term investment in the absence of clarity over medium-term aviation policy aspirations coupled with a collective official failure to effectively articulate the evident strengths and dynamism of the UK economy beyond the M25.

**Aircraft Movements through Heathrow (ATMs 000's)**



Source: ACL

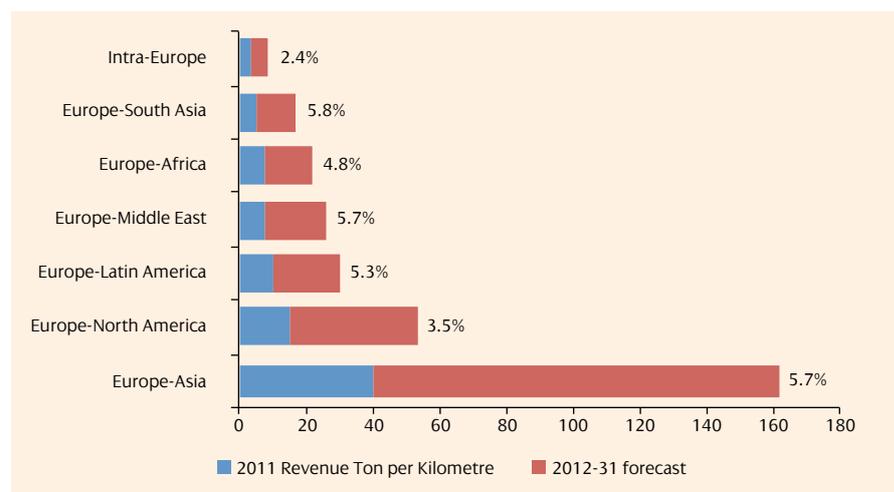
With Heathrow as the principal entry point for air freight (primarily belly-hold) capacity constraints appear to be a major factor in limiting the UK's ability to realise potential in existing and new markets – air movements through Heathrow have remained comparatively static. Indeed, the capacity of the current British air freight services infrastructure is weakening when compared to competitors. According to the Centre for Asia Pacific Aviation, no British airport ranked in the world top ten cargo airports, over the period 2001-10, whereas Paris and Frankfurt are perennial features. According to the Airports Council, London at 1.55 million tonnes cargo in 2010 ranked only 15 (and was the only British Airport to rank in the top 50), which was 64% of the tonnage of Paris and 68% of that ferried in Frankfurt, with Amsterdam already rivalling London, with 1.54 million tonnes freighted in the same year. However, the under-performance of the British air freight sector is perhaps more amply demonstrated by the fact that some 6 other European airports are ranked in the 2010 top 50: Luxembourg (705,370 tonnes freighted), Cologne (644,029 tonnes), Liege (639,669 tonnes), Leipzig (638,491 tonnes), Brussels (441,442 tonnes) and Milan (432,672 tonnes). The success of these 6 cargo airports, moreover, demonstrates that given the relative size of the economies (Britain set to overtake France in size of GDP in 2013) that it is possible to have a diversified, rather than heavily centralised, air freight services structure. The integration of these airports with high-speed rail links may also partly explain their success.

Yet in Britain, air freight growth rates have been much more subdued. This can be explained by two factors. Firstly, capacity constraints at Heathrow, and secondly, Britain's other main freight airports are largely freight only, whereas the bulk of all airfreight is now carried as belly-hold. In

the case of Heathrow, flight arrivals, and by proxy the available freight capacity has stalled. With anaemic growth rates, and indeed some contractions, recorded since the commencement of the new century, is in marked contrast to the vibrancy, if not accelerated growth rates recorded elsewhere across the globe. Moreover, not only have capacity constraints reduced development of existing trade routes, but has also precluded the development of new routes, particularly the non-EU growth markets in the southern, western and eastern hemispheres.

Within the existing globalised trade structure, and intensified pan-global supply chains, air freight obviously has a key role. While the structure of the air freight sector continues to evolve in response to new economic imperatives, since 1980, the growth of international air freight has outpaced that of global GDP by a factor of 2.5. Although, air freight traffic constitutes less than 2% of all tonnage transported, it represents over one-third of the aggregate value of all international trade. Most of this tends to be high-value goods, such as pharmaceuticals, machine tools, computers and electronics, aircraft, auto parts, perishables, instruments, and medical equipment. Most of this is considered just-in-time components used for time-sensitive processing.

#### Regional Air Cargo Markets (Annual % growth)



Source: Boeing

Boeing is forecasting, in the period to 2030, that growth in air freight services will continue to be robust. Furthermore, in addition to vibrant growth prospects in Asia, including China, India and Indonesia, regional air freight growth is expected to be strong in other new markets in Africa and Latin America, although prospects in the Middle East and North Africa are clouded by lack of clarity over the future direction of politics. In Europe, air freight is expected to be more moderate, as given the expansion of high-speed rail links across the continent it is generally accepted that air freight only becomes effectively competitive over alternatives beyond 500 kms. The problem for the UK is that the air connections are skewed toward Europe and North America, with more circumspect access to the world's growth markets. This is reflected in both the top ten destinations served by UK airports (Spain, USA, Germany, Italy, Ireland, France, Switzerland, Netherlands, Portugal and Poland) and in the top 10 destinations accessed via an airport outside the UK by British residents (USA, Australia, India, Thailand, South Africa, New Zealand, China, Italy, Germany and Canada).

## 4. Birmingham Airport – Potential for Greater Connectedness

Over the same study period (1-7 April 2013) the Birmingham seat capacity share was even more pronounced toward low cost carriers (59.6%), whilst the alliances market share was just over a quarter (Oneworld no presence, Star 17.4%, SkyTeam 8.2%, an aggregate 25.6%), with other operators holding a 14.8% market share. *Currently penetration of global alliances at Birmingham Airport is considerably less than the UK average.* This statistic is broadly comparable with Manchester Airport, where the three alliances (Oneworld has a significant presence there) totals 26.1%. In both cases the incidence of global airlines as measured by seat capacity is one third less than the UK region as a whole, which itself is heavily influenced by London Heathrow (79.6% alliance penetration versus 1.1% low cost carrier).

There is a clearly identifiable trend emerging by which more recent applicants (2010-2013) to each of the alliances have come from:

- (a) China & Asian Emerging Markets
- (b) Latin American & African Emerging Markets

The original members for the most part came from developed economies. There are several regional airlines and LCCs, mainly at the affiliate level although the inclusion of the (then) LCC Air Berlin into Oneworld since 2012 may not be the last. It is important that Alliances as such have been developed to improve corporate commercial viability, and that benefits for economies, passengers and freight are essentially secondary factors. Thus there is evidence to suggest that the airline alliances do not exist primarily for the benefit of their passengers but rather for themselves and for the airports that are in a better position to host them as they often have large stand-alone terminals into which alliance members, affiliates and other associated airlines can be channelled for even greater 'seamlessness'. This modus operandi was seen to work well in the United States in the immediate wake of the deregulation of air travel there after 1976 as terminals at US airports are traditionally operated (and usually owned) by the airlines.

The concentration of air travel there into mega hubs such as Atlanta, Chicago and Dallas-Fort Worth appears to have worked to the disadvantage of many travellers to the extent that even since the advent of the low cost airline, there are still many small cities and communities without adequate air service. The supporters of the original theories of US deregulation, such as Alfred Kahn and Mike Levine, have been forced to admit that their thesis did not work out in practice quite as they had imagined and that the consumer has not always benefitted. So it is with the global alliances, too.

In the current structure, the alliances primarily serve global 'hub' gateway airports, which themselves serve what are classified as Alpha Cities by the Globalization and World Cities Research Network (GaWC). Cities that are the higher ranked Alpha Cities by GAWC are primarily international financial services centres, which generate travel by global services business. As a result if that variety of passenger is not significantly represented in the vicinity of an airport, or if that airport is in other ways unable to contribute to the seamlessness that the alliance-member airlines seeks, then it is unlikely to receive any substantial degree of alliance air service except perhaps by way of local feeder service, typically provided by a subsidiary or affiliated airline. The shift in the global economy and the current restructuring in finance institutions could undermine the viability of this structure if there is no real recovery in the performance of global financial services.

*Furthermore, there is evidence of some changes to the way airlines organise themselves in alliances just recently that may prove to be of some strategic benefit to airports such as Birmingham Airport. These changes may be summarised as the development of radial alliances. The theory<sup>3</sup> is that constraints of national ownership requirements and a deep rooted preference for protectionism to promote national flag carrier interests have for decades moulded the shape of an inefficient and largely unsustainable airline industry organised through historic bilateral air service agreements that the alliance system has since helped perpetuate. Most of the primary airlines within the system operate with only singular or dual hub/bases. It is a model designed for the conditions of post-war 1945, yet it somehow survived for 70 years with only modest changes. Some attempts to circumvent national ownership rules through international cross-border mergers have occurred; in Europe, where Air France and KLM, also British Airways and Iberia, formed holding company structures; in Latin America a more integrated model has been developed, notably by LAN and TAM in the LATAM venture; while – mainly in Asia – LCCs have used cross-border joint venture companies to get around prohibitions against local establishment.*

The principal rationale for establishing the branded global alliances was to provide a way for non-merged airlines to be able to portray an image of a much more global marketing capability. Although remaining confined to their own geographic bases, member airlines could advertise themselves as able to provide access to most points in the world through their partners. The three major brands, Star Alliance, Oneworld and SkyTeam, are quite different in their own specifics and sizes. Thanks to the insertion of the Gulf carriers (Emirates, Etihad Airways, Qatar Airways) across the grain of the alliance directions, these differences are set to magnify.

Nevertheless, however important they may be, these are just the technical manifestations of an emerging environment. *The really fundamental shifts that make these changes possible – and are about to reshape the industry – are the new underlying government attitudes towards liberalisation. For many governments, protectionism of flag carriers is becoming secondary to a new perception of the national interests, in terms of improved transport access. How that access is provided is now less important than making sure it is there at all.*



The result is the emergence of a much more egocentric (concerned with the self) model than the more diffuse (and hierarchical) relationships that characterise the global alliances. These new models, ironically, are essentially bilateral in nature and this helps explain why Qatar Airways could, as mentioned earlier, migrate to an alliance in Oneworld, where this would probably not work within the other, more “multilateral” alliances. Oneworld is a much looser grouping than the more structured and centrally-orchestrated Star and SkyTeam. (Also, there is a large scale airport development – the Hamad International Airport in Doha that is scheduled to open shortly).

There is no formal structure to these new partner formulae, but they do have a common pragmatism that is directed towards meeting very specific geographic and market goals. The models involve airlines establishing their own, tailored, constellations of partners in radial formation. Each partner is carefully selected, with one or more goals in mind. The structure is different to the random ex-alliance partnerships that existed previously and often still do as they were most often driven by tactical rather than strategic criteria.

In tracing the origins of this next generation of partnerships – and where it might evolve – the respective evolutions of the Gulf carriers themselves are helpful. The three were born into and have developed, each in its own way, in a world where global alliances became increasingly powerful; but they were excluded from being part of that development – mostly because the established airlines saw the intruders as threats to that emerging status quo.

In retrospect, that was not an inaccurate assessment. Armed with a new willingness among (most) governments to remove barriers to entry, the three Gulf carriers were able to expand much faster than their detractors would foresee. For example the UAE’s ability to support two major network airlines with hubs only an hour’s drive apart (Dubai and Abu Dhabi) was questioned. This entirely ignored the fact that the catchments for these airports embraced many populations within half a day’s flying – several billion people, many of whom were sufficiently affluent to travel. Thus the three Gulf hubs have been able to place themselves at the centre of a new aviation network that is entirely global (seamlessly connecting, for example, Tokyo with Sao Paulo and Beijing with Johannesburg and potentially via a terminal dedicated solely to the A380) with little reference to the relatively small populations where the hub airports are located. That they also now support two major LCCs as well is further testament to the integrity of the UAE’s airline strategy.



When it requires two A380s to service one new route (as it often does with Emirates), the numbers come into focus. The typically long-haul-to-long-haul hub connections make for a new type of network format, absorbing much larger unit revenues from passengers in the process, which underlines their sustainability.

Thus the Gulf airlines evolved mostly outside the central legacy framework. But, throughout 2012, each sought to engage with one or more members of the established airline industry.

Abu Dhabi's Etihad Airways is closest to being the germ of the new breed of partnerships. From its early days, Etihad decided to rely much more on a strategy based around selected partnerships. These have come to include Air Seychelles (40% equity since January 2012); Virgin Australia (5% equity since June 2012), Aer Lingus (3%) and Air Berlin (29.21% equity since December 2011). Air Berlin is the most interesting and apposite case. This unlikely egocentric alliance between a full service carrier and what was a large budget airline, with a model not dissimilar to that of Ryanair, delivered an estimated EUR50 million in synergy-related revenues to Air Berlin in 2012, and helped the carrier return to profitability following a huge loss of EUR420 million in the previous year.

In April 2013, Etihad stated that it appears traditional airline alliances are becoming fragmented and no longer deliver value to their member airlines. Equity alliances with those airlines listed above allowed easier access to new markets and greater scope to expand networks and reduce operating costs. Etihad added that it is easier, faster and far more cost effective to grow through one-on-one partnerships with established, respected carriers than it is to rely totally a carrier's own resources, and to start from scratch in every market the airline serves.

*Apart from the airlines, Berlin Airports has also been a beneficiary from the agreement between Etihad and Air Berlin. Traffic overall increased by 5.1% in 2012 and by 2.1% in Q12013 notwithstanding a reduction in flight movements and despite the continuing influence of the German tourist tax, which has caused traffic losses at many German airports. For an airport that cannot be over-reliant on Lufthansa, which has less relative capacity there than at any of its other four bases or focus cities (see chart in Munich section) and which has been heavily criticised by Lufthansa for its failure to open Berlin Brandenburg International Airport on time, this experiment is one that could open the door to others as the global branded alliance system comes under threat from agreements that are more reactive to the changing nature of the airline business.*

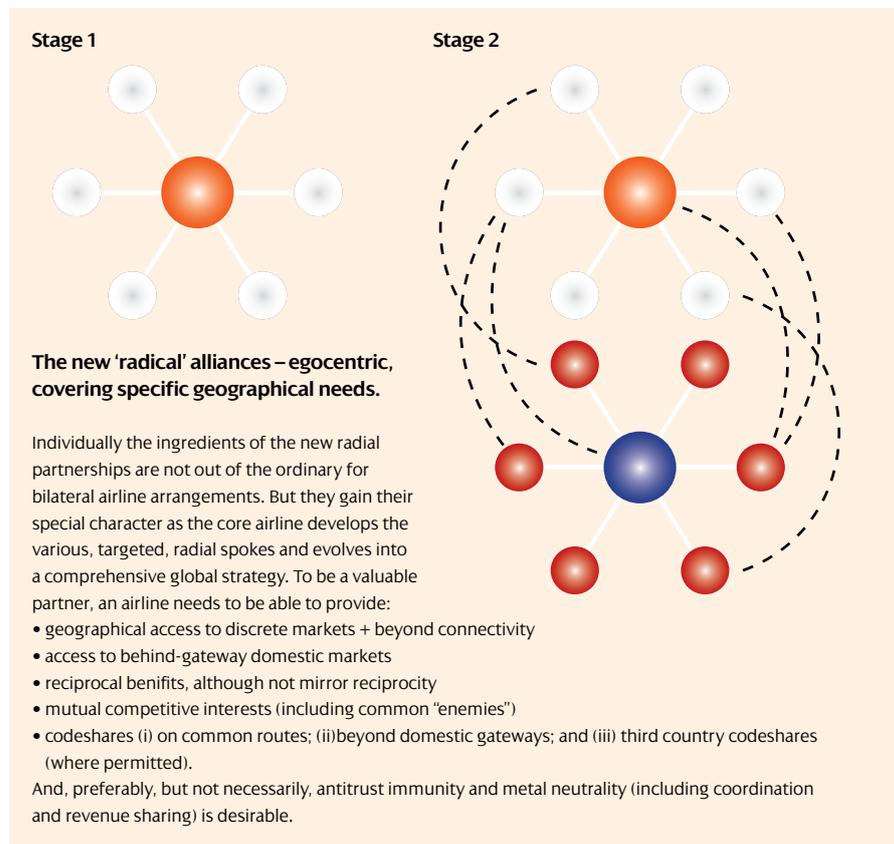
Berlin, although the federal capital, had until quite recently been a relatively insignificant group of three airports within the wider German framework, well behind Frankfurt, Munich and Dusseldorf airports in terms of passenger numbers. With a new airport under construction additional traffic arising from the alliance constitutes a stimulus to other airlines that may be considering adding service there. Etihad Airways may seek to add more partnership agreements of this variety, at other locations in Europe. It is *momentarily* believed to be a unique model in global terms.

Another model and another version of these egocentric radial alliances is the aforementioned 2012 deal between Emirates and Qantas. The fact that Emirates saw it necessary (and possible) to strike such an arrangement with a hitherto-conventional legacy airline should be seen as a pivotal moment in the industry's evolution. *Effective from 31 March 2013 when it came into force, the shape of this arrangement quite probably entrenches the future direction of the airline industry.*

In combination, the two carriers offer 98 weekly services between Dubai and Australia, which dovetail into Emirates existing network at Dubai, which features single, double, triple, quadruple or more daily services to and from a very wide range of cities in Europe and on other continents, often flown by A380 aircraft. Qantas is reported to have seen a six-fold increase in bookings to and from Europe on the joint network in the first nine weeks of sales compared to the same period last year (2012). Moreover, the new network is claimed to cut average journey times by more than two hours from Melbourne and Sydney to the top 10 destinations in Europe and vice versa.

Tellingly Qantas have stated that Dubai is the best hub for Qantas in the 21st century, located as it is, eight hours' flying time from 75% of the world's population. Moreover, fares will be aligned and are likely to reduce by approximately US\$100 per passenger. As these two Gulf carriers become an integral part of the 'established' community, albeit with a different model, they bring with them the potential to spark even more far-reaching change. Then there is a further step, now tentatively being made, to interlink the radial links into constellations. That is, where radials of one central partner connect with radials of the other. This creates a form of linkage not enormously different from the way the global branded alliances work already. In each case the relationship is (at first) bilateral, and to a large extent optional. One difference from the wider alliance approach is that this process is entirely optional, much more selective and is managed directly by the core partners.

#### The evolving 'constellation' alliances



Source: Harbison, P<sup>3</sup>



A working example of it is the announcement in the first week of April 2013 of an expansion of the code share agreement between Air Seychelles and Etihad Airways to include Etihad's 10 times weekly Abu Dhabi-Dublin service, and which might tie-in to the network operated by Aer Lingus at Dublin. Aer Lingus is an unaligned carrier and Etihad holds a small stake in it. At the same time Etihad has agreed a code share deal with Aer Lingus for services between Dublin and North America. Thus a code shared ticketed journey New York-Dublin-Abu Dhabi-Seychelles becomes possible outside of the global branded alliance system. Constellation evolution is at an early stage presently, and is thus not discussed further in this paper.

The more *personalised* alliance structure developed in this way gives each core airline access to each of its key markets, also ideally allowing *behind-gateway* access. Thus it goes well beyond a simple basic bilateral code-share. In Europe, the traditional intercontinental 'gateway' (and usually hub) airports are well established and have been for several decades. They are London Heathrow, Paris Charles de Gaulle, Frankfurt International, Amsterdam Schiphol and Madrid Barajas, supported by second tier ones at, inter alia, Rome, Zurich, Vienna, Munich, Copenhagen, Oslo and Stockholm.

*The process of radial alliance building, of which, it should be stressed, is at the very beginning, has the capability to boost the prospects of regional airports across Europe, including Birmingham, i.e. behind the gateway.*

It is no coincidence that the first examples of radial alliance building should involve Gulf carriers as the focus of the international aviation industry has been drifting towards the Gulf and away from its traditional centres (Europe and to a lesser degree Southeast Asia) for some time. For 2013 IATA once again identifies the Middle East to be the world's fastest growing region for air traffic. Dubai Airport, which has just overtaken Hong Kong to be the world's third busiest international airport, is expected to overtake London Heathrow as the world's busiest in that category by 2016. Dubai Airport's strategic plan for 2045 is designed to expand total passenger handling capacity there to 200 million per annum.

Middle East airline traffic is projected to grow 6.4%, compounded annually, during the next 20 years. Revenue passenger-kilometres will more than triple by 2031, as the Middle East continues to take advantage of (ICAO<sup>4</sup>) sixth freedom travel organisation, connecting foreign countries via a transfer in the carrier's home country, a model that was once the preserve of both European and Asian carriers.

## How will this benefit Birmingham?

Last year, the CBI has referred to the fact that it appears increasingly that the UK is becoming a branch-line destination on the route map of global airlines. Although this is slightly disingenuous, it may apply to existing gateway hubs but as the text above suggests the new order in global airline alliance building offers other primary level airports such as Birmingham the *capability to build on behind-gateway demand to replace the 'main line' service it rarely had*.

The construction of additional airport infrastructure in and around London will not remove the threat to the gateway hub because the Gulf carriers, and Emirates in particular, have already established critical mass and have identified their airports in the minds of travelers as acceptable alternatives. Moreover, it is in the Middle East where airport, as well as airline, capacity is being added. This may mean that Birmingham remains only as a spoke rather than a hub in its own right but it has *the capability to be many spokes*.

For example, the troika of Gulf carriers, reacting to the withdrawal of British Airways services from Manchester Airport, have already established that airport as the second in Europe by number of weekly services available to and from the Gulf. Birmingham Airport, which represents a similar metropolitan city-region, catchment area and economic gravitas, can benefit equally, more so once the runway extension is completed, and it is understood that discussions are already under way for additional Gulf services and higher gauge (aircraft size).

The City of Newcastle and its metropolitan region (Tyne & Wear) has clearly benefitted from the introduction of a daily service to Dubai by Emirates in September 2007. Analysis by UK Trade & Industry suggests that since that airline arrived in the region there has been a notable boost to exports and trade. The analysis shows a rise in trade from £150 million to £275 million between the North East and Australasia over the period 2007-2012. A study of the International Passenger Survey, UK Civil Aviation Authority (CAA) Passenger Survey and CAA Statistics also leads to an estimate that inbound passengers on the Dubai service spent around £16.7 million in the North East of England in 2012, supporting around 230 jobs in the tourism industry.

Separate research has analysed the journey time benefits derived from shorter travelling times for passengers and businesses and the produce benefits triggered by these. On the basis of 2012 traffic levels, the consultancy suggests the service will bring net economic benefits of £4.6 million to the North East or when considered across the five year life of the service, around £20.3 million since September 2007. Despite the ever-growing importance of the Gulf in global aviation terms at the expense of the traditional European hub/gateways it is important to avoid becoming fixated on it. There are other airlines that consistently seek to reproduce what the Gulf carriers have laid down to date.

Numbered amongst them is Turkish Airlines (THY). Since the turn of the millennium THY turned itself around to become one of the world's fastest growing airlines with a network over 200 cities in 90 countries. Its goal is to become the world's largest airline network by 2023 with over 375 aircraft. That is exclusive of any airline subsidiaries it may acquire outside of its Star Alliance membership. At the end of 2012 it had a fleet of 200 aircraft, the youngest fleet of any significant network carrier in Europe. Momentarily it is hampered by constrained facilities at Istanbul's principal airport, Ataturk, but that airport will be replaced by a new one, which will be built in four stages to handle, eventually, 150 million passengers per annum. Traffic at the two existing Istanbul airports grew by 18.5% in 2012 and by an average of 22% in February 2013.



THY benefits geographically from a similar global position to those of the Gulf carriers, but it is also able to call upon well-established international tourism demand (and infrastructure) within Turkey, and a population of 75 million people with a growing middle class element. In brief, THY has the capability to outstrip the Gulf carriers, as its cost base is lower and many of its shorter connecting services through the Istanbul hub can be operated with smaller and more fuel-efficient aircraft. THY is already established at primary airports in the UK including Manchester, where it has a double-daily operation and Birmingham where it is soon to increase from daily to 10 times weekly. Additionally THY has been seeking increased co-operation in the passenger and cargo segments with Lufthansa, both being Star Alliance members.

*Such is the almost exponential growth of these airlines that a scenario where a 'shuttle' type multi-daily spoke schedule connecting Birmingham and airports such as Dubai, Abu Dhabi and Istanbul (and beyond) is now quite feasible. There is no longer the need to travel to London in order to take an indirect sixth freedom flight option (which is often less expensive) and travellers based in the south of England, from the northern Home Counties to Gloucestershire, have every reason to choose Birmingham over London for these options.*

The final piece in this jigsaw is a growing propensity amongst some of these long haul carriers to fly 5th Freedom routes in addition to their comprehensive 6th Freedom offer. For example Emirates plans to commence daily Dubai-Milan-New York service, effective 01 October 2013. Italy's Civil Aviation Authority (ENAC) authorised the Milan-New York service on an extra-bilateral basis and the airline is confident of demonstrating economic benefits for Italy's economy, exporters, tourism and airports over the next 18 months. Emirates has wanted to operate a trans-Atlantic route for some time. This route is currently under-served.

The Chinese carriers, as noted previously, have in the main been late entrants to the branded global alliances and they are not present in significant numbers even now. Air China and China Southern joined alliances in 2007, followed four years later by China Eastern (2011) then by Shenzhen Airlines and Xiamen Airlines (both 2012). As Chinese airlines become increasingly ambitious to have a global presence it is likely that they will seek to co-operate with other airlines through formal branded alliances or by way of other arrangements. International long haul capacity remains small. In the case of China Eastern for example it is just 3% of its overall capacity at what is one of the world's ten largest carriers. It is not necessarily the case that Chinese carriers will seek to serve major hub gateways. Much is made of the fact that there are few services by Chinese carriers into London and the lack of capacity is typically cited as the reason. But there is still spare capacity at Gatwick Airport, a lot of it at Stansted Airport, and slots still change hands at Heathrow Airport.

The Chinese government, and its airlines, seeks to maximise opportunities wherever the airlines operate (directly or through other-airline agreements). This has clearly been the case in Africa and increasingly is so in Latin America. It does not automatically follow that because the country is the world's second largest by GDP and because GDP is set to continue growing at approximately 8.5% per annum in the period 2013-2017 that airlines will choose financial capitals like London to implement service. China is essentially an industrial nation after all and it can often extricate greater value by flying to airports that are located in major industrial regions such as Dusseldorf (served by Air China from Beijing) and Birmingham. There are an increasing number of options open to Chinese airlines as to as how they can do this, for example by a 'behind-gateway' measure that might see them tying up with an airline such as Air Berlin or Flybe in the UK, or by a more traditional fifth freedom operation that might see, for example, a service from an industrial city such as Guangzhou or Chengdu via Birmingham to another point, perhaps in Latin America, where what is essentially a passenger service could be underpinned by industry-specific belly-hold freight volume.

Looking at Chinese airlines in the reverse perspective it is also interesting that they are increasingly seeking to position themselves and their airports not only as gateway points to and from China but also as (sixth freedom) transfer points to North Asia and even Australasia, in the manner of Emirates and Singapore Airlines. As they are not (yet) wedded substantially to the concept of global branded alliances they have greater flexibility to avoid the global alliance hub system and are thus able to route passengers from other primary airports to these end destinations.

China Southern has been the most aggressive in developing Europe-Australia/New Zealand and vice-versa travel via China and seeks to have 55 weekly round-trips by 2015. China Southern operated up to 14 weekly flights between Guangzhou and Melbourne during 2012. Amongst many other examples, Hainan Airlines operates a Shenzhen-Sydney service and Sichuan Airlines a Chengdu-Melbourne service. When taking into account the additional ticket revenues in Europe generated by the alliance between Qantas and Emirates it is clear why Chinese airlines perceive Europe-Australasia to have great market potential even though that market, for the moment, has declined.

As with the Gulf carriers and Turkish Airlines there is no requirement on the airlines to offer these sixth freedom services from branded alliance gateway hubs. The paradigm has changed. Moreover, the increase in services, and passengers carried by the Gulf carriers, THY, the Chinese airlines and others must act as a stimulus to the European carriers that already offer sixth freedom travel from Birmingham and other airports to up their game.

Without doubt, Birmingham's central position in England and transport accessibility by road and rail works to its advantage in any consideration by airlines of optimum locations. To give just one example it is known that the Cape Verdean airline TACV (unaligned) when examining prospects for a UK service identified Birmingham as, geographically, the most promising location.

To summarise this section, the proposition is that long-haul operations will in future be delivered by a smaller number of large and efficient specialist airlines, with geocentric hubs and the resources to deliver a wide range of services. At the same time they will provide space to many other airlines. This concept, of wide usage of other airlines' equipment as channels or "pipes", to be leased (code-shared) is little different from what occurs in the telecommunications industry or in liberalised rail systems and opens another door for Birmingham Airport to develop and promote new air services that will continue to evolve.

## 5. Sectoral Dependencies on Air Connectivity growth opportunities in the Midlands

The modest expansion of the runway by 2014 at Birmingham Airport, offers the opportunity for a step change in the air connectivity of the Midlands, and wider catchment area, with the potential for greatly increased long-haul flights to the principal export markets that the Midlands currently accesses via indirect flights. Increased long-haul capability can be expected to have significant positive benefits both in term of business-to-business contact as well as the potential for repositioning Birmingham Airport as a principal freight node.

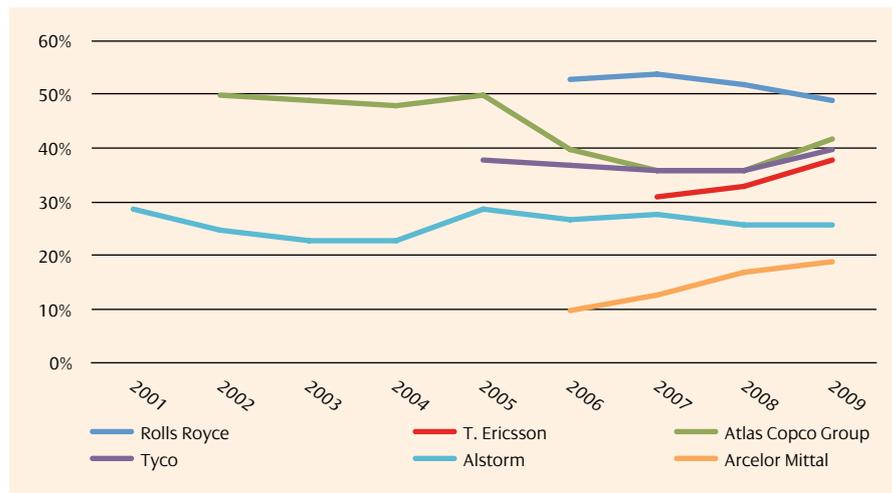
In 2012, close to 58% of exports from the Midlands were destined for non-EU markets (with 54% of imports originating from non-EU sources). Indeed, of the top 25 export markets for the Midlands (which provide 85% of export demand) 13 are located outside the EU and EFTA. More detailed analysis of these markets is provided in section 9, however it is worth noting that the bulk of these economies tend to be substantial importers of manufactures: United States (67% of merchandise imports comprise manufactures), China (59%), Singapore (60%), Hong Kong (84%), UAE (an outlier at 21%), Japan (47%), Russia (80%), Canada (72%), Australia (69%), Turkey (59%), India (41%) and Brazil 72%). With all of these countries expected to sustain growth over the next 5 years, import demand is anticipated to continue increasing. Moreover, as manufacturers globally increase post-sales servicing, that is embark on servitisation, the speed of air connectivity is likely to be a key factor in sustaining future growth.

Research by the Cambridge Services Alliance, University of Cambridge, indicates that servitisation by manufacturing companies, especially exporters, is becoming an important consideration for future business strategies, with a range of economies recording increased servitisation in the production sectors. Data provided by Cambridge highlights that in 2011, the United States had the highest level of servitisation at 55%, and although a number of economies had not recorded a shift in the level between 2007 and 2011, that China was experiencing a rapid shift from less than 1% of manufacturing companies being servitised in 2007 to close to 20% in 2011. This probably reflects some official policy intervention, but is indicative of the intention of Chinese manufacturers to move up the value-chain. As Cambridge describe this is now a race to innovate and offer higher value products and services, with air connectivity a key component in the achievement of global penetration. There are a number of factors influencing the move to servitisation, not least the fact that manufacturing firms in the Midlands cannot compete on the basis of cost alone.



Moreover, there is the problem of installed base, which ensure there are limitations to product appetite that built-in obsolescence can only partly address. According to Cambridge in mature markets, for every new car sold there are already 13 in operation, with the ratio greater at 15 to 1 for civil aircraft and 22 to 1 for trains. In addition, servitisation enables companies to lock-in customers and lock-out competitors. In Emerging Markets, these ratios will begin to increase.

**Servitisation Revenues Selected Companies (%)**



Source: WMEF & Cambridge Services Alliance

This not only provides greater stability to revenue flows, but also a significant proportion of overall revenue. Rolls-Royce, according to Cambridge for instance, derives close to 50% of its revenues from servicing, and although other companies analysed also derived strong revenue flows from services. In delivering a globalised servitisation products, as well as sustaining sales, fast and efficient air connectivity would seem an essential pre-requisite. – the capacity for a Midlands enterprise to have an engineer, technician or sales representative to a client within one-working day would at least put them on par with where German, Japanese and American suppliers have been for a number of years. It would also seem a necessary attribute to have the capability to compete in future global export markets.

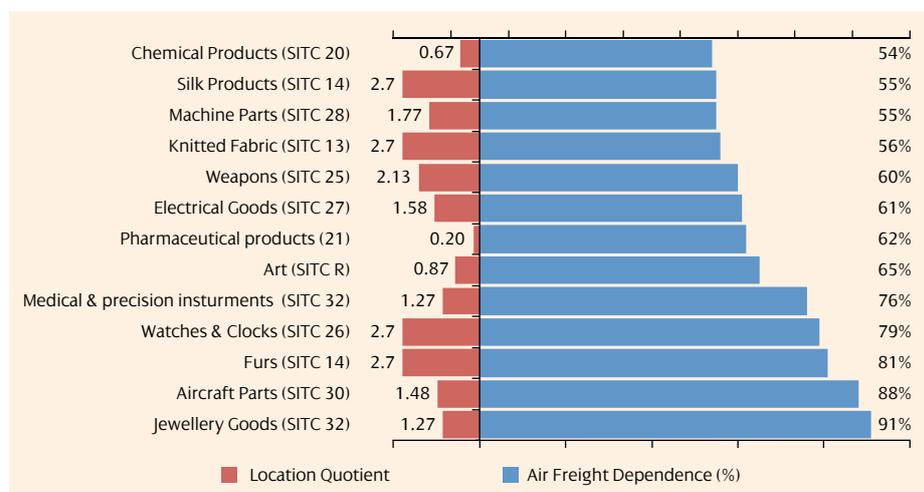
In addition to the potential that servitisation offers both for securing and maintaining market share, it important to consider where the sectoral comparative advantages of the Midlands are and which of these would benefit from improved air connections. In contrast to the combined regions of London and the South East, in terms of location quotients the Midlands performs more strongly in terms of production industries, rather than services. The impact of the greater access could therefore be twofold. In London and the South East, the services sector according to analysis presented by the Greater London Authority has benefited significantly from the global access provided by London Heathrow, especially in terms of business traveller capacity but also in no small part from the availability and scale of air freight services. With the bulk of the Midlands located beyond 100 minutes travelling time from London Heathrow, it could be reasonably argued that this constrained accessibility has limited growth in the Midlands services sector, especially in the non-international financial service sector. While sectors such as logistics, tourism (by proxy of accommodation and food) and education exhibit some strength, a number of services, such as legal, accountancy and business support could and would benefit from improved international connectivity.

	Midlands Location Quotient	UK aGVA %	London & S East Location Quotient
<b>Agriculture</b>	<b>1.14</b>	<b>0.16</b>	<b>0.30</b>
<b>Production</b>	<b>1.28</b>	<b>21.27</b>	<b>0.54</b>
<i>of which</i>			
Manufacturing	1.39	15.27	0.42
Electricity & gas	1.45	2.56	0.67
Water & waste	1.45	1.41	n/a
Construction	1.04	7.26	0.82
<b>Wholesale &amp; retail</b>	<b>1.16</b>	<b>15.54</b>	<b>0.89</b>
<b>Services</b>	<b>0.79</b>	<b>56.82</b>	<b>1.21</b>
<i>of which</i>			
Logistics	1.06	6.81	1.05
Accommodation & food	1.06	3.31	0.96
IT	0.63	9.25	1.60
Finance (part)	0.36	5.86	1.24
Real estate	0.80	2.70	1.27
Professional	0.67	12.57	1.42
Administrative	1.00	7.73	1.08
Education	1.12	1.42	1.14
Health & social	1.46	2.34	1.84
Arts	0.87	1.58	1.69

Source: ONS - Annual Business Survey (Approximate gross value added at basic prices, aGVA, release date 26/07/2012) & WMEF

However it is the production sectors, most notably the manufacturing sector, within which the real benefits of air access could be realised. At both sector and industry levels, the Midlands exhibit a number of comparative advantages, when viewed via location quotients.

#### Comparative Advantage: Air Freight Dependence of Key Midlands Sectors (SITC codes)

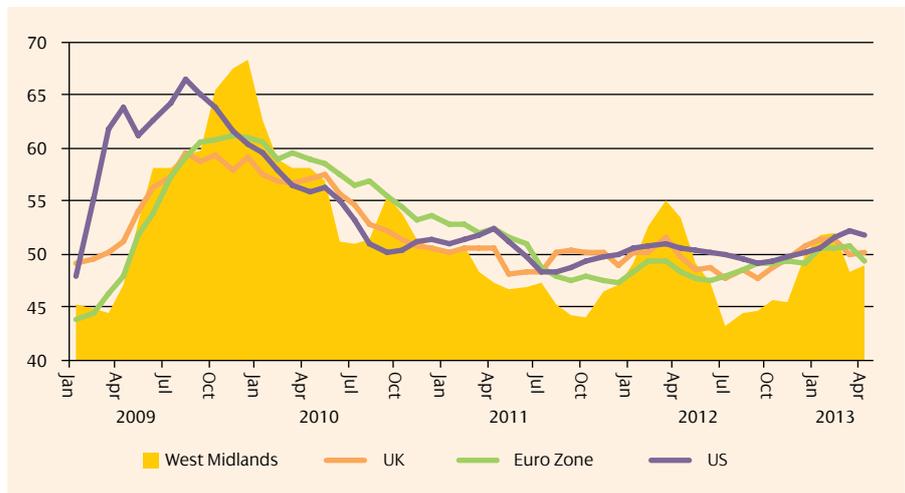


Source :ONS, HMRC, DFT, steer, davies & gleave, WMEF

Using analysis prepared for the Department of Transport by steer, daves & gleave, it is possible to indicate which sectors are most heavily dependent on air freight services and those in which the Midlands enjoys a comparative advantage. In addition to machine parts and the aerospace sector, the Midlands exhibits location quotient strength in the bulk of sectors that are most dependent on aviation access. In particular sector specialism in precision manufacturing aviation components, manufacturing parts and some specific fashion textiles would be boosted by enhanced air connectivity.

Moreover it is important to note that in terms of productivity growth, the Midlands economy, as indicated by the West Midlands PMI Productivity Indicator, has since the financial crisis maintained growth rates comparable with major competitors nationally, in Europe and in North America.

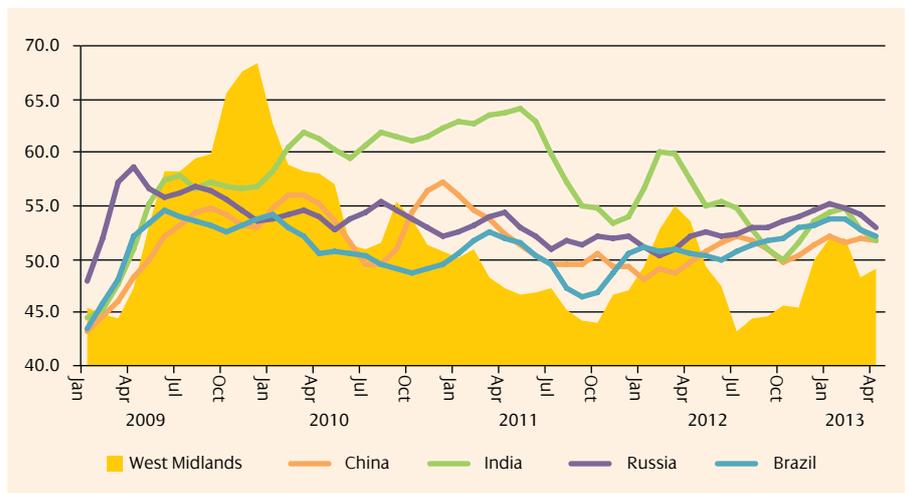
**Productivity PMI**



Source: ONS, Markit Economics, WMEF

More significantly, local productivity growth has kept pace with rates being sustained in the more dynamic emerging markets.

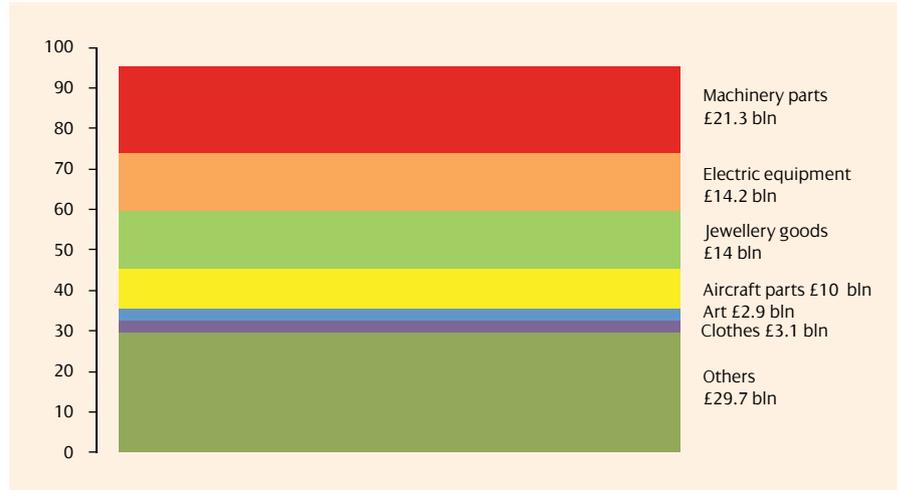
**Productivity PMI**



Source: ONS, Markit Economics, WMEF

Therefore, in examining the potential for Birmingham Airport it perhaps not only important to examine actual potential capacity, but also where potential demand is likely to originate. It is clear that the sectors most likely to benefit from increased freight connectivity are those sectors that the Midlands retains specialisation.

**Largest Value Sectors for UK-Non EU Air Freight (2008)**



Source: HMRC & steer davies gleave

The output potential, and consequent stimulus to freight traffic, that the developments taking place at Birmingham Airport have a significant upside for the regional, and in particular the Midlands economy. The existing catchment area of the Airport makes it an attractive proposition for long-haul international air carriers, with a potentially dramatic increase in freight tonnage transported, particularly when taking account of the volumes handled by similarly placed continental European airports. Without a contemporaneous development of freight handling capacity this momentum would be lost. With the increased availability of long-haul flight slots, the origin, destination and structure of trade with the Midlands is also likely to undergo profound change and the freight strategy will need to accommodate these new demands.

## 6. Creating a supportive aviation infrastructure for the Midlands

Just as global branded alliances are evolving and changing so is the low cost carrier (LCC) segment. As mentioned previously, it is a considerable segment of the business, responsible for (January to April 2013) 25.6% of global seat capacity (slightly down on the full year 2012), and for 120 carriers. Within Europe it is responsible for 34% of seat capacity although growth there now comes more from new routes and frequency increases from the larger carriers (Ryanair, easyJet, et al) rather than from new entrants. It is a mature business in Europe.

The main changes to the modus operandi of LCCs insofar as they affect Birmingham Airport are:

- *Hybridisation* in order further to challenge the network carriers by identifying new service features in order to aid product differentiation
- Potential *consolidation* in the future
- Increasing role in *alliances*

### 6.1. Hybridisation

The two largest LCCs in Europe are Ryanair and easyJet. Both are changing the nature of their product offer and pricing, the latter considerably more rapidly than the former. Ryanair has a significant presence at Birmingham Airport, where it has a base, with 28 services, while easyJet is not so well established with three services. (EasyJet did have a base at nearby East Midlands Airport but closed in down altogether in 2011). For the moment easyJet is polarised between operations in the south of England from large bases at London Gatwick, Stansted and Luton airports and in the north of England (Liverpool and Manchester).

During 2011, *Ryanair* began to indicate that it wished to attract more higher-yielding business passengers and that it would consider increasing its presence at primary airports. While the statement made economic sense, it needs to be weighed against the evidence. The fact of the matter is that the bulk of Ryanair's services are out of secondary and tertiary level airports, where it often enjoys close relations with owners, often small municipalities. A cursory examination of Ryanair's route map in April 2013 does not indicate that it has opened many new primary airport level bases since 2011. Nevertheless, it is now present at six primary level airports in the UK outside of London (some of them only within the last three years) and in other primary airports around Europe such as Madrid, Barcelona, Berlin, Rome, Marseille, Budapest, Oporto and Krakow. It is at Madrid and Barcelona that Ryanair's primary airport interest has been tested because, despite a reduction in capacity after the state operator AENA increased fees in June 2012, the airline has over the years consolidated all its operations into Madrid's Barajas airport when there were alternative airports available and at Barcelona it commenced operations at the central El Prat airport while it was already established at either side of the city at Girona and Reus airports. For a time the number of services at El Prat exceeded those of both Girona and Reus though momentarily Girona is back in favour.

So the process of shifting to operations at primary airports is a slow one but it is important to take account of Ryanair's aircraft stock. Presently it has 305 in service but it has 175 on order, a deal concluded in March 2013 after a three-year hiatus. It is Ryanair's largest ever order and prompts the question as to what it will do with them. Ryanair strategy would appear to secure wider access to Eastern Europe and possibly the CIS states, although there remain a number of issues to be resolved.

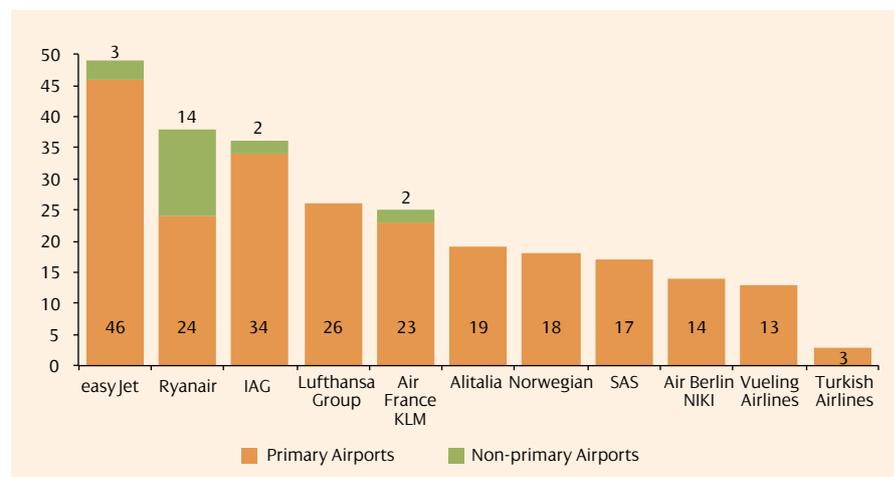
The emerging scenario for Ryanair, it will be forced to retrench to the UK and Ireland and to increase its exposure to primary airports rather faster than it has done to date. In that sense Birmingham Airport is well positioned as it:

- Is already a base
- Caters to a proportionately higher volume of business travellers compared to some other regional airports
- Is easily accessible from a wide area by surface transport including, for example, National Express, with which Ryanair concluded a ticketing deal in April 2013
- Is devoid of direct competition from other LCCs such as easyJet and Jet2.com

It would be very speculative to say that Birmingham Airport could replicate Stansted Airport in terms of airline operations by Ryanair but there is clear potential for the airline to expand further there, as indeed there is at other primary level UK airports such as Manchester and Edinburgh.

*easyJet* is much further along the path of hybridisation than is Ryanair; indeed it could be argued that *easyJet* is no longer a 'low cost airline' in the original meaning of the phrase and has become a de facto network carrier, often replacing British Airways, which has centred on London hub operations (Heathrow, Gatwick and London City) as the principal British airline flying into Europe from primary airports in regional cities.

#### Presence in Europe's top 100 market pairs: easyJet vs. competitors



While smaller than Ryanair (213 aircraft as of 31 December 2012), *easyJet* enhanced its credentials as a business airline successively during the last five years by introducing, inter alia:

- Higher frequencies
- Flexible fares with free date changes
- Inventory available through GDS
- Lounges
- Seat selection
- Fast-track boarding
- Indirect brand loyalty programme (Nectar card and link to Emirates' Skywards programme) – though it does not have its own FFP
- Country Commercial Directors and sales force in charge of cooperation with corporate entities and business travel agencies



In 2011, 18% of easyJet's passengers were flying for business purposes and easyJet aims to increase this to 20%-24% over three to five years. These decisions helped contribute to an increase in revenues of 11.6% in the 12 months ended 30 September 2012, an operating profit of £331 million (+23%); net profit + 13.3% and revenue per ASK<sup>5</sup> of +7.2%. This despite a difficult operating environment across much of Europe.

It is clear which direction easyJet is following. It is an airline perfectly suited to operations at Birmingham, irrespective of the presence of Ryanair and for reasons similar to those pertaining to Ryanair that were highlighted earlier. With space at a premium in the southeast of England (easyJet already operates over 100 services at London Gatwick and the carrier has been forced to invest in new services at Southend Airport) and with a growing operation bridged between Liverpool and Manchester airports in the northwest (as with Ryanair) easyJet is not well represented across a swathe of central England, where Birmingham sits at the heart. In that sense it has the potential to replicate the impact of British Airways' Birmingham division in the 1960s-1980s, for example by commencing services to Moscow as it has at Gatwick and Manchester in 2013.

Finally, it must be pointed out that Ryanair and easyJet are but two (albeit the largest two) of the 'budget' airlines' that have the propensity to start and grow services at Birmingham considerably in the future.

Amongst the others is the well-run Spanish LCC *Vueling*, for which International Airlines Group (BA/Iberia) has pitched for 100% of its shares. If IAG is successful – and it appears it will be – it might have a detrimental effect on Vueling's expansion plans. Otherwise, Vueling was traditionally cautious about operating in environments where it came into direct competition with indigenous LCCs (for example in the UK) but latterly has opened services to Edinburgh and Cardiff. It is also not averse to opening bases abroad. Four of its 13 bases are outside Spain, at Amsterdam, Florence, Paris and Rome.

The Scandinavian LCC *Norwegian Air Shuttle* has a very large order for aircraft without an obvious strategy as to what it intends to do with them within the thinly populated Nordic countries. It will initiate long haul routes (US, Asia) that will employ the Boeing 787 this year but may have to consider operations from bases outside of Scandinavia, especially if Scandinavian Airlines survives as an independent airline. It has already identified Budapest and Hamburg.

In North America, there are three budget airlines that could commence UK routes without prior experience if and when the general economic climate improves. Firstly there is *Rouge*, the lower cost subsidiary of Air Canada, which has already earmarked Edinburgh for service. Secondly, *WestJet*, a Canadian LCC that has indicated a desire for international operations beyond existing ones to the US, Central America and the Caribbean. WestJet is introducing a regional subsidiary momentarily, but as part of that exercise will migrate from a low-cost carrier to a hybrid carrier featuring a "low-cost full-service business plan" in order to tap into the corporate market in a similar fashion to easyJet. Finally, *Southwest Airlines*, the world's largest LCC, which made a strategic decision in 2012 to offer international air service for the first time – though only to Mexico and the Caribbean in the first instance – as a response to the continuous consolidation amongst the US' legacy airlines.

Finally, there are several Asian airlines that could identify Birmingham as a gateway in the future, all from the long haul low cost arena. They include Japan's *Skymark Airlines*, which awaits delivery of the first of six A380s it states it will use on alternate gateway routes; *AirAsiaX* (Malaysia), which has pledged to return to Europe once the economic environment improves; and *Jetstar* (Australia/Hong Kong), which again targets secondary European gateways in the long term.

These are merely examples of airlines for which Birmingham Airport could become a viable operation under the scenarios considered here.

## 6.2 Consolidation

There has for many years been talk of the potential for merger and consolidation between low cost airlines. Ryanair's strategy appears to envisage that only two will ultimately remain in Europe – itself and easyJet. Several years ago it was considered that a merger between Ryanair and Wizz Air (which have synergies) was possible but it did not take place. But for the most part the clearout has already taken place, with the takeover of buzz (a weak airline) by Ryanair, Go (a cannibaliser of the parent airline's routes) by easyJet, and DBA (an anachronism) by Air Berlin, all in the previous decade. Those legacy airlines that initiated budget subsidiaries wound them up rather than consolidating or merging them. The merger of Ryanair with Aer Lingus (a hybrid airline that demonstrated budget traits on European operations) was stopped for the third time in 2013 by the European Commission. With the exception of Flybe – another 'hybrid' carrier – most European LCCs are keeping their head above water, including Air Berlin courtesy of its aforementioned deal with Etihad Airways, and doing surprisingly well in some cases, such as the UK's Jet2.com. There do not appear to be the same drivers towards consolidation presently except that legacy airlines have succeeded in narrowing cost differentials by 30% over the last five years<sup>6</sup>. While this could be an issue to LCCs most have adapted either by (a) reinventing themselves again as described above; and /or (b) moving more deftly than the legacy airlines, entering and exiting airports and routes to maximise profitability. It looks less likely now that there will be outright LCC mergers than it has done for some time.

### 6.3 Alliances

We are also likely to see more instances of LCCs joining or cooperating with formal global branded alliances or in radial, behind-gateway alliances. As things stand there are three LCCs within alliances (Air Berlin, Blue1 and Iberia Express). It could be argued that Air Berlin has changed its model since joining Oneworld and that Blue1 is a regional SAS feeder airline as much as an LCC.

But key to this is a realisation amongst airlines' management that standards of service on short and long haul routes no longer need to be complementary. The public has become familiar with the service standard on the LCC and it has been adopted as the norm. Hence Aer Lingus, which reduced costs significantly in the short haul domain in order to compete with Ryanair, offers a quite different standard there compared to its long haul one. Lufthansa will replace many of its mainline airline short haul routes with LCC subsidiary Germanwings (though not at its main hubs, Frankfurt and Munich, in the first instance). In Scandinavia there is a disconnect between service levels on SAS long haul and on the feeder Blue1.

Potentially, these trends could benefit Birmingham Airport if large LCCs opted to attach themselves to it. While Ryanair remains unlikely to choose such a course of action, the fact that Air Berlin chose both to join an alliance and to enter into a separate agreement with Etihad may provoke airlines such as easyJet, Vueling, Norwegian, and Wizz Air to revisit their own position.

#### *The emergence of a new dynamic in the organisation of air travel- facilitating the peoples' choice.*

One of the major impediments to the marketing efforts of regional airports is the ingrained assumption amongst consumers that in order to travel by air from the UK to many destinations it is necessary to travel first to London. Manchester Airport for example estimates that it loses four million passengers annually in this manner while a similar situation at Birmingham is exacerbated by the presence of the M40 motorway, which leads, via the M4, directly to Heathrow Airport, which is closer still. Moreover, the diminution in the number of High Street travel agents who can offer appropriate advice has also played a part. The role of the independent travel agent was as much to educate and inform as to take bookings.

However, there is potential redress in the adoption by IATA of its New Distribution Capability (NDC), which it describes as a new and innovative approach to the way airlines' products and services are being distributed.

In recent years IATA has worked mainly to ensure the global adoption of paperless electronic ticketing in the passenger function, similar paperless technology in the cargo function and implementation of security measures. During that period, the distribution of the air travel product has been overlooked, has become outdated, and has polarised between the distribution methods of the low cost carriers (fundamentally online, via the Internet) and the global distribution systems (GDS) used by business travel agencies and large corporate entities who buy travel in bulk, and which is focused on the lowest ticket price. NDC is intended to enable airlines to fill the capability gap between their direct and indirect channels, providing identical retail capabilities across all channels. It supports product differentiation and customer personalisation.

Neither of these channels enables purchasers to view the entire product in detail as it is possible to do on a range of shopping websites in other industries, such as Amazon and eBay. The intention is that NDC *will* enable that. The fundamental feature is that it will help travel agents add value to their clients by allowing for comparison of information that is only available now on individual websites. Passengers will be able to see for themselves exactly what it is that they are buying, from the aircraft type to the seat they will sit in, to the size of the overhead locker. It will also facilitate the sale of ancillary products. Passengers will be able to create their own profile, which specifies precisely their preferences, to which the technology, ideally, will be able to respond with the best offer.

Though most of these features appear to be airline-related, *the theory is that NDC will create business opportunities across all aspects of the industry, for all stakeholders.* There will be enormous opportunities for airports to become part of the purchase 'experience' in a way they have not previously been. A passenger's individual profile for example could offer to any of the catchment area inhabitants (for whom Birmingham is the nearest airport) the opportunity to identify named carrier(s), suggested travel dates and a choice of fare level as the primary determinates of the product search, which may be governed by algorithmic calculations in the same way as data requests on search engines like Google are now. Equally, the airport operator might have the opportunity to add promotional messages at any point along the transaction, for example by publicising a duty free or car parking offer, showing a picture or video of a client-preferred airline's new lounge, or of its own lounge (which could be booked on the spot), or publishing passenger testimonials. Or the operator might offer an application ('app') – NDC will provide an open Application Programming Interface to enable third parties to develop apps for distribution.

*The opportunity to ally NDC to the fast developing science of the application of Big Data is clear.*

Essentially, it will be possible, within a few years, for Birmingham Airport to be able to know in intimate economic detail the make-up of its immediate catchment area and of those beyond, where it is in greater competition to win passengers, and then to tailor messages through NDC to attract them to commence their journey there. The same will ultimately apply to incoming and transfer passengers.

NDC is not a 'done deal'; it is not yet in Beta-testing and there are, as always, political ramifications. The results of pilot projects will be presented in October 2013. *Assuming it goes ahead (possibly in 2014) it has the capability to be a 'game changer' for regional airports, offering them the capability to publicise their pull factors infinitely more widely than they are able to do momentarily.*

Another factor in Birmingham's favour that is related to IATA's decision to pursue the NDC project is that, according to a consultancy<sup>7</sup>, while absolute numbers should continue to grow (IATA's latest estimate for international travellers from the UK in 2017 is 200.8 million, 32.8 million more than in 2012), business travellers will decline from 45% of the total to 40% in the same period. Leisure travellers display less brand loyalty (e.g. of alliances), which should favour Birmingham and other regional airports.

## 7. Benchmark airports

It is useful to compare Birmingham Airport with others of a similar size, scope and regional status abroad, especially where the organisation of air travel is differentiated from the UK. The airports selected are: Munich and Lyon.

### 7.1 Munich Airport

The Federal Republic of Germany consists of 16 Länder, covering an area of 357,021 square kms and has 81.8 million inhabitants, compared to 62.6 million in the UK.

State	Capital	Area (sq kms)	Population (million)
Baden-Württemberg	Stuttgart	35,752	10,753,880
<b>Bavaria</b>	<b>Munich</b>	<b>70,549</b>	<b>12,538,696</b>
Berlin	Berlin	892	3,460,725
Brandenburg	Potsdam	29,477	2,503,273
Bremen	Bremen	404	660,999
Hamburg	Hamburg	755	1,786,448
Hesse	Wiesbaden	21,115	6,067,021
Mecklenburg-Vorpommern	Schwerin	23,174	1,642,327
Lower Saxony	Hanover	47,618	7,918,293
North Rhine-Westphalia	Dusseldorf	34,043	17,845,154
Rhineland	Mainz	19,847	4,003,745
Saarland	Saarbrücken	2,569	1,017,567
Saxony	Dresden	18,416	4,149,477
Saxony-Anhalt	Magdeburg	20,445	2,335,006
Schleswig Holstein	Kiel	15,763	2,834,259
Thuringia	Erfurt	16,172	2,235,025

Source: Big Pond Aviation

Bavaria is physically the largest state (20% of the landmass), with the second highest population (12.5 million) after North-Rhine Westphalia in the industrial Ruhr area. Bavaria's capital is Munich, with a population of 1.4 million in the city proper and 2.6 million in the urban city-region. This compares with the populations of Birmingham (1 million) and the West Midlands Metropolitan County (2.7 million). Moreover, the state of Bavaria has a population close to that of the Birmingham catchment area of 14 million. While Bavaria counts seven other major cities, in addition to Munich with populations in excess of 100,000, in the catchment area there are 18 cities and towns, in addition to Birmingham, with populations in excess of 100,000.

In terms of regional economic output, Bavaria produces EuR442 billion, compared to the equivalent figure for the Birmingham catchment area of EuR227 billion, with per capita GVA of Eur34,700 in Bavaria and the equivalent figure in the West and East Midlands of Eur22,500 and Eur23,300 respectively. In marked contrast to the Midlands, Bavaria has been able to enjoy a long and extended period of growth, most notably in the manufacturing sector. This has in part been due to Bavaria's capacity to sustain vigorous export growth.



The catchment area of Munich Airport, whilst overlapping with that of Nuremburg Airport in northern Bavaria and Stuttgart in Baden-Wurttemberg, also spills south and eastwards into Austria, thus broadening it into regions where local airports (Innsbruck, Salzburg, Linz) mainly handle incoming tourism traffic.

*There is little statistical comparison between Munich and Birmingham Airport.* In 2012 Munich Airport handled 38,362,000 passengers (+1.6% on 2011) compared to 8,919,000 at Birmingham. Munich Airport thus handled 430% more passengers than did Birmingham, 11.75% more than London Gatwick Airport and 54% of the passenger total at London Heathrow Airport, the World's third busiest. Munich Airport is the second busiest airport in Germany in terms of passenger traffic after Frankfurt, the seventh busiest in Europe and the world's 12th busiest airport in terms of international passenger traffic.

The travelling time between Munich and Frankfurt is over 3 and a quarter hours, compared to over 2 hours travelling time between Birmingham and London. In May 2012 it was 20 years since Munich Franz Josef Strauss airport opened, to replace Riem Airport. In those two decades the airport handled almost 500 million passengers, or three times as many passengers as the old Riem Airport saw in its entire history from 1949 until 1992. Annual growth in passenger traffic has averaged 6% during this period, considerably higher than the average increases posted by all other German airports during the same period (3.7%). The volume of airfreight handled over the first 20 operating years had an average annual growth rate of 7.3%. In comparison, passenger numbers in the period 1997-2012 at Birmingham Airport have varied only between 6,025,000 (1997) a peak of 9,627,000 in 2008, and 8,919,000 in 2012 a variation of 48% and equivalent to average growth of 3.2% over 15 years.

### **What factors have underpinned the growth at Munich?**

Without doubt one of the main driving factors is its development into one of Europe's leading hubs, which began in the mid-1990s when Lufthansa stationed two long-haul aircraft in Munich for the first time. This decision was taken despite the fact that Lufthansa's primary base and hub is at Frankfurt International, and that Frankfurt Hahn Airport had opened, partly funded by the same airport owner (Fraport) thus taking away cargo traffic and releasing extra passenger capacity at Frankfurt International. Hahn also attracted the burgeoning low cost carriers away from Frankfurt International.

That marked the start of a steady expansion in hub traffic in Munich. The percentage of passengers changing aircraft in Munich has since more than tripled from 12% in 1992 to 40% in 2012. Lufthansa now operates a Munich based fleet of 125 aircraft, including 24 wide body jets for intercontinental traffic. Locally, this amalgam of base and hub operations means that the local people and economy of Bavaria benefit from direct access to 241 destinations (170 of them non-stop) in 70 countries around the world. (Heathrow Airport currently serves 193 destinations – 162 of them non-stop – in 90 countries while Birmingham currently has 69 non-stop destinations).

The Thomas Cook owned airline Condor, one of Europe's largest scheduled leisure airlines, also has a large base at Munich. Other significant operators include Air Berlin and TUIfly. There are 12 cargo airlines with services into Munich.

With Terminal 2, which Munich Airport has jointly operated with Lufthansa since the summer of 2003, and the satellite terminal currently under construction and due for completion in 2015, the airport's annual passenger handling capacity will rise to 50 million. A third runway is proposed but has encountered opposition from environmental groups. The two existing runways, which have a capacity of 90 schedulable aircraft movements per hour, operate at maximum capacity during peak periods. The third runway would increase maximum aircraft movements to 120 per hour. Munich Airport considers itself to be a motor of the economy and an employment generator. In its inaugural year (1992), Munich Airport provided employment for 12,000 people. Today the 550 on-site companies and public authorities together employ a total workforce of more than 30,000. Indirect and induced jobs are estimated to total another 30,000. The data is supported by the Hamburg Institute for International Economics, which confirms the theory that economic growth in Bavaria is closely linked to the level for passenger and cargo traffic at the airport.

Munich Airport claims to offer more European destinations than any other airport, supported by 278 weekly take-offs and landings to and from intercontinental cities. This translates into a significant competitive advantages for the entire southern German economy in global access amongst the regions. The airport is operated by FMG, founded in 1949. FMG has three shareholders, the Free State of Bavaria (51%), the Federal Republic of Germany (26%) and the City of Munich (23%). An important difference between Munich Airport and Birmingham Airport is that the state flag carrier, Lufthansa, has chosen to diversify its activities across the Federal Republic beyond Frankfurt: at Munich and at other airports such as Dusseldorf (the third hub) and at Berlin Tegel Airport (which will eventually be replaced by Berlin Willy Brandt Airport); Stuttgart Airport and Hamburg Airport. The latter three are 'Focus Cities'.

The table below summarises Lufthansa's share of scheduled seat capacity at each of these airports in the period 08 to 14 April 2013

Airport	Lufthansa seat capacity (% of total)
Frankfurt International	65.7
<b>Munich</b>	<b>63.7</b>
Dusseldorf	37.4
Berlin (Tegel)	26
Hamburg	38.5
Stuttgart (with LCC subsidiary Germanwings, 35.7%)	42.5

Source: Innovata

This data compares unfavourably with the influence of UK flag carrier British Airways (BA) at the main airports outside of London (in this example, Birmingham, Manchester, Bristol, Newcastle, Glasgow International and Edinburgh). British Airways' international services are concentrated exclusively on London. BA does not have 'focus cities'.

Airport	British Airways seat capacity (% of total)
London Heathrow	45.6
London Gatwick	18.1
London City (CityFlyer Division)	39.3
<b>Birmingham</b>	<b>0</b>
Manchester	5.2
Bristol	0
Newcastle	13.5
Glasgow International	19.8
Edinburgh	15.6

Source: Innovata

These regional airports are to all intent and purposes 'BA-free zones' where international services are concerned. Thus they and the regions they represent derive no international trade benefit from any 'halo effect' that emanates from the operation of international services by the national flag carrier into those regions, which is the case with Lufthansa at Munich and other German regional airports. *All the BA regional airport seat capacity referred to in the table is domestic.*

The problem has been exacerbated by the absorption of British Midland Airways (bmi) into British Airways in 2012. bmi did fly a small number of direct international services from regional airports, and intercontinental ones from London Heathrow. Part of that company was acquired as a going concern by a Scottish company and trades as bmi regional, flying short haul routes in Europe, some of them from Birmingham. The third force UK airline with intercontinental air services is Virgin Atlantic. In April 2013 that airline commenced feeder services to London Heathrow Airport from Manchester, Edinburgh and Aberdeen airports, timed for connections to intercontinental services at Heathrow. Otherwise it flies a handful of intercontinental direct routes from Manchester and Glasgow, not from Birmingham.

In brief there are three reasons why Munich Airport operates at a much higher volume of traffic than does Birmingham:

- Identified as a key component of national and regional transport policy
- Capacity to handle long-haul flights
- Access to international routes via a global airline, the national flag carrier

## 7.2 Lyon Airport

France's Lyon Airport bears greater comparison with Birmingham Airport. The benchmark example is chosen partly because Lyon is twinned with Birmingham and the two city-regions are also similar in size, scope and economic impact. From summer 2013 they will be connected directly by two airlines.

The population of the city of Lyon is 484,344 (2010 census). Together with its suburbs and satellite towns, Lyon forms the largest conurbation in France outside Paris, with a population estimated to be 1,422,331; its overall metropolitan area is estimated to have a population of 2,118,132 and its urban region represents half of the Rhône-Alpes region population with 2.9 million inhabitants. This is broadly comparable with the UK West Midlands metropolitan area of 2.7 million.

Lyon Airport has a similar set of passenger statistics to that of Birmingham. In 2012 it attracted 8.5 million passengers (+0.2%), making it the third busiest airport after Paris Charles de Gaulle and Orly, but before Marseille, which is the second largest city proper. In the previous five years there had been growth every year, varying from +8.4% in 2007 to +5.7% in 2011. That growth can now be seen to be levelling off. International traffic remained the main driver of growth at the airport. It rose by 2% in 2012 and now makes up 62.2% of total passenger traffic. Lyon has a broad mix of airlines. Momentarily (April 2013) 65.2% of seats are offered by full service/network carriers; 30.1% by low cost carriers; and 4.7% by regional airlines. The leading airlines are jointly easyJet and Air France and its subsidiary Airlineair, both with 25.5% of seat capacity. British Airways (3.2%) has more capacity than it does at Birmingham.

The growth of low cost airlines has been driven partly by the provision of a dedicated satellite terminal, which will grow to a capacity of 10 million passengers per annum by 2020. The satellite is part of new terminal infrastructure to the value of EUR260 million. In addition to easyJet this facility has attracted Vueling (Spain) and Transavia (Netherlands). Until December 2012, when a service to Dubai by Emirates commenced, there were no significant long haul airlines apart from Air Transat (Canada), Air Austral (Reunion) and Aeroflot (Russia). There are no direct US or Asian flights. Lyon Airport acquired this service despite the fact that Emirates also operates at nearby Geneva Airport, some 90 minutes travel time away.

The principal network airline is Air France-KLM and its subsidiaries, which are now jointly branded as Hop! Though declining as a result of greater LCC entry, market share was until recently close to 40%. This operation is quite separate and distinct from Air France's recently introduced regional services at Bordeaux, Marseille and Nice, which it predates. The airport has two runways, of 4000m and 2670m respectively, at least one of which is capable of handling the very largest passenger aircraft currently in use, such as the A380 and the B747-8I. There are two planned runways to be added at the appropriate time, both of 3200m.

Lyon is also similar to Birmingham in that it is a key transport facility for the entire Rhone-Alpes region in the central/eastern part of France. There is an extensive national road (motorway) system running through and around it that includes the A6 and A7 north-south national motorways to Paris and Marseille (with a direct airport connection on the A432) and the west-east A42/43 (Geneva and Grenoble). Lyon has been at a natural crossroads since Roman times and remains so today. Lyon Airport's biggest challenger aeronautically is Geneva Airport because of its proximity, followed by the Paris airports and then by a surface transport competitor, the high-speed TGV train. TGV lines run through both downtown Lyon (the Part-Dieu and Perrache main stations) and the airport itself, with connections running north, south and east to 30 cities, including Turin from 2013. *With such a comprehensive system in place the rail service could be a serious competitor, especially to domestic services and on the Paris route, but the management actually promotes it widely on the basis that there is a comprehensive 'gateway' transport system in situ that cannot be compared with any other French city, including Paris.*

This is despite the fact that Paris is only two hours away on a train that leaves every 30 minutes. There is a clear indication here of the value to Birmingham Airport of the anticipated delivery of the HS2 high-speed rail line. There is additionally, since 02 April 2013, a 'low cost' version of the TGV operated by SNCF state railways, known as Ouigo, operating directly from the airport station to a variety of cities such as Avignon, Aix-en-Provence, Marseille, Nimes, Montpellier and Marne-la-Vallée Chessy. Like many European cities Lyon has been undergoing a metamorphosis of post-industrial regeneration. Throughout the last three centuries its centre has frequently shifted. The most recent development is the Confluence district, at the junction of the Rhone and Saone rivers, an area equivalent to London's docklands or Salford Quays in the UK. The previous one was Part-Dieu, a city-centre business district that is already second in size in France to La Défense in Paris.

Lyon was a centre for silk making and printing, later chemicals, pharmaceuticals, motor vehicles and mechanical engineering, but has broadened into one that is ever more oriented towards scientific innovation clusters, knowledge industries, digital entertainment and the wider creative arts. The city is now regarded as the second business destination in France after Paris. To a certain extent Lyon has benefited from industrial restructuring, such as that of Sanofi, the pharmaceutical group, which is modifying its research operations in France, increasing its traditional presence in Lyon while reducing it elsewhere, notably in Toulouse.

Unemployment in France's second-biggest economic region, at 8.4%, is below the national level. The inward investment agency experienced a record year in 2012, reporting the arrival of 71 companies in the area. The city's ambition is to consolidate its position as the country's second economic power after Paris and establish itself as a European centre to rival the mainland continent's other big regional cities, such as Barcelona, Milan and Munich.

The most testing struggle is to compete with the magnetic attraction of Paris, which is by far the biggest business centre in France, just as London is in the UK. One way to counter this characteristic centralisation of France is to give Lyon greater 'critical mass.' The city is due within the next two years to become the first in the country with the status of 'European Metropolis', merging with the surrounding Rhone département to try to increase its financial firepower and streamline the layers of local administration and bureaucracy. There is some similarity here with the loosening of central government control in the UK over city-regions

such as Greater Manchester in the first instance, to be followed by Leeds in West Yorkshire and possibly others such as Birmingham.

Its biggest problem as a business centre is the perceived inadequacy that still remains of its airport, ranked 47th in Europe by size, and particularly the lack of direct international flights. The Chief Executive of the inward investment agency confirms that projects are still lost to Frankfurt and Paris because of the lack of international connections.

Lyon Airport occupies similar ground to that of Birmingham Airport when HS2 is in place there. The entirety of the Lyon transport hub comprises a capacity-unconstrained airport, excellent high-speed train services in all directions – and in situ at the airport – connected to an integrated local transport system of bus, metro and tramway, and one of the most comprehensive through and peripheral motorway systems in Europe.

None of this has made Lyon's airport any more successful as measured by traffic statistics than is Birmingham but this is partly because of the influence of Paris and partly because of an airport management strategy to be 'human-sized', which contrasts with that the city's much grander economic ambition. Aéroports de Lyon is expecting a slight rise (+2 to 3%) in traffic in 2013. It is aiming to reach close to 11 million passengers in 2016.

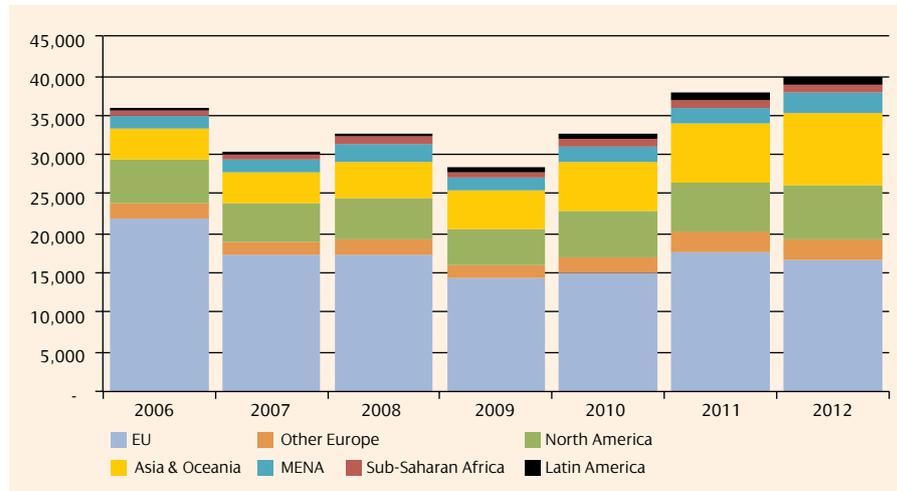
Of the 2000 hectares that comprise the estate, 900 are held in reserve (amongst the highest total in Europe) and are not, as yet, allocated to a major project such as an airport city.

Even so, as an integral part of the overall transport hub, it has undoubtedly contributed to the economic renaissance of what was undeniably a moribund city-region as recently as ten years ago. Again, as in the case of Munich, the support of the national airline has been important, albeit at a domestic and regional (European) level.

## 8. Structure of Midlands Export Demand – Current and Future

The relatively strong performance in the Midlands can be attributed in large part to vastly improving output in exports; total exports in 2012 saw a 40% rise from 2009, including a 64% rise to markets outside the EU, where economic conditions were relatively stronger. These results give an idea of the capacity of the Midlands economy to renew penetration of previously tapped markets, when usual trading practices become less profitable, further connectivity could multiply this effect and smooth the transition to an ideal make-up of trading partners.

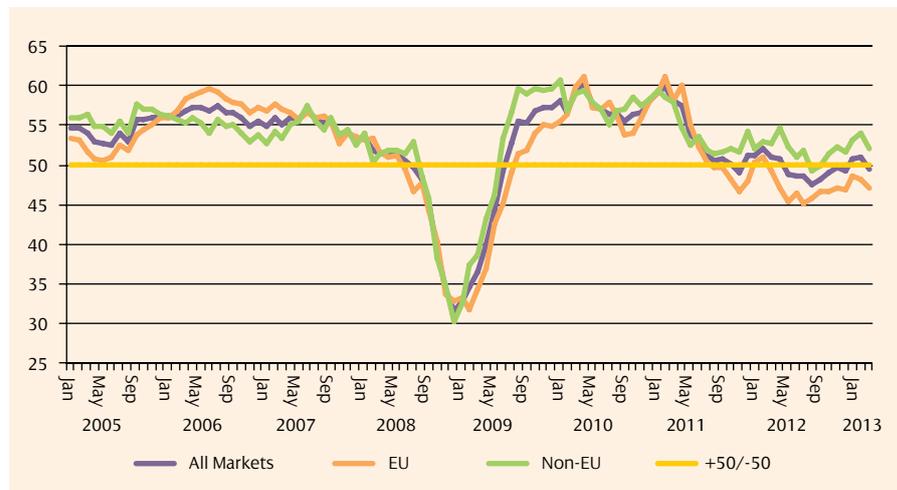
**Midlands Export Performance (£ million)**



Source:HMRC & WMEF

According to official data, recovery has been firm since the collapse of global trade flows in 2009. However in contrast to the pre-crisis period, when the EU provided the major source of demand, post crisis stronger demand in non-EU markets has compensated for the continued lack-lustre performance in the EU. This is borne out by the latest Midlands Exporter Climate Indicator.

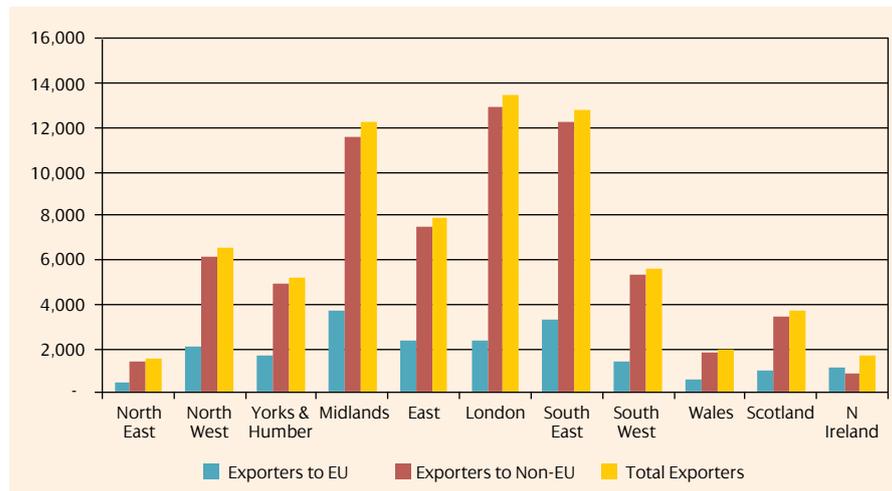
**Midlands PMI Export Climate Indicator (+50 expansion/-50 contraction)**



Source: Markit & WMEF

The export climate indicator is a composite index of export demand performance in the top 20 export markets for the Midlands. Whereas EU demand was strong pre-crisis, the trend post crisis has exhibited much stronger demand in the Non-EU, although data for the first quarter of 2013 is indicative of weaker performance across markets. Using the Midlands export climate indicator, the USA, China and Germany contribute to over half of growth in the Midlands, perhaps representative of the success of Midlands exporters penetrating challenging export markets – in all three markets competitiveness determined by high quality, proven reliability, cost effectiveness and crucially just-in-time delivery turnarounds. Since the recession, the export climate indicator has remained generally positive, touching the 60 mark on two occasions, which is reflected in real export growth. The positive export climate is despite contractions in the Eurozone, once again indicating the importance of diversifying trade through connectivity.

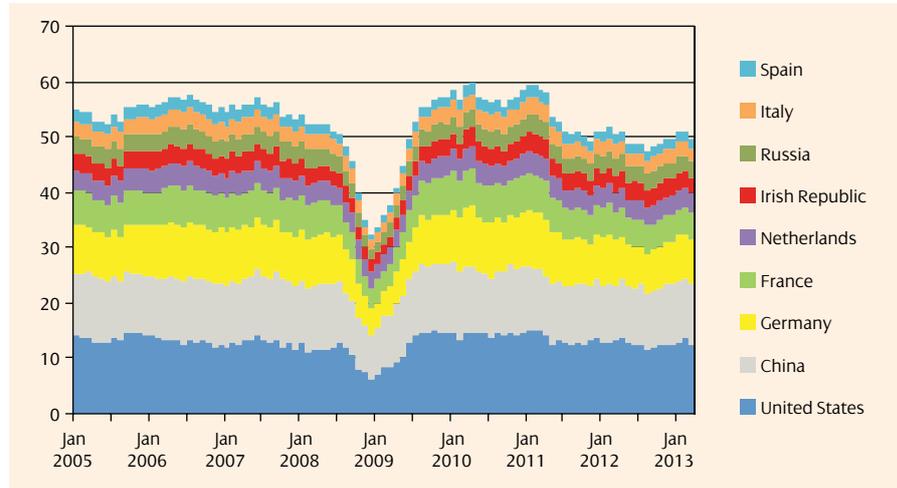
**Regional Export Performance (no of companies 2012)**



The vibrancy of the Midlands (and the Birmingham Airport catchment area) is further demonstrated by the number of companies exporting, which ranks close to what are normally assumed to be the main export regions, London and the South East. Indeed, the Midlands economy, which provides over 13% of national GVA, is a key export region, most notably of automotive and aeronautic products. The region hosts one of the largest concentrations of exporting companies, and since the crisis it is the exporting firms, according to the latest national data, that have tended to perform stronger than domestically-orientated firms.

The recovery in export performance since 2009 has been in spite of the poor trading conditions that have been prevalent in the main export market, the EU, in the period since. Increased penetration of non-EU markets, both in North American and Emerging Markets has largely compensated for the shortfall. The Midlands Export Climate Indicator suggests that import demand in the Midlands principal export markets will continue to firm in non-EU economies.

**Midlands Export Climate Index: Country Contribution**



Source: Markit Economics

In addition to traditional markets, such as North America and Japan, there has been a significant improvement in export volumes to the global growth markets, primarily Emerging Markets. Undoubtedly, the rapid depreciation of Sterling has contributed to firmer performance, although the export product mix, especially high-value vehicles has contributed to the increase in demand.



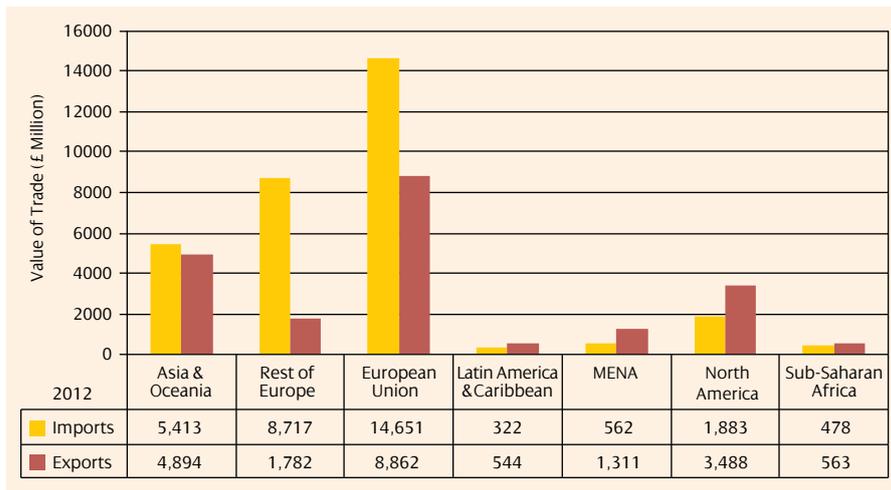
**Trade Proportions (% of country total 2012)**



Source: WMEF & WTO

There are some recurring themes that appear looking across the following range of 13 countries, firstly the group is heavily reliant on manufactures with all but India, Japan and UAE importing between 59% and 85% of their merchandise as manufactured goods. The data also goes some way in supporting the notion of re-exporting centres as a common model for high trade non-EU nations, with Hong Kong, Singapore, Japan and Turkey all appearing to have a large component of both imports and exports in manufactures as goods pass through their economy.

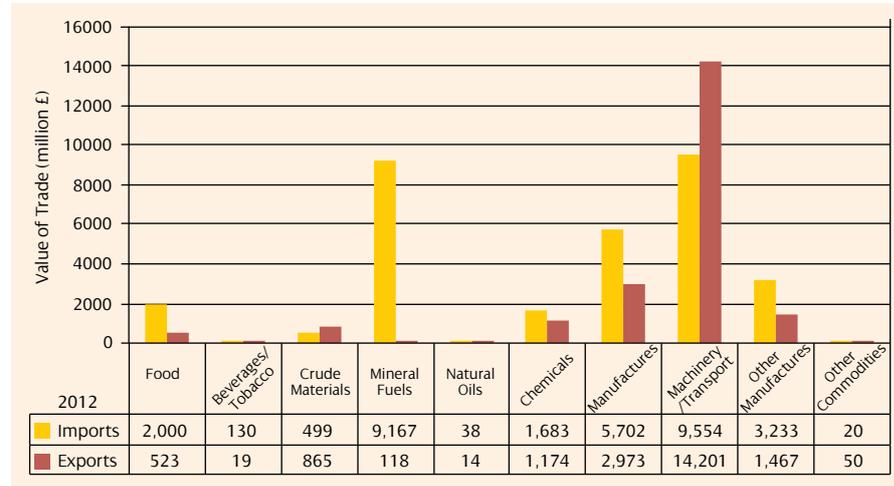
**West Midlands Trade by Partner Region**



Source: HMRC & WMEF

Another trend is of high value products in many of the industrial sectors in these countries, creating a challenging market for quality Midlands manufactures to have to compete to become involved in.

**West Midlands Trade (2012 by SITC Group)**



Source: HMRC & WMEF

The imports and exports from 2012 show some significant deficits for the Midlands economy in all categories but that of Machinery and Transport, though 90% of the total current account deficit for the region can be attributed to the market for fuel. Midlands' business and aviation policy needs to be geared towards a vast and flexible exporting network in order to level the disadvantage from increasing energy needs. It is also noteworthy that in 2012 the Midlands deficit was representative of the total UK deficit with only the North East in England producing a current account surplus, the Midlands performed better than both the large South East and London economies.

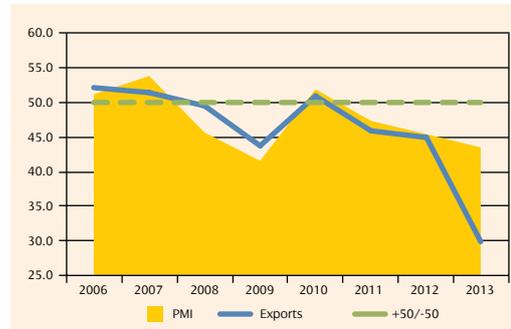
In contrast to other regions, the Midlands exports sector recovered quickly with a positive outlook for trade going forward. These economies consistently have high levels of imports from Germany, which has a similar economic composition to the Midlands, this shows there is a real possibility of competing in and expanding exports in these large and distant economies – transportation costs are not too big a barrier.

Case-by-case analyses are needed to identify specific areas of future trade for the Midlands, but with a diverse and dynamic economy we can anticipate strong returns in these markets which have overall been less exposed and recovered better from the financial crisis than the historical trading partners on the continent.

# Trade Profile: Commonwealth of Australia

Notwithstanding the close trade links with the industrial economies of the Asia-Pacific Rim, Germany is the fifth largest exporter, providing 4.6% of imports. In contrast, UK exports are currently equivalent to 2.9% of market share. With manufactures comprising close to 70% of imports, the demand profile is favourable for Midlands export products in what is the region's 16th ranked market. With a significant proportion of commercial service trade recorded as travel, opportunities are available for developing non-business travel. Imports of goods and services are forecast to grow by 3.5% per annum up to 2018, according to the latest IMF forecasts.

**Australia External Performance**



Source: Markit Economics & WMEF

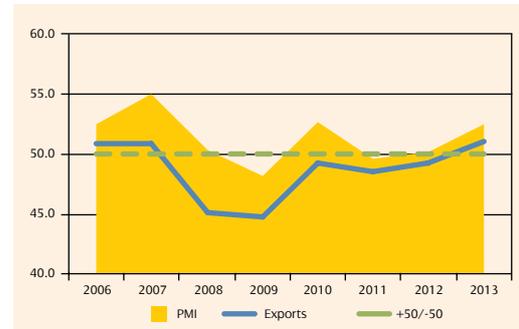
GDP (\$ Bn)	1379	Imports (\$ bn)	244	Exports (\$ Bn)	272
% Global GDP	1.97%	% Global Imports	1.3%	% Global Exports	1.5%
No. top 50 Airports	2				
% of Imports from UK		2.9%	% of Exports to UK		2.9%
Value (\$ Bn)		7.2	Value (\$ Bn)		7.9
Imports Source: 1		China	Exports Destination: 1		China
Value (\$ Bn)		44.8	Value (\$ Bn)		74.4
% of Imports		18.4%	% of Exports		27.4%
Imports Source: 2		USA	Exports Destination: 2		Japan
Value (\$ Bn)		27.6	Value (\$ Bn)		52.3
% of Imports		11.3%	% of Exports		19.2%
Imports Source: 3		Japan	Exports Destination: 3		South Korea
Value (\$ Bn)		19.1	Value (\$ Bn)		24.2
% of Imports		7.8%	% of Exports		8.9%
Imports Source: 4		Singapore	Exports Destination: 4		India
Value (\$ Bn)		15.1	Value (\$ Bn)		15.8
% of Imports		6.2%	% of Exports		5.8%
Imports Source: 5		Germany	Exports Destination: 5		USA
Value (\$ Bn)		11.3	Value (\$ Bn)		10.2
% of Imports		4.6%	% of Exports		3.7%
Merchandise Imports as % Global		1.3%	Merchandise Exports as % of Global		1.5%
Manufactures Imports % National Merchandise		69.1%	Manufactures Exports of National Merchandise		10.5%
Commercial Services Imports % Global		1.5%	Commercial Services Exports % Global		1.2%
Commercial Services Imports:		19.5% of National	Commercial Services Exports:		15.9% of National
Transportation		5.1%	Transportation		1.7%
Travel		8.7%	Travel		9.8%
Other commercial services		5.6%	Other commercial services		4.4%

Sourced from IMF, WTO, IBRD, ACI and WMEF.

# Trade Profile: Federative Republic of Brazil

Having faltered last year, import demand is forecast to strengthen to 7.6% p.a., in line with more robust economic performance. Manufactures form 70% of imports, a profile that matches Midlands export capacity, with Brazil ranked 22 of Midlands export markets. The UK provides a modest 1.5% of imports, in contrast to Germany, which as Brazil fourth largest import provider has a 6.7% market share.

## Brazil External Performance



Source: Markit Economics & WMEF

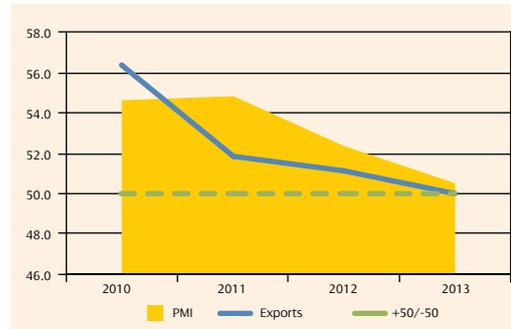
GDP (\$ Bn)	2477	Imports (\$ bn)	228	Exports (\$ Bn)	242
% Global GDP	3.54%	% Global Imports	1.2%	% Global Exports	1.3%
No. top 50 Airports	1				
% of Imports from UK		1.5%	% of Exports to UK		2.0%
Value (\$ Bn)		3.4	Value (\$ Bn)		4.9
Imports Source: 1		USA	Exports Destination: 1		China
Value (\$ Bn)		34.5	Value (\$ Bn)		41.9
% of Imports		15.1%	% of Exports		17.3%
Imports Source: 2		China	Exports Destination: 2		USA
Value (\$ Bn)		33.0	Value (\$ Bn)		24.5
% of Imports		14.5%	% of Exports		10.1%
Imports Source: 3		Argentina	Exports Destination: 3		Argentina
Value (\$ Bn)		17.0	Value (\$ Bn)		21.5
% of Imports		7.5%	% of Exports		8.9%
Imports Source: 4		Germany	Exports Destination: 4		Netherlands
Value (\$ Bn)		15.3	Value (\$ Bn)		12.9
% of Imports		6.7%	% of Exports		5.3%
Imports Source: 5		South Korea	Exports Destination: 5		Japan
Value (\$ Bn)		10.2	Value (\$ Bn)		9.0
% of Imports		4.5%	% of Exports		3.7%
Merchandise Imports as % Global		1.2%	Merchandise Exports as % of Global		1.3%
Manufactures Imports % National Merchandise		72%	Manufactures Exports of National Merchandise		32.8%
Commercial Services Imports % Global		1.8%	Commercial Services Exports % Global		0.9%
Commercial Services Imports:		23.5% of National	Commercial Services Exports:		12.4% of National
Transportation		4.6%	Transportation		2.0%
Travel		6.9%	Travel		2.2%
Other commercial services		12.1%	Other commercial services		8.2%

Sourced from IMF, WTO, IBRD, ACI and WMEF.

# Trade Profile: Canada

Ranked 15th, Canada consumes 2.2% of Midlands' exports, with some 72% of merchandise imports being manufactures. Given its membership of NAFTA, it is not surprising that the USA provides close to half of all imports, with Mexico providing a further 5.5%. Nevertheless Germany still provides almost 3% of imports, while the UK a more modest 2.3%. The UK is however the second most important export market for Canada at 4.2%, although this must be put in context of where the USA consumes close to three-quarters of all exports.

## Canada External Performance



Source: Markit Economics & WMEF

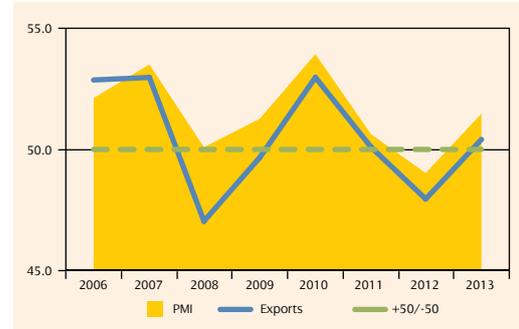
GDP (\$ Bn)	1736	Imports (\$ bn)	470	Exports (\$ Bn)	462
% Global GDP	2.48%	% Global Imports	2.6%	% Global Exports	2.5%
No. top 50 Airports	1				
% of Imports from UK		2.3%	% of Exports to UK		4.2%
Value (\$ Bn)		10.9	Value (\$ Bn)		19.4
Imports Source: 1		United States	Exports Destination: 1		USA
Value (\$ Bn)		233	Value (\$ Bn)		340.5
% of Imports		49.6%	% of Exports		73.7%
Imports Source: 2		China	Exports Destination: 2		UK
Value (\$ Bn)		50.7	Value (\$ Bn)		19.4%
% of Imports		10.8%	% of Exports		4.2%
Imports Source: 3		Mexico	Exports Destination: 3		China
Value (\$ Bn)		25.9	Value (\$ Bn)		17.3
% of Imports		5.5%	% of Exports		3.7%
Imports Source: 4		Japan	Exports Destination: 4		Japan
Value (\$ Bn)		13.7	Value (\$ Bn)		11.0
% of Imports		2.9%	% of Exports		2.4%
Imports Source: 5		Germany	Exports Destination: 5		Mexico
Value (\$ Bn)		13.5	Value (\$ Bn)		5.7
% of Imports		2.9%	% of Exports		1.2%
Merchandise Imports as % Global		2.6%	Merchandise Exports as % of Global		2.5%
Manufactures Imports % National Merchandise		72.2%	Manufactures Exports of National Merchandise		45.1%
Commercial Services Imports % Global		2.6%	Commercial Services Exports % Global		1.8%
Commercial Services Imports:		18.4% of National	Commercial Services Exports:		14.7% of National
Transportation		4.1%	Transportation		2.5%
Travel		5.9%	Travel		3.2%
Other commercial services		8.4%	Other commercial services		9.1%

Sourced from IMF, WTO, IBRD, ACI and WMEF.

# Trade Profile: People's Republic of China

The UK provides a meagre 0.8% of Chinese imports, notwithstanding the fact that China is the third most important export market for the Midlands, consuming 8.2% of all exports. China also is reliant on manufactures imports, which are close to 59% of all such imports. Germany, with significantly greater air connectivity, both in terms of number of flights and range of destinations, has been able to sustain accelerated penetration of the Chinese market such that it now provides 5.3% of imports. Set in context the largest exporter to China, Japan has an 11% market share. Despite the comparative easing of growth this year, the IMF is still anticipating that imports of will grow by over 10% p.a.

China External Performance



Source: Markit Economics & WMEF

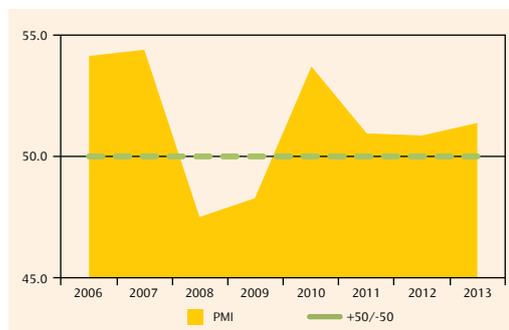
GDP (\$ Bn)	7318	Imports (\$ bn)	1818	Exports (\$ Bn)	2049
% Global GDP	10.5%	% Global Imports	9.9%	% Global Exports	11.1%
No. top 50 Airports	6				
% of Imports from UK		0.8%	% of Exports to UK		2.3%
Value (\$ Bn)		15.2	Value (\$ Bn)		47.5
Imports Source: 1		Japan	Exports Destination: 1		USA
Value (\$ Bn)		203.0	Value (\$ Bn)		350.1
% of Imports		11.2%	% of Exports		17.1%
Imports Source: 2		South Korea	Exports Destination: 2		Hong Kong
Value (\$ Bn)		168.8	Value (\$ Bn)		288.8
% of Imports		9.3%	% of Exports		14.1%
Imports Source: 3		USA	Exports Destination: 3		Japan
Value (\$ Bn)		124.4	Value (\$ Bn)		158.7
% of Imports		6.8%	% of Exports		7.7%
Imports Source: 4		Germany	Exports Destination: 4		South Korea
Value (\$ Bn)		96.8	Value (\$ Bn)		89.4
% of Imports		5.3%	% of Exports		4.4%
Imports Source: 5		Australia	Exports Destination: 5		Germany
Value (\$ Bn)		84.5	Value (\$ Bn)		82.4
% of Imports		4.6%	% of Exports		4.0%
Merchandise Imports as % Global		9.9%	Merchandise Exports as % of Global		11.1%
Manufactures Imports % National Merchandise		59.2%	Manufactures Exports of National Merchandise		93.3%
Commercial Services Imports % Global		5.9%	Commercial Services Exports % Global		4.3%
Commercial Services Imports:		12.0% of National	Commercial Services Exports:		8.8% of National
Transportation		4.1%	Transportation		1.7%
Travel		3.7%	Travel		2.3%
Other commercial services		4.2%	Other commercial services		4.7%

Sourced from IMF, WTO, IBRD, ACI and WMEF.

# Trade Profile: Hong Kong Special Administrative Region

Although Export PMI data is unavailable, SAR import demand is forecast to recover strongly from the weaker (2.5%) growth recorded last year – annual growth over the period up until 2018 is expected to exceed 7% p.a. A principal transshipment to mainland China – the mainland provides 45% of import and 52% of export demand. In addition, the SAR services the wider Asia-Pacific Rim, boasting considerable re-export capacity, with manufactures equivalent

**Hong Kong External Performance**



Source: Markit Economics & WMEF

to 85% of merchandise imports, and a key market for the Midlands. Ranked 10th, the SAR consumers 2.7% of exports from the region, a stronger performance than the UK nationally, which provides 1.3% of imports. Nevertheless, the UK is one of the stronger EU performers, with comparatively weak penetration by the Germans (currently not ranked in the top 5).

GDP (\$ Bn)	248.6	Imports (\$ bn)	504	Exports (\$ Bn)	433
% Global GDP	0.36%	% Global Imports	2.7%	% Global Exports	2.4%
No. top 50 Airports	1				
% of Imports from UK		1.3%	% of Exports to UK		1.8%
Value (\$ Bn)		6.6	Value (\$ Bn)		7.8
Imports Source: 1		China	Exports Destination: 1		China
Value (\$ Bn)		227.1	Value (\$ Bn)		231.8
% of Imports		45.1%	% of Exports		52.3%
Imports Source: 2		Japan	Exports Destination: 2		USA
Value (\$ Bn)		42.7	Value (\$ Bn)		44%
% of Imports		8.5%	% of Exports		9.9%
Imports Source: 3		Singapore	Exports Destination: 3		Japan
Value (\$ Bn)		34.1	Value (\$ Bn)		17.9
% of Imports		6.8%	% of Exports		4.0%
Imports Source: 4		United States	Exports Destination: 4		India
Value (\$ Bn)		28.5	Value (\$ Bn)		12.4
% of Imports		5.7%	% of Exports		2.8%
Imports Source: 5		South Korea	Exports Destination: 5		Germany
Value (\$ Bn)		20.1	Value (\$ Bn)		11.8
% of Imports		4%	% of Exports		2.7%
Merchandise Imports as % Global		2.7%	Merchandise Exports as % of Global		2.4%
Manufactures Imports % National Merchandise		84.6%	Manufactures Exports of National Merchandise		89.6%
Commercial Services Imports % Global		1.4%	Commercial Services Exports % Global		2.8%
Commercial Services Imports:		9.9% of National	Commercial Services Exports:		20.6% of National
Transportation		2.9%	Transportation		5.5%
Travel		3.4%	Travel		4.8%
Other commercial services		3.6%	Other commercial services		10.2%

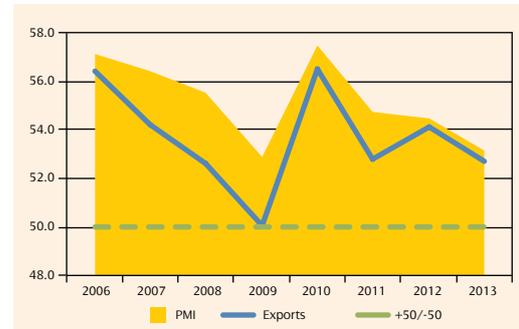
Sourced from IMF, WTO, IBRD, ACl and WMEF.

## Trade Profile: Republic of India

With manufactures accounting for less than half of merchandise imports, India's trade profile suggests it may be one of the more difficult markets to penetrate. The Republic accounts for 1.4% of Midlands export demand, and the UK overall provides 1.6% of all imports. At third Switzerland is the higher ranked European exporter (6.8%) and no European importer ranked in the top 5 the UK being one of the most significant consuming 2.9% of India's exports.

Import growth was sluggish this year and last, however the IMF forecasts an acceleration in performance toward 2018, averaging close to 9% p.a.

### India External Performance



Source: Markit Economics & WMEF

GDP (\$ Bn)	1848	Imports (\$ bn)	490	Exports (\$ Bn)	291
% Global GDP	2.64%	% Global Imports	2.7%	% Global Exports	1.6%
No. top 5 Airports	2				
% of Imports from UK	1.6%	% of Exports to UK	2.9%		
Value (\$ Bn)	7.9	Value (\$ Bn)	8.3		
Imports Source: 1	China	Exports Destination: 1	UAE		
Value (\$ Bn)	58.3	Value (\$ Bn)	36.7		
% of Imports	11.9%	% of Exports	12.6%		
Imports Source: 2	UAE	Exports Destination: 2	USA		
Value (\$ Bn)	37.6	Value (\$ Bn)	31.6		
% of Imports	7.7%	% of Exports	10.9%		
Imports Source: 3	Switzerland	Exports Destination: 3	China		
Value (\$ Bn)	33.3	Value (\$ Bn)	18.1		
% of Imports	6.8%	% of Exports	6.2%		
Imports Source: 4	Saudi Arabia	Exports Destination: 4	Singapore		
Value (\$ Bn)	29.8	Value (\$ Bn)	15.3		
% of Imports	6.1%	% of Exports	5.3%		
Imports Source: 5	USA	Exports Destination: 5	Hong Kong		
Value (\$ Bn)	24.7	Value (\$ Bn)	12.0		
% of Imports	5.0%	% of Exports	4.1%		
Merchandise Imports as % Global	2.7%	Merchandise Exports as % of Global	1.6%		
Manufactures Imports % National Merchandise	41.4%	Manufactures Exports of National Merchandise	61.7%		
Commercial Services Imports % Global	3.1%	Commercial Services Exports % Global	3.2%		
Commercial Services Imports:	21.0% of National	Commercial Services Exports:	31.2% of National		
Transportation	9.6%	Transportation	4.0%		
Travel	2.3%	Travel	4.0%		
Other commercial services	8.0%	Other commercial services	21.6%		

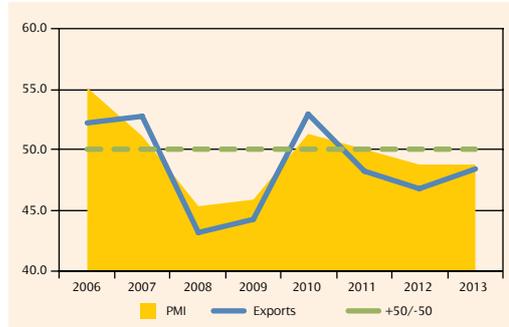
Sourced from IMF, WTO, IBRD, ACI and WMEF.

# Trade Profile: Japan

Notwithstanding the past decades of weak growth, Japan is the third largest economy, equivalent to 8% of global GDP, and accounting for over 4% of global import and export demand. The penetration by the UK is modest however, 0.9% of all imports, although no European economy ranks in the top 5 for either exports or imports. Japan still occupies a key position in global supply chains, especially with regard to China's re-exports. This is perhaps

reflected in the merchandise trade structure, with close to 90% of the archipelago's exports manufactures and accounting less than half of imports.

**Japan External Performance**



Source: Markit Economics & WMEF

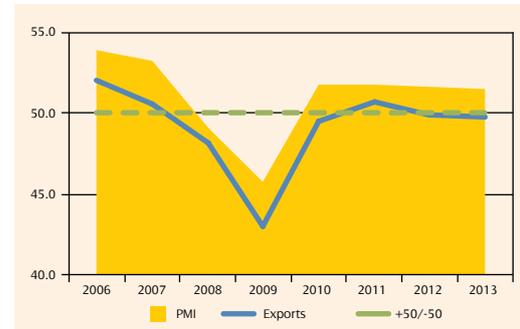
GDP (\$ Bn)	5867	Imports (\$ bn)	886	Exports (\$ Bn)	799
% Global GDP	8.38%	% Global Imports	4.8%	% Global Exports	4.3%
No. top 50 Airports	1				
% of Imports from UK		0.9%	% of Exports to UK		2.0%
Value (\$ Bn)		7.5	Value (\$ Bn)		15.9
Imports Source: 1		China	Exports Destination: 1		China
Value (\$ Bn)		190.6	Value (\$ Bn)		156.8
% of Imports		21.5%	% of Exports		19.6%
Imports Source: 2		USA	Exports Destination: 2		USA
Value (\$ Bn)		79.0	Value (\$ Bn)		123.8
% of Imports		8.9%	% of Exports		15.5%
Imports Source: 3		Australia	Exports Destination: 3		South Korea
Value (\$ Bn)		58.8	Value (\$ Bn)		64.0
% of Imports		6.6%	% of Exports		8.0%
Imports Source: 4		Saudi Arabia	Exports Destination: 4		Hong Kong
Value (\$ Bn)		52.4	Value (\$ Bn)		41.6
% of Imports		5.9%	% of Exports		5.2%
Imports Source: 5		UAE	Exports Destination: 5		Thailand
Value (\$ Bn)		44.4	Value (\$ Bn)		36.3
% of Imports		5.0%	% of Exports		4.5%
Merchandise Imports as % Global		4.8%	Merchandise Exports as % of Global		4.3%
Manufactures Imports % National Merchandise		47%	Manufactures Exports of National Merchandise		88.2%
Commercial Services Imports % Global		4.1%	Commercial Services Exports % Global		3.3%
Commercial Services Imports:		16.2% of National	Commercial Services Exports:		14.8% of National
Transportation		4.8%	Transportation		4.0%
Travel		2.7%	Travel		1.1%
Other commercial services		8.7%	Other commercial services		9.7%

Sourced from IMF, WTO, IBRD, ACI and WMEF.

# Trade Profile: Russian Federation

2013 is expected to see a further slowdown in growth, although the IMF still foresees firm import growth, averaging close to 6% up until 2018. Much will depend on how the authorities use their substantial reserves to ameliorate the output slowdown and seek to foster fixed capital investment. As the largest transitional economy in the European economic space, as the Federation moves closer to EU consumption patterns there is likely to be strong demand for higher-value products. As the authorities seek to re-tool industry, notably in the automotive and aerospace sectors, opportunities will become available for precision-machined component suppliers – the Federation consumes 2.2% of Midlands' exports, stronger than the UK (1.7%).

## Russia External Performance



Source: Markit Economics & WMEF

GDP (\$ Bn)	1858	Imports (\$ bn)	369	Exports (\$ Bn)	529
% Global GDP	2.66%	% Global Imports	2.0%	% Global Exports	2.9%
No. top 50 Airports	0				
% of Imports from UK		1.7%	% of Exports to UK		2.1%
Value (\$ Bn)		6.3	Value (\$ Bn)		11.0
Imports Source: 1		China	Exports Destination: 1		Netherlands
Value (\$ Bn)		57.5	Value (\$ Bn)		65.1
% of Imports		15.6%	% of Exports		12.3%
Imports Source: 2		Germany	Exports Destination: 2		China
Value (\$ Bn)		36.9	Value (\$ Bn)		34.2
% of Imports		10.0%	% of Exports		6.5%
Imports Source: 3		Ukraine	Exports Destination: 3		Italy
Value (\$ Bn)		15.8	Value (\$ Bn)		29.6
% of Imports		4.3%	% of Exports		5.6%
Imports Source: 4		Italy	Exports Destination: 4		Germany
Value (\$ Bn)		15.8	Value (\$ Bn)		24.3
% of Imports		4.3%	% of Exports		4.6%
Imports Source: 5		USA	Exports Destination: 5		Poland
Value (\$ Bn)		13.9	Value (\$ Bn)		22.5
% of Imports		3.8%	% of Exports		4.3%
Merchandise Imports as % Global		2.0%	Merchandise Exports as % of Global		2.9%
Manufactures Imports % National Merchandise		80.7%	Manufactures Exports of National Merchandise		19.3%
Commercial Services Imports % Global		2.2%	Commercial Services Exports % Global		1.2%
Commercial Services Imports:		21.3% of National	Commercial Services Exports:		9.2% of National
Transportation		3.7%	Transportation		3.0%
Travel		7.9%	Travel		2.0%
Other commercial services		9.7%	Other commercial services		4.3%

Sourced from IMF, WTO, IBRD, ACI and WMEF.

# Trade Profile: Republic of Singapore

As a major entrepôt centre – despite an economy that is equivalent to 0.34% of global GDP, it provides 2% of global export and imports – Singapore offers significant wider regional export opportunities. This is reflected in its trade structure which is heavily skewed toward regional neighbours but also exhibits a significant degree of trade dependency on the United States. Although no EU member is ranked in the top 5 trade partners, the UK manages to provide 1.7% of imports and 1.7% of the islands export demand. The Midlands has achieved a greater import penetration with 3.7% (rank 7th) of export demand. Manufacturers comprise 60% of imports and close to 70% of exports. Whilst import compression occurred in 2012 and is expected to erode further this year, the IMF anticipates some recovery in the period to 2018, with import of goods and services to expand by over 5% p.a. Although no PMI is available for the island, it is evident that Singapore has been able to succeed in the various iterations of the global economy and is often a key bell-weather of international demand.

GDP (\$ Bn)	240	Imports (\$ bn)	366	Exports (\$ Bn)	412
% Global GDP	0.34%	% Global Imports	2.0%	% Global Exports	2.2%
No. top 50 Airports	1				
% of Imports from UK		1.7%	% of Exports to UK		1.7%
Value (\$ Bn)		6.1	Value (\$ Bn)		7.0
Imports Source: 1		USA	Exports Destination: 1		Malaysia
Value (\$ Bn)		39.5	Value (\$ Bn)		50.0
% of Imports		10.8%	% of Exports		12.1%
Imports Source: 2		Malaysia	Exports Destination: 2		Hong Kong
Value (\$ Bn)		39.1	Value (\$ Bn)		45.2
% of Imports		10.7%	% of Exports		11.0%
Imports Source: 3		China	Exports Destination: 3		Indonesia
Value (\$ Bn)		38.0	Value (\$ Bn)		42.8
% of Imports		10.4%	% of Exports		10.4%
Imports Source: 4		Japan	Exports Destination: 4		China
Value (\$ Bn)		26.2	Value (\$ Bn)		42.8
% of Imports		7.2%	% of Exports		10.4%
Imports Source: 5		South Korea	Exports Destination: 5		USA
Value (\$ Bn)		21.8	Value (\$ Bn)		22.4
% of Imports		5.9%	% of Exports		5.4%
Merchandise Imports as % Global		2.0%	Merchandise Exports as % of Global		2.2%
Manufactures Imports % National Merchandise		60.1%	Manufactures Exports of National Merchandise		68.3%
Commercial Services Imports % Global		2.8%	Commercial Services Exports % Global		3.0%
Commercial Services Imports:		23.7% of National	Commercial Services Exports:		23.9% of National
Transportation		7%	Transportation		6.8%
Travel		4.3%	Travel		3.5%
Other commercial services		12.7%	Other commercial services		13.4%

Sourced from IMF, WTO, IBRD, ACI and WMEF.

## Trade Profile: Republic of South Africa

Although PMI data is not available, as Sub-Saharan Africa's largest and most developed economy, import demand is forecast to achieve relatively firm growth of 4% p.a. up until 2018. Although it is expected to be overtaken by Nigeria in terms of GDP in the near future, the demand structure of the local economy will continue to make it an attractive export destination. Manufactures comprise nearly two-thirds of imports, with Germany ranked 2nd providing close to 11% of imports. The UK provides 4% of imports and 4% of exports; with the Midland penetration is more circumspect, with 1.2% of exports of the Midlands.

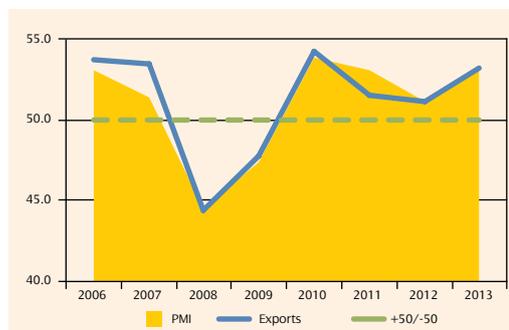
GDP (\$ Bn)	408.2	Imports (\$ bn)	122	Exports (\$ Bn)	97
% Global GDP	0.58%	% Global Imports	0.7%	% Global Exports	0.5%
No. top 50 Airports	0				
% of Imports from UK	4.0%	% of Exports to UK		4.1%	
Value (\$ Bn)	4.9	Value (\$ Bn)		4.0	
Imports Source: 1	China	Exports Destination: 1		China	
Value (\$ Bn)	17.3	Value (\$ Bn)		12.4	
% of Imports	14.3%	% of Exports		12.8%	
Imports Source: 2	Germany	Exports Destination: 2		USA	
Value (\$ Bn)	13.0	Value (\$ Bn)		8.4	
% of Imports	10.7%	% of Exports		8.6%	
Imports Source: 3	USA	Exports Destination: 3		Japan	
Value (\$ Bn)	9.7	Value (\$ Bn)		7.6	
% of Imports	8.0%	% of Exports		7.9%	
Imports Source: 4	Japan	Exports Destination: 4		Germany	
Value (\$ Bn)	5.8	Value (\$ Bn)		5.9	
% of Imports	4.7%	% of Exports		6.0%	
Imports Source: 5	Saudi Arabia	Exports Destination: 5		UK	
Value (\$ Bn)	5.4	Value (\$ Bn)		4.0	
% of Imports	4.5%	% of Exports		4.1%	
Merchandise Imports as % Global	0.7%	Merchandise Exports as % of Global		0.5%	
Manufactures Imports % National Merchandise	63.2%	Manufactures Exports of National Merchandise		38.1%	
Commercial Services Imports % Global	0.5%	Commercial Services Exports % Global		0.3%	
Commercial Services Imports:	13.6% of National	Commercial Services Exports:		12.8% of National	
Transportation	5.9%	Transportation		1.5%	
Travel	3.8%	Travel		8.5%	
Other commercial services	4.0%	Other commercial services		2.8%	

Sourced from IMF, WTO, IBRD, ACI and WMEF.

# Trade Profile: Republic of Turkey

The IMF anticipates Turkey increasing faster growth of imports than exports. Turkey has seen a strong recovery in terms of both productivity and exports since 2009. Exports to Turkey are already an important market but the UK is still underperforming compared to both imports from Turkey and German exports to Turkey. There is an expanding market in Turkey with the IMF predicting growth in imports here to average 9.2% over the next 5 years. The Midlands is performing above the national average in exports proportion to Turkey, which highlights the value of the increased connectivity to this country from Birmingham airport.

**Turkey External Performance**



Source: Markit Economics & WMEF

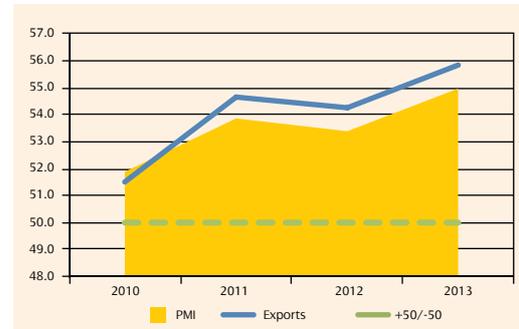
GDP (\$ Bn)	775	Imports (\$ bn)	237	Exports (\$ Bn)	153
% Global GDP	1.11%	% Global Imports	1.3%	% Global Exports	0.8%
No. top 50 Airports	1				
% of Imports from UK		2.4%	% of Exports to UK		6.0%
Value (\$ Bn)		5.7	Value (\$ Bn)		9.2
Imports Source: 1		Russia	Exports Destination: 1		Germany
Value (\$ Bn)		23.6	Value (\$ Bn)		15.8
% of Imports		9.9%	% of Exports		10.3%
Imports Source: 2		Germany	Exports Destination: 2		Iraq
Value (\$ Bn)		22.6	Value (\$ Bn)		9.4
% of Imports		9.5%	% of Exports		6.2%
Imports Source: 3		China	Exports Destination: 3		UK
Value (\$ Bn)		21.3	Value (\$ Bn)		9.2
% of Imports		9.0%	% of Exports		6.0%
Imports Source: 4		USA	Exports Destination: 4		Italy
Value (\$ Bn)		15.8	Value (\$ Bn)		8.9
% of Imports		6.7%	% of Exports		5.8%
Imports Source: 5		Italy	Exports Destination: 5		France
Value (\$ Bn)		13.2	Value (\$ Bn)		7.7
% of Imports		5.6%	% of Exports		5.0%
Merchandise Imports as % Global		1.3%	Merchandise Exports as % of Global		0.8%
Manufactures Imports % National Merchandise		59%	Manufactures Exports of National Merchandise		77.2%
Commercial Services Imports % Global		0.5%	Commercial Services Exports % Global		0.9%
Commercial Services Imports:		7.5% of National	Commercial Services Exports:		22.2% of National
Transportation		3.3%	Transportation		6.2%
Travel		1.9%	Travel		13.3%
Other commercial services		2.3%	Other commercial services		2.8%

Sourced from IMF, WTO, IBRD, ACI and WMEF.

# Trade Profile: United Arab Emirates

The sole net importer from the UK on the list, the UAE imports a large amount of commercial services while its own domestic focus is on production. The UAE has had productivity and export growth at high levels despite the financial crisis and is predicted by the IMF to expand further in coming years, with imports expected to grow at a steady rate around 4%. Germany is the UK's main competitor from the EU with the UK trailing by 1 and a half percentage points of UAE imports.

## UAE External Performance



Source: Markit Economics & WMEF

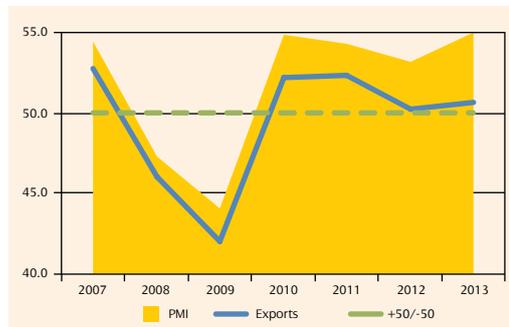
GDP (\$ Bn)	360.2	Imports (\$ bn)	205	Exports (\$ Bn)	285
% Global GDP	0.51%	% Global Imports	1.1%	% Global Exports	1.5%
No. top 50 Airports	1				
% of Imports from UK		3.1%	% of Exports to UK		0.5%
Value (\$ Bn)		6.4	Value (\$ Bn)		1.3
Imports Source: 1		India	Exports Destination: 1		Japan
Value (\$ Bn)		40.6	Value (\$ Bn)		46.0
% of Imports		19.8%	% of Exports		16.1%
Imports Source: 2		China	Exports Destination: 2		India
Value (\$ Bn)		28.1	Value (\$ Bn)		38.3
% of Imports		13.7%	% of Exports		13.4%
Imports Source: 3		USA	Exports Destination: 3		Iran
Value (\$ Bn)		16.6	Value (\$ Bn)		31.1
% of Imports		8.1%	% of Exports		10.9%
Imports Source: 4		Germany	Exports Destination: 4		South Korea
Value (\$ Bn)		9.4	Value (\$ Bn)		15.8
% of Imports		4.6%	% of Exports		5.6%
Imports Source: 5		Japan	Exports Destination: 5		Thailand
Value (\$ Bn)		7.8	Value (\$ Bn)		15.6
% of Imports		3.8%	% of Exports		5.5%
Merchandise Imports as % Global		1.1%	Merchandise Exports as % of Global		1.5%
Manufactures Imports % National Merchandise		20.9%	Manufactures Exports of National Merchandise		54.8%
Commercial Services Imports % Global		1.2%	Commercial Services Exports % Global		0.3%
Commercial Services Imports:		19.2% of National	Commercial Services Exports:		4.1% of National
Transportation		12.2%	Transportation		1.0%
Travel		5.2%	Travel		3.1%
Other commercial services		1.8%	Other commercial services		0.0%

Sourced from IMF, WTO, IBRD, ACI and WMEF.

# Trade Profile: United States of America

21% of Global GDP and a close trade political relationship mean the US market is invaluable for UK trade. In future years the relationship looks to improve as a new free trade agreement is proposed between the EU and US. The US imports a large number of manufactures which should be a target area for the Midlands. After problematic growth post-crisis, productivity has once again picked up in the US and is expected to rebound further, there is also an expected import growth rate close to 6% over the next 5 years.

**United States External Performance**



Source: Markit Economics & WMEF

GDP (\$ Bn)	14990	Imports (\$ bn)	2335	Exports (\$ Bn)	1547
% Global GDP	21.42%	% Global Imports	12.7%	% Global Exports	8.4%
No. top 50 Airports	19				
% of Imports from UK		2.3%	% of Exports to UK		3.8%
Value (\$ Bn)		53.8	Value (\$ Bn)		58.5
Imports Source: 1		China	Exports Destination: 1		Canada
Value (\$ Bn)		430.5	Value (\$ Bn)		293.5
% of Imports		18.4%	% of Exports		19.0%
Imports Source: 2		Canada	Exports Destination: 2		Mexico
Value (\$ Bn)		330.6	Value (\$ Bn)		206.4
% of Imports		14.2%	% of Exports		13.3%
Imports Source: 3		Mexico	Exports Destination: 3		China
Value (\$ Bn)		273.6	Value (\$ Bn)		108.5
% of Imports		11.7%	% of Exports		7.0%
Imports Source: 4		Japan	Exports Destination: 4		Japan
Value (\$ Bn)		136.5	Value (\$ Bn)		69.1
% of Imports		5.8%	% of Exports		4.5%
Imports Source: 5		Germany	Exports Destination: 5		UK
Value (\$ Bn)		103.5	Value (\$ Bn)		58.5
% of Imports		4.4%	% of Exports		3.8%
Merchandise Imports as % Global		12.7%	Merchandise Exports as % of Global		8.4%
Manufactures Imports % National Merchandise		67.2%	Manufactures Exports of National Merchandise		65.3%
Commercial Services Imports % Global		9.8%	Commercial Services Exports % Global		13.8%
Commercial Services Imports:		14.8% of National	Commercial Services Exports:		28.5% of National
Transportation		3.2%	Transportation		3.8%
Travel		3.2%	Travel		7.2%
Other commercial services		8.4%	Other commercial services		17.4%

Sourced from IMF, WTO, IBRD, ACI and WMEF.

## Notes & Disclaimer

- 1 Boeing Commercial Market Outlook 2012
- 2 Innovata
- 3 Harbison P, et al, CAPA – Centre for Aviation, March 2013
- 4 International Civil Aviation Organisation Freedoms of the Air
 

**First Freedom of the Air** - the right or privilege, in respect of scheduled international air services, granted by one State to another State or States to fly across its territory without landing (also known as a First Freedom Right).

**Second Freedom of the Air** - the right or privilege, in respect of scheduled international air services, granted by one State to another State or States to land in its territory for non-traffic purposes (also known as a Second Freedom Right).

**Third Freedom of The Air** - the right or privilege, in respect of scheduled international air services, granted by one State to another State to put down, in the territory of the first State, traffic coming from the home State of the carrier (also known as a Third Freedom Right).

**Fourth Freedom of The Air** - the right or privilege, in respect of scheduled international air services, granted by one State to another State to take on, in the territory of the first State, traffic destined for the home State of the carrier (also known as a Fourth Freedom Right).

**Fifth Freedom of The Air** - the right or privilege, in respect of scheduled international air services, granted by one State to another State to put down and to take on, in the territory of the first State, traffic coming from or destined to a third State (also known as a Fifth Freedom Right).

ICAO characterizes all "freedoms" beyond the Fifth as "so-called" because only the first five "freedoms" have been officially recognized as such by international treaty.

**Sixth Freedom of The Air** - the right or privilege, in respect of scheduled international air services, of transporting, via the home State of the carrier, traffic moving between two other States (also known as a Sixth Freedom Right). The so-called Sixth Freedom of the Air, unlike the first five freedoms, is not incorporated as such into any widely recognized air service agreements such as the "Five Freedoms Agreement".

**Seventh Freedom of The Air** - the right or privilege, in respect of scheduled international air services, granted by one State to another State, of transporting traffic between the territory of the granting State and any third State with no requirement to include on such operation any point in the territory of the recipient State, i.e the service need not connect to or be an extension of any service to/from the home State of the carrier.

**Eighth Freedom of The Air** - the right or privilege, in respect of scheduled international air services, of transporting cabotage traffic between two points in the territory of the granting State on a service which originates or terminates in the home country of the foreign carrier or (in connection with the so-called Seventh Freedom of the Air) outside the territory of the granting State (also known as a Eighth Freedom Right or "consecutive cabotage").

**Ninth Freedom of The Air** - the right or privilege of transporting cabotage traffic of the granting State on a service performed entirely within the territory of the granting State (also known as a Ninth Freedom Right or "stand alone" cabotage).

Source: Manual on the Regulation of International Air Transport (Doc 9626, Part 4)
- 5 The amount of revenue earned per Available Sales Kilometre – a measure of an airline flight's passenger carrying capacity, and equal to the number of seats available multiplied by the number of kilometres flown
- 6 According to a report by KPMG
- 7 Atmosphere Research Group

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