



IS THIS THE END OF THE HUB?

The impact of Middle Eastern Air Carriers on European Hubs



The rise of middle eastern carriers

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Hub?

ARC thanks all those who have impacted this report, through information, sharing their thoughts or by supporting the work undertaken in the spring and summer of 2012.

Specific gratitude goes to ARC members who undertook the difficult task of inputting local and regional government viewpoints into the issues of aviation economics.

Our thanks also go to the industry and airlines who displayed complete frankness, and openness. They will recognise themselves.

Last, but not least, the ARC wishes to thank James Patrick Sgueglia, for gathering the information received.

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Sergi Alegre Calero
ARC President

This study aims at updating Europe's local and regional governments on a new phenomenon: the competitive impact of air carriers based in the Arabian Gulf. The competition between airlines and their respective market shares may seem a purely economic concern but it is not. The consequences will be felt in regions seeking new destinations from their key airports, and will be equally strong for regions that are home to European flag carriers.

Local and regional governments in airport regions are open to structural and operational changes in the aviation marketplace, always ready to absorb new thinking. Personally, I have found this report informative, and useful for my work as a politician in El Prat, Spain. As president of the ARC, I am delighted and proud that we can provide our members with state-of-the-art information on aviation evolution as represented by this study.

I wish you a pleasant and informative reading.



INTRODUCTION

This work was undertaken during spring and summer of 2012, during which time we have been privileged observers of the rise of the Middle Eastern air carriers (MEACs), at the turning point of their settlement in Europe.

When referring to Middle Eastern air carriers, we are primarily concerned with the “big three”: *Etihad*, *Emirates*, and *Qatar*. However, these are not the only carriers present in the region, with Turkish Airlines, Gulf Air, Royal Jordanian, and Saudia also very much present in the region. A few years ago they were almost unknown to the world, but now have increased in importance, opening many new primary and secondary destinations across Europe and around the world. With their hubs located in Abu Dhabi and Dubai in the United Arab Emirates and Doha in Qatar, these fast growing airlines easily connect the growing markets of the Far East and Australia with Europe. Their unique geographical location puts them in a perfect position to compete with European network carriers and these MEACs are becoming a concern for the European hub regions that rely on “legacy” carriers for employment opportunities for their citizens.

This puts European network carriers in an increasingly dire situation where their intra-European (short-haul) market is being “eaten” by Low Cost Carriers on the one hand and the lucrative intercontinental (long-haul) market being eaten by the Middle Eastern Air Carriers on the other.

This subject was first brought to our attention by ARC member region, Val d’Oise, wishing to raise other members’ awareness of the phenomenon, and its potential impact on European hubs and hub regions. Hence we started our reflection with the “Middle Eastern Carriers-An Aviation Strategy Perspective,”¹ which emphasised the fact that the phenomenon is

- 1) important in amplitude
- 2) here to stay
- 3) constantly changing dimensions. We decided to have a deeper look at the impact on airport regions, our members.

1 “Middle Eastern Carriers-An Aviation Strategy Perspective” prepared by Mott MacDonald

The rise of the Middle Eastern Air Carriers is a “hot topic” in the aviation world, and even more so in Europe. Some stakeholders are “against it” and some are in “favour of it.” It is important to realise, however, that the purpose of this study is not to take sides. On the contrary, we felt it was important to gather and disseminate the information for thorough analysis. There is very little academic data available at present; most of the information was provided by the players themselves, and by the media. Additionally, a substantial part of that was understandably corporate information that required filtering.

Our end goal with this study is to inform the regions and cities that have a local airport on their territories or nearby on this most recent evolution of the aviation industry. By doing so, ARC hopes to support strategic regional decision-making.

Lèa Bodossian

ARC Secretary General

The Hubs, centre of the
global aviation model?

Hubs are the general and dominant model

A hub is now a word and concept often used by travellers and the general public alike. Nevertheless, it did not come naturally with aviation - emerging only in the 1970s together with criteria to define whether an airport can be considered a hub airport or not.

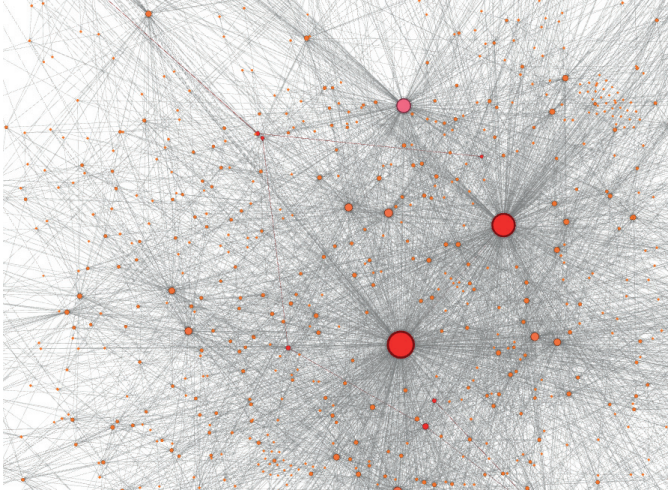
From that decade, hub-and-spoke operations have become an essential feature of global air transport since first instituted by airlines in the United States. The model is a system of connections arranged like a chariot wheel, in which all traffic moves along spokes connected to the hub at the centre. Delta Air Lines started developing what was the first the hub and spoke system for aviation in 1955 from its hub in Atlanta, Georgia in an effort to compete with Eastern Air Lines. FedEx later adopted the hub and spoke model for overnight package delivery during the 1970s. When the airline industry in the United States was deregulated in 1978, Delta's hub and spoke model was adapted by several airlines and soon became the norm in the United States. The hub model was brought to Europe in the 1980s, copying the success of the system in the United States, and became increasingly more popular through the 1990s as European network airlines adopted strategies to compete effectively in the Single European Market.

“Hubbing” offers an airline a number of competitive advantages

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Hubs form the centre of spoke-hub distribution systems, allowing passengers and cargo to be transported from one spoke to another, connecting via the hub, very efficiently. It is a simplified way to connect one place with another without a direct service. “Hubbing” offers an airline a number of competitive advantages in a liberalised or deregulated commercial environment, with the most obvious benefits are to increase dramatically the number of markets that can be served for a given volume of output.² Specific hub criteria include passenger transfer rates (connecting) exceeding 20 percent, “wave” or “push” structured flights operations (peak hours), annual passenger numbers exceeding 20 million, and a home base of a major network carrier.

Example of a “Hub System”¹



The chart on the next page lists the major European hub airports and their affiliated cities. These are the airports that currently satisfy the criteria explained above. The majority of air traffic in Europe goes through these hub airports.

“Hub” airports in the European Union:

Country	City	Airport	IATA Code	Traffic (Pax 2011)
Austria	Vienna	Vienna Int'l Airport	VIE	21,106,292
Belgium	Brussels	Brussels Nat'l Airport	BRU	18,786,034
Denmark	Copenhagen	Copenhagen Airport	CPH	22,725,517
France	Paris	Paris-Charles de Gaulle Airport	CDG	60,970,551
Germany	Frankfurt	Frankfurt Airport	FRA	56,436,255
Germany	Munich	Munich Airport	MUC	37,763,701
Italy	Rome	Leonardo da Vinci-Fiumicino Airport	FCO	37,651,700
Netherlands	Amsterdam	Amsterdam Airport Schiphol	AMS	49,755,252
Spain	Madrid	Madrid-Barajas Airport	MAD	49,671,270
Spain	Barcelona	Barcelona El Prat Airport	BCN	34,398,226
Switzerland	Zurich	Zurich Airport	ZRH	24,337,954
United Kingdom	London	London Heathrow Airport	LHR	69,433,230
United Kingdom	London	London Gatwick	LGW	33,674,264
			TOTAL:	516.65

Source ACI 2011 Data

Other models are growing stronger everyday

Point-to-point transit refers to a transportation system where a plane travels directly to a destination, rather than going through a central hub. The majority of the United States airline industry was point-to-point until deregulation in the late 1960s/early 1970s when they switched to the hub concept, with Europe following this concept in the 1980s. This differs from the spoke-hub distribution model in which the transportation goes to a central location where passengers change to another train, bus or plane to reach their destination.

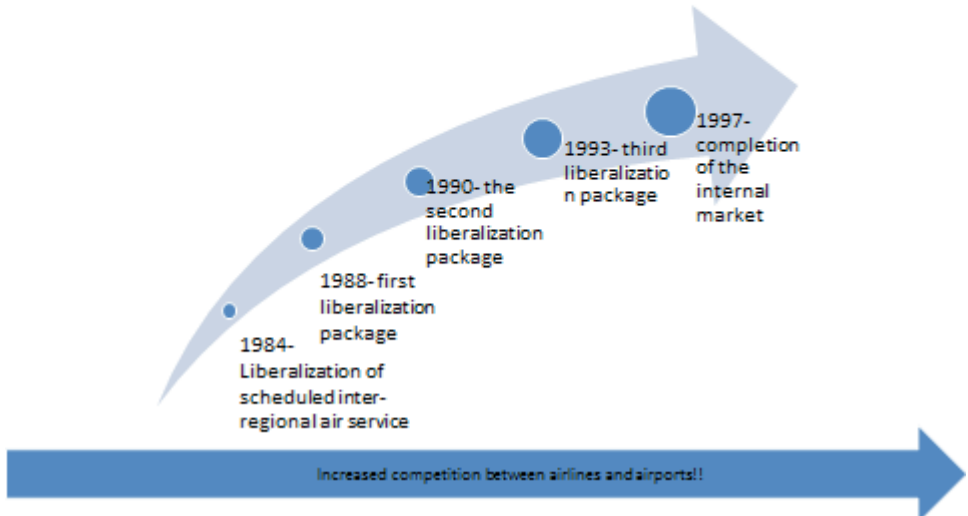


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A Low Cost Carrier (also known as a no-frills, discount or budget carrier or airline or cheap flight) is an airline that generally has lower fares and fewer comforts. To make up for revenue lost in decreased ticket prices, the airline may charge for extras like food, priority boarding, seat allocating, and baggage. Low Cost Carriers have been present in the airline industry since deregulation of the US air transport market in the 1970s, with Southwest Airlines commencing operations in 1971.

Liberalization of the air transport market in Europe

From national air transport market to EU internal market for air transport



Deregulation in the European Union, illustrated in the figure above, came in phases with the final phase being implemented in 1997. Irish-based carrier Ryanair quickly adapted a no-frills point-to-point model in Europe in the 1990s and in an effort to save costs began servicing secondary and regional airports. Many of these smaller secondary airports, in many cases, were former air force bases closed after the fall of the Soviet Union and the communist threat from the East. Ryanair used these to pioneer its point-to-point model and has become one of the many success stories of the single market.

Ryanair is the most emblematic example of an airline using the point-to-point transit model. For example, there is a route between Brussels-Charleroi airport and Rome-Ciampino airport (both considered “non-hub” secondary cities). Currently, It is doubtful if there is a true point-to-point airline, as most have at least a «home base» airport where most flights originate or depart, which becomes a de facto hub or “focus city”, whether that is the intention or not. Examples of this are Brussels Charleroi or Frankfurt-Hahn, which both serve as large bases for Ryanair.

Advantages of point-to-point include the connection of many non-hub “regional” airports to a hub offering on numerous routes they would otherwise

not have. Point-to-point also creates connectivity to regions. New tourism to the region is often created by this model that otherwise would not exist. Point-to-point airports also have considerably fewer flights than hubs and therefore, proportionally, there are less emissions and noise in the region around the airport. The airlines are also known for using new fleets of aircraft that have a high environmental performance.

The disadvantages include volatility of the Low Cost Carriers. Since they are not based in the area, these airlines can move easily from one regional secondary airport to the next. This implies that there is no long-term job guarantee in that airport region, as the Low Cost Carriers have no historical links, nor functional, nor economic dependency to the region. This also tends to induce or increase competition between regions or regional airports to attract such carriers. At the moment, the model is under close scrutiny by the European Commission, to verify compliance with existing legislation on State aid. Very often the airports are served by only one principle Low Cost Carrier, and have little room to manoeuvre should the business plan of the airline change.

The strengthening of Low Cost Carriers, particularly in Europe, will continue to be a real threat to eroding of the economics of hub-and-spoke networks of the full cost (legacy) airlines in their hub and particularly spoke airports, which may cause some instability in their growth.³ In addition, the Low Cost Carriers will continue to stimulate growth of passenger demand throughout their networks, continuing to connect mostly the small- and medium-sized regional airports with prevailing originating and destinating passengers. The innovative Low Cost Carrier economic/business models will be developed into long distance markets, strengthening airline competition and very likely bringing more traffic to the airports involved.

One may want to note the existence of another model, which is the point to hub business model, principally followed by the Regional Airlines. Regional airlines are also known as “feeder” carriers as they “feed” the major hub of a network carrier. In these roles, all of the regional airlines are operated primarily to bring passengers to the major hubs, where they will connect for longer distance flights on the network carriers. We have not gone into the details of it as we believe that even though these airlines have a very different function which, the rise of the Middle Eastern carriers on European hubs will not impact.

The hub model is reaching its own capacity limits in Europe

Hub airports bring a lot to a region due to their significant economic impacts. The principal types of economic impact as defined by Airports Council International (ACI) are direct, indirect, induced, and catalytic. The direct impact a hub airport has can be classified as the operation of airlines and airports (technical support and handling, catering, fuel, security, cleaning), commercial activities (shopping, restaurants, car rental, and parking), land transport, and air cargo. Its indirect impact can be described as the output and employment supported through the aviation sector's based supply chain or the buying supplies (goods and services) to support direct activities. The induced impact is joint impact of direct and indirect or employment and output supported by the spending of those directly or indirectly employed in the aviation sector. Finally the catalytic effect an airport has on its regions can be most commonly described as the "spillover" benefits associated with the aviation sector. Some of these include the activity supported by the spending of foreign visitors travelling to the region via air transport, and the level of trade directly enabled by the transportation of merchandise. It should be pointed out however that

A significant economic impact for the airlines, the airports and their regions



this impact is maximised when an aircraft is based at the hub airport. Aircraft not based at the given hub airport only create around one third of the number of jobs compared to aircraft based at the airport.

Note that this methodology for evaluating the economic impact of airports is generally accepted all around the world for all types of airports. However, by many standards, this methodology has been specifically designed for the hub-and-spoke model. A significant part of this impact is valid mostly because of the hub function.

Hubs: victims of their success?

It seems the business model has recently reached its own limit. For example: The hub-and-spoke system as it has developed after deregulation allowed rapid growth in size, competition strategy and traffic demand in the airline business. However⁴, this had resulted in operational inefficiencies at periods of slow economic activity; with airlines in some cases facing poor financial performances. As a result, some airlines have restructured their business model to return to the point-to-point system; move out of the constant need

4 as suggested by Wells and Younger (2004)

for a large hub; and utilise hubs in a more uniform manner in terms of arrivals and departures. This phenomenon is known as the rolling hubs, was tested by American Airlines in Chicago and is currently being utilised by Lufthansa Group airlines across their five hubs of Frankfurt, Munich, Zurich, Vienna, and Brussels.

Congestion and delays at hub airports

To limit waiting times and provide a large choice of possible connections for passengers at the hub airport, it is essential for the hub airline to schedule as many incoming and outgoing flights as possible during a short time frame. This results in high traffic peaks during these times and often causes delays due to scarce airside facilities such as taxi- or runways and ground handling.

At the same time the hub-and-spoke system allows hub airlines to increase their benefit exponentially by adjoining an additional destination to the network compared to point-to-point-carriers. The implication for a hub airline is that the trade off between congestion costs and the benefit of serving new markets is in their favour. Therefore the airline has an incentive for adding more traffic despite a rising congestion level. The point-to-point carriers at the airport which cannot capitalise on such an exponential benefit, however, suffer from the increasing number of flights.⁵

Another reason for congestion originates from the fact that many airports do

Airport capacity is limited and usually not sufficient



not limit the number of takeoffs and landings. One possibility for airlines to prevent further congestion while increasing the passenger count is the use of larger aircraft. However, doing so produces new challenges when these aircraft with more passengers are delayed. More travellers will miss their connecting flights, producing a poor utilisation rate of the hub-hub connection and reducing the profitability of a carrier. This problem is especially critical for operations of the A380⁶.

Merging of traffic in a hub-and-spoke-system implies a traffic structure consisting of high peaks at certain times a day when airport facilities are in greatest use. At some airports, costly additional capacity and infrastructure (e.g. runways) are required to cater for demand at these peaks. During off-peak hours, as traffic is less, terminal and airside facilities are used inefficiently or

5 Mayer & Sinai 2003

6 Ruehle 2006

may even be idle. The temporal discrepancy between capacity and demand will continuously result in either congestion and delays or under-utilisation⁷.

Hub airlines and the corresponding alliances (refer to Airline alliance for more details) have selected a limited number of airports on each continent through which they route their traffic. For these few hub airports in turn, such airlines represent a high share of their business. As airport capacity is limited and usually not sufficient for other extensive networks, and the necessary slots at attractive times are not available, other airlines tend to choose alternative options. From an airport's perspective, this dependency on one major hub airline has advantages and disadvantages: as long as the airline is stable and successful in the market the airport can be sure of a consistent operation and therefore a steady income stream. But when the airline struggles, this will have negative repercussions on the airport and might severely jeopardise profitable operations at the airport⁸.

With these few points to set the scene, it is obvious that the European hubs do constitute a substantial part of total European passenger traffic. On economic impact it is also clear that a hub has its economic limits, with environmental/emissions standards, and congestion leading to a decreasing acceptance. The phenomenon of the Low Cost Carrier has developed another business model on short and medium haul flights. The network carriers are left with more and more unconventional flights to be profitable but their position is also threatened by new players on the scene: the Middle Eastern carriers.

7 See Janic 2008

8 See Janic 2008

The rise of the Middle
Eastern carriers: will it
bring the end to the
hub era?

The Rise of the Middle Eastern Air Carriers

What could be at stake is the international positioning of Europe in the global air transport market. Recent financial losses by major network carriers Air France-KLM and Lufthansa Group were previously attributed to the rise of Low Cost Carriers in Europe and more recently rising fuel prices. But what is becoming more and more evident is one thing: the impact of the Middle Eastern Air Carriers and their increasing presence in Europe.

Middle Eastern airlines are changing the dynamics of not just European aviation but international aviation as a whole, as Emirates, Qatar Airways and Etihad Airways are quickly emerging as the new global challengers. Over recent years, there has been a major shift in the global air transport market as the Middle East's carriers, and in particular Arabian Gulf based airlines, have altered the way traffic flows are being routed. In 2008, passenger growth rates for the Middle East were seven per cent - more than four times the global average. The Gulf based carriers are largely responsible for this growth and have capitalised on their central geographical location by "cannibalising" ⁹ the traditional traffic flows between Asian and European hubs, and by connecting secondary cities as a result of exercising their sixth freedom traffic rights. It is estimated that around 4.5 billion people reside within an eight hour flight of the Middle East, providing the potential for a large part of the world's population to connect through a single stop. Emirates Airline is the dominant carrier, although Qatar Airways and Etihad Airways, combined, are roughly 70% of its size.

These airlines are serving European big hub airports, and also "smaller airports". They are carrying passengers to Asia and the Far East through their hubs based in Doha, Dubai or Abu Dhabi. Etihad and Qatar are also members of TGVair, which allows them to also serve all High speed train stations in France, as if they were airports.

The Freedoms of the Air

Description		Example
1st	Right to fly over a foreign country without landing there	New York-Mumbai, as a American airline overflying the EU
2nd	Right to refuel or carry out maintenance in a foreign country on the way to another country	New York-Mumbai as an Indian airline but stopping for fuel in Brussels
3rd	Right to fly from one's own country to another	Toronto-Frankfurt as an German airline
4th	Right to fly from another country to one's own	Toronto-Frankfurt as an Canadian airline
5th	Right to fly between two foreign countries during flights while the flight originates or ends in one's own country	Oslo-Stockholm-Doha, Qatar, as a Qatari airline
6th	Right to fly from a foreign country to another one while stopping in one's own country for non-technical reasons	Paris-Dubai-Sydney, as a UAE airline
7th	Right to fly between two foreign countries while not offering flights to one's own country	New York-London as a UAE airline
8th	Right to fly between two or more airports in a foreign country while continuing service to one's own country	Chicago-New York-Dubai as a Qatari airline
9th	Right to fly inside a foreign country without continuing service to one's own country	Frankfurt-Munich as a Chinese airline

Competitive situation: European airlines and their hubs becoming an endangered species?

The Middle Eastern Air Carriers are merely new players interpreting the rules differently, and playing the game with different cards. They are taking advantage of two factors in this regard: geography and technology. From hubs in Dubai, Doha, or Abu Dhabi, they can now reach any point on the Earth nonstop and connect any two city pairs with only one stop in the Middle East. Recent enhancements in aircraft technology have made this possible with the introduction of ultra-long-haul airplanes such as the Airbus A340 and Boeing 777. The cost advantage is biggest for the Middle Eastern Air Carriers¹⁰ when they can combine two long-haul flights from secondary cities in Europe to secondary cities in Asia, such as Barcelona, Spain to Trivandrum, India. The European network carriers would have to channel traffic on this flight through two hubs and operate two relatively high-cost short-haul connecting flights.

Gulf carriers are profiting from an optimal regulatory environment, geography and technology

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As of Spring 2012, the Middle Eastern Air Carrier's biggest European rivals, particularly Air France-KLM and Lufthansa Group were strongly lobbying against additional traffic rights for the Middle Eastern Air Carriers, with numerous studies being cited on the fact of their numerous competitive advantages such as low user charges and handling fees at Dubai airport and the fact that there is no income tax in the United Arab Emirates, among other things. A recent Lufthansa Group policy report states that while private German and European airlines are being systematically held back by ever greater financial burdens and restrictions, national carriers from the Gulf States are profiting from an *“optimal regulatory environment”*. The research institute Oxford Economics, for example, credits the emirate of Dubai with having a *“consensus based partnership”* between the government and the airline Emirates. Other Gulf state carriers, such as Etihad and Qatar Airways, also enjoy tailor-made regulatory conditions. Furthermore, as one top European airline manager who switched over to the Emirate put it: *“20 years ago, air transport was declared a strategic industry in Dubai. In Europe, it is neither strategic nor important to policy makers.”*¹¹

10 Flottau (2007),

11 Lufthansa Policy Brief 01/2012

However, it can't be denied that the central geographic location of the Gulf hubs is a huge benefit and the main point that the Middle Eastern Air Carriers push when the carriers lobby European policy makers in support of additional traffic rights (new flight opportunities). The MEACs are enjoying the benefits of this geographic location as is outlined in the Emirates Route Map below¹².

Additionally, Middle Eastern Air Carriers are able to operate 24 hours a day



with no curfews providing them with very high aircraft utilisation. That is in contrast to Germany where for six hours daily, the country's most important aviation hub, Frankfurt is closed between 11pm and 5am. Night flights were banned at the Lufthansa mega-hub, and this is a gain for many of the Middle Eastern hub airports.

Competitive Advantages

The Middle Eastern Air Carriers also enjoy numerous competitive advantages over their European counterparts. Highlights include lower maintenance costs due to newer aircraft; the ability to offer a higher in-flight quality product; enjoying cheaper jet fuel costs at the Gulf hubs; no corporate or income taxes in the emirates; preferred financing on aircraft from Export Credit Agencies; and considerably lower labour costs especially in terms of ground handlers. A 2011 article on Emirates featured in The New York Times summarises the situation: "The airline, however, does have undeniable advantages over competitors, including lower labour costs. While Emirates pays its pilots international wages, it hires inexpensive workers, usually from the Indian subcontinent, for tasks like handling baggage or working in catering services."¹³

Looking at a comparison of average aircraft age between the Middle Eastern Air Carriers and the European Network Carriers, the differences are astounding. Older aircraft usually consume more jet-fuel, create higher emissions, are noisier, and generally have higher operational costs due to their age. Older

¹² See Emirates Open Sky

¹³ See "Emirates' Ambitions Worry European Rivals" - NY Times

airplanes are more expensive to operate and the Middle Eastern Air Carriers combined have some of the youngest fleets in the world. Average fleet age for the MEACs is around 6.6 years for Emirates, 4.4 years for Etihad, and 4.9 years for Qatar. This compares with the major European network carriers where 9.4 years is the average for KLM, 9.5 for Air France, 12.7 years for British Airways, and 13.3 years for Lufthansa.

In flight services and prices

Additionally, Middle Eastern Air Carriers are well known for offering a high quality in-flight product. This is something that is of course a necessity should they wish to remain competitive as most of their flights are long-haul and cater to a high class clientele within the United Arab Emirates's social elite. However, interestingly enough, Flottau has found that one area that puts the Middle Eastern Air Carriers at a disadvantage is time. He argues that it is difficult for the Middle Eastern Air Carriers to attract the highly coveted business travellers on key routes. This is because, while the Middle Eastern Air Carriers may offer lower fares and equal or better on-board services, the flying distance to Asian destinations north of the equator is typically longer when adding a stop in Dubai, Doha, or Abu Dhabi. And while leisure travellers may put up with the inconvenience "it could be a significant issue for business travellers who may have to wake up during the journey to change aircraft." Just to illustrate this point, a randomly selected flight between Paris and Shanghai would cost minimum of 2.000€ (economy) for a leisure traveller and 9817€ for a business traveller (first class) with Air France and 11 hours of flight.

The same trip, on the same dates, would be charged 822€ by Emirates (11 hours) and 895€ and 997€ by Emirates and Qatar (around 17h00). In first class the difference is even more striking. 4196€ by Etihad and 5187€ by Emirates. The question must be tabled. Legacy carriers were extremely confident for

Carriers were confident that no business traveller would ever use low cost airlines



a considerable time that no business traveller would ever use Low cost airlines. In reality, with the economic downturn and constrained budgets, this is no longer always true in Europe. Equally the price difference using Middle Eastern Air Carriers is such that even business travellers are using flights operated by Middle Eastern Air Carriers. The Minimum Connecting Time may not be always the best, but the lounges are praised by their users.

So yes, the travel time remains an advantage, but is not a silver bullet.

Jobs

It is no secret that labour is one of the largest expenses that network airlines are faced with. Labour constituted 27.5% of British Airways costs in 2008. It is also higher for the British flag carrier due to it being based in London, one of the most expensive cities in the world.

According to 2007 International Civil Aviation Organisation data, an average annual salary for a network airline employee was \$73,082.14 Network carriers have to make large payments to their pension schemes as well as servicing their existing pension deficits. While the Middle Eastern Air Carriers provide internationally competitive benefits and salaries to their cabin crew, pilots, and management, labour-intensive tasks such as ground handling, maintenance, catering, and call centres are sourced from the cheap labour markets of India, Pakistan, Sri Lanka, Bangladesh, and Nepal. Meanwhile many IT requirements are out sourced to India.

Furthermore, in countries such as the United Arab Emirates, labour laws forbid strikes and there are no trade unions. This ensures smooth flight operations and continuous services. This is in contrast to Europe where the numerous powerful network airline unions routinely use strikes in order to have management realise the union's concerns. It is estimated that on average the Middle Eastern Air Carriers enjoy labour costs up to 60% lower than the European network carriers.

Environment

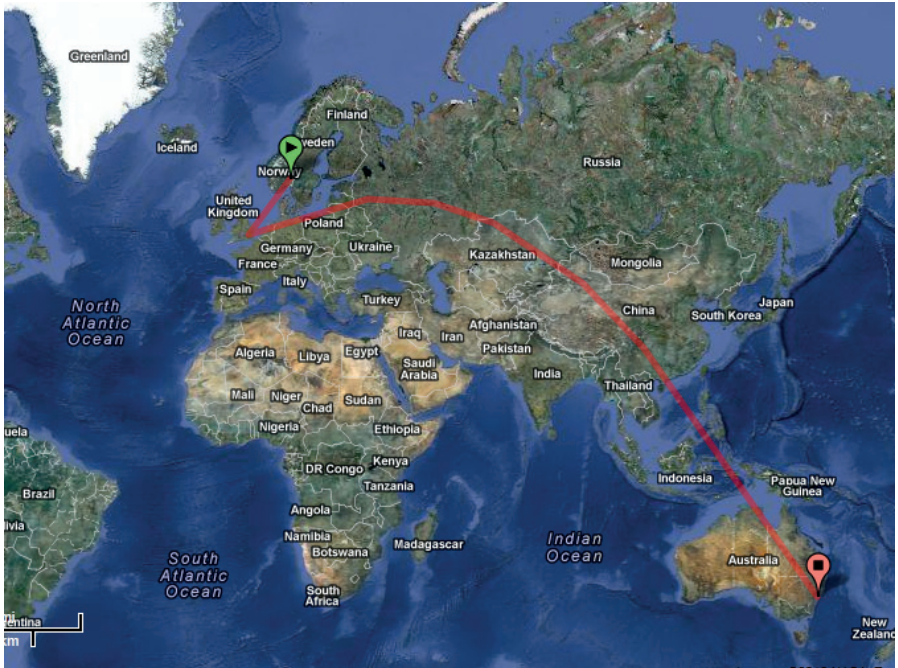
On the environment, the Middle Eastern Air Carriers operate some of the most modern aircraft available on the market. This in turn means these aircraft are quieter, more fuel efficient, emit less carbon emissions, and fly further than many of the aircraft operated by the European network carriers. Additionally, advances in aircraft technology mean that the Middle Eastern Air Carriers can operate some of the most longest scheduled flights in the world from their Gulf hubs. On the next page is a graph illustrating this: ¹⁵

Another environmental element is hardly ever mentioned when discussing the competitive situation between European major airlines and Gulf Carriers, i.e. the CO₂ emissions generated by stop-overs in Western Europe. The five largest European hubs are located in the western part of the continent. How much sense does it make emissions-wise and time-wise for a traveller from Venice, Budapest, Zagreb, Sofia to fly to China, Australia or India with a first segment

14 O'Connell 2011

15 Emirates Open Sky 10/2010

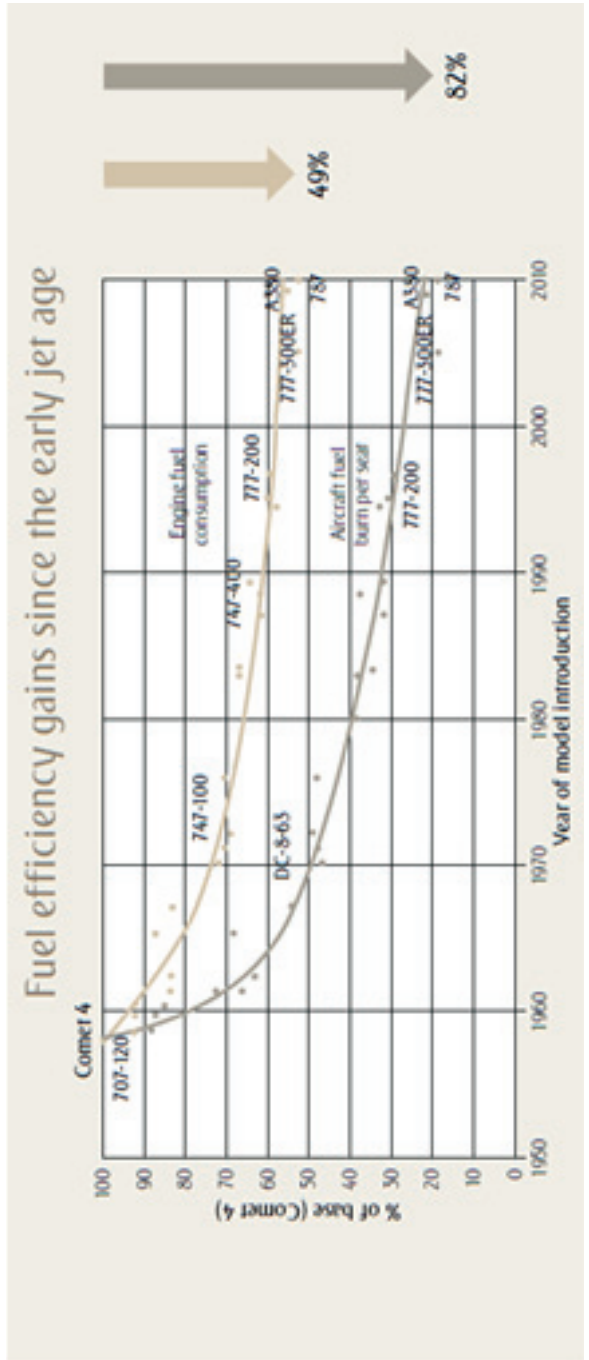
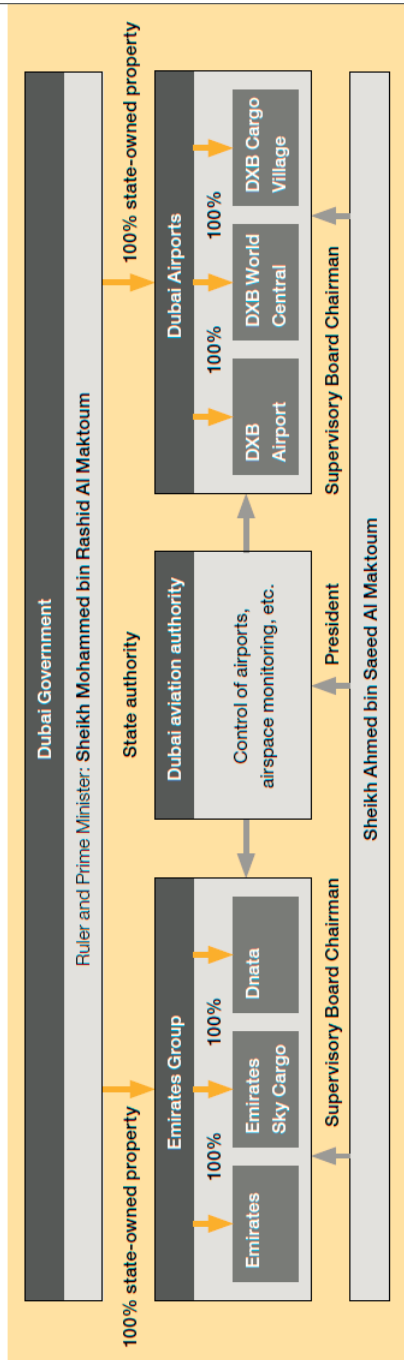
of the trip through Amsterdam, Paris, Frankfurt or Heathrow? A Boeing 747, for example, releases around 35 kg of carbon dioxide per kilometer. Hence, one could think that direct flights departing from European hubs are cleaner (because the distances are less important). This is not necessarily the case, as an aircraft flying directly to Asia needs to carry its fuel for the entirety of the trip, and requires additional fuel... in order to carry the fuel.



Oslo-Sydney. Does it make sense to go through London – Image Google Earth

Oil

Jet fuel is now the single largest expense of most major network airlines. The Middle Eastern Air Carriers pay lower market prices for aviation fuel as the region is in close proximity to many oil production and refining facilities, reducing supply chain costs for the MEACs. While publicly, the Middle Eastern Air Carriers consistently discount this fact, even producing statements by major jet-fuel providers saying they consistently pay “market-rates” for jet fuel in the region, the key point here is the “region” which as we know, is oil-rich.



Different governance structures

There are also completely different governance structures. While in Europe, we pride ourselves on our historical diversity, and there are numerous structures of multi-level governance that affect aviation, (Region, National Civil Aviation Authority, EASA, European Commission, et) in the Gulf States airlines, airport and aviation authority are often under the same control, producing what Lufthansa coins as an “optimal regulatory environment”

Glance at governance structure (previous page - right)

A European perspective on this phenomenon

The International Air Transport Association (IATA)'s May 2012 versus May 2011 data on the global air transport of passengers shows that the situation is getting worse. According to IATA, European carriers posted only 4.1% growth on international services when compared to the previous May. *“This is significantly below the 5.7% year-on-year growth recorded for April.”* Furthermore according to IATA, traffic growth for European carriers basically stopped at the end of 2011 and from the beginning of 2012, the growth trend has been basically flat, in line with the economic pessimism throughout the continent (IATA 2012).

The Middle Eastern Air Carriers on the other hand showed the strongest growth in the month of May with a 15.8% increase. This outstripped the increase in capacity which was only 11.9%. Interestingly enough, the MEACs were the only carriers to report aggregate accelerated demand growth compared to April, when the region's airlines reported 15.2% growth. These statistics make it blatantly clear that the MEACs are dominating the market in terms of new growth with the recession in Europe only making things worse.

As these figures show, large network carriers are most in danger from the rise of the Middle Eastern Air Carriers. Many argue that these European network carriers might be “too big to fail” or too important to fail, as they are vital to their respective countries' economies. However, we recently saw two state-owned airlines, Malév of Hungary and Spanair of Spain, collapse with little warning. Could a major European network carrier be next?

In addition to soaring fuel costs and increased competition from the Low Cost Carriers, it is no surprise that the Middle Eastern Air Carriers are affecting European network carriers' profits. This means job cuts for European regions and these cuts are felt even more significantly in the hub regions. Just a few weeks ago, German carrier Lufthansa announced that it would eliminate around 3,500 jobs as part of a *“wide-ranging effort to improve its profitability.”*

2,500 of those jobs are based in Germany. This is also the first time since the economic crisis in 2008 that Lufthansa has announced significant staff reductions and came as the airline reported that its net loss for the first three months of 2012 rose to €397 million. According to the New York Times, the reductions were the latest in a wave of belt-tightening taking place at network carriers as they struggle to compete with leaner and nimbler rivals like Ryanair, easyJet and Air Berlin in Europe and with rapidly expanding Middle Eastern carriers like Emirates and Etihad on long-distance routes.¹⁶

Air France-KLM has begun similar efforts as well calling for more than a 20 per cent cut in costs and a reduction of more than 5,100 jobs by December 2013 as part of the company's Transform 2015 strategic plan to restore profitability. While the company has said that it hopes the job cuts can be achieved without compulsory redundancies, forced cuts will be implemented if needed.

Large network carriers are most in danger from the rise of the Middle Eastern Air Carriers

“Air France is facing a fundamental choice about its future” said Air France Chairman and Chief Executive Officer Alexandre de Juniac, announcing the strategy plan. “If we make all the necessary equitably distributed efforts, there will be no forced departures.”¹⁷

British Airways has also alluded to cuts recently, saying that as many as 1,200 jobs could go. The airline has recently purchased British regional carrier BMI and has said job cuts are needed in order to integrate the carrier into its London-Heathrow based operations.

The Middle Eastern Air Carriers are currently the largest customers for commercial aircraft from both Europe based Airbus and American based Boeing, with hundreds of aircraft currently on firm order. This brings up another policy paradox in the fact that the Middle Eastern Air Carriers do support European jobs in the aeronautical industry. Airbus employs around 52,000 people at sixteen sites in four European Union member states: France, Germany, the United Kingdom and Spain with final assembly production of all aircraft at Toulouse (France), Hamburg (Germany), and Seville (Spain).

The question is: would these aeronautical sector jobs compensate the airline industry job losses? It was demonstrated¹⁸ that if an Airbus A340-300 is based in Germany, this creates 367 direct jobs and an income effect of €20.9

16 See “Lufthansa to Cut 3,500 Jobs in Bid to Improve Profitability”

17 See “AF-KLM Plans Major Layoffs by 2013

18 Grimme (2011)

million on the regional economy. In contrast, the operation of that same aircraft by a Middle Eastern Air Carrier but based outside of Germany, creates only 85 jobs and an income effect of €3.8 million. Countering this, Emirates argues that by ordering new Airbus aircraft it added to the viability of the A340, A350 and A380 programmes, with the A380 creates more than 40,000 direct and indirect jobs in Germany. “There is a reason that airlines around the world are afraid of the success of Emirates” says John Leahy, chief operating officer of Airbus, the European plane maker, referring to Emirates’ mix

Middle Eastern Air Carriers are the largest customers for both Airbus and Boeing



of quality service, operating efficiency and low costs. “That should strike fear in the hearts of airlines around the world.” Emirates is one of Airbus’s top customers.”¹⁹ Another angle of reflection could be brought to the policy paradox. Indeed, the Gulf carriers are by far the largest client of aeronautical industry. Nevertheless some announcements were made in Spring 2012 by Etihad that they would certainly consider buying Chinese long haul aircraft once available on the market (2016). Certainly, the announcement is also part of the negotiation pressure made when discussing the price of current fleet acquisitions, but it also underlines that aeronautical jobs in Europe cannot be taken for granted either.



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A Shift of Power?

IATA has forecasted continued losses for the European network carriers in their “2012 Profit Scenario.” Middle Eastern Air Carriers are continuingly to grow rapidly and so is their influence and it seems that the balance of power is undoubtedly shifting in favour of the Middle Eastern Air Carriers. So what are the network carriers doing to counteract this, could this lead to Middle Eastern Air Carriers joining the major network alliances? Lufthansa Chief Executive Officer Christoph Franz has been the most vocal opponent of the Middle Eastern Air Carriers carriers, criticising them for being state-owned and subsidised. He believes that the Arabian Gulf carriers enjoy other unfair advantages such as access to export financing, low or no taxes and cheap labour. Franz’s rage culminated in the statement that the Gulf countries are a “sand pit with money.” But several high-level diplomatic interventions and a lunch date with Emirates President Tim Clark later, Franz now says he has “high respect for the entrepreneurial achievements” of his new competitors.²⁰

There are also rumours that Etihad is in negotiation with Air France-KLM over possible code-sharing agreements and a joint venture. Is this a sign that the network carriers are giving up the fight and giving in to the Middle Eastern carriers by inviting them into their joint ventures and alliances? Will this save jobs and European regions in which these airlines are based?

What matters to European regions?

When examining the rise of the Middle Eastern Air Carriers from the perspective of European airport regions, three important topics emerge that matter most to our member regions: jobs, environment and governance.

Jobs:

Jobs are an important issue for European airport regions, with many airports serving as an important job provider and economic engine for their region. Without the airport many regions would have few job opportunities for their citizens. It is also important to mention the different types of economic impact that an airport has on a region: direct, indirect, induced, and catalytic.

Direct: This type of impact can be best described as the output and employment of the firms in the aviation sector. Examples of this include: the operation of airlines and airports (technical support and handling, catering, fuel, security, cleaning), commercial activities (shopping, restaurants, car rental, and parking), land transport and air cargo.

Indirect: This impact can be classified as the output and employment supported through the aviation sector's supply chain. Activities such as buying supplies (goods and services) to support direct activities.

Induced: Employment and output supported by the spending of those directly or indirectly employed in the aviation sector is more or less an indicator of an induced impact.

Catalytic: The fourth type of impact is catalytic and can be described as the spillover benefits associated with the aviation sector. Some of these include the activity supported by the spending of foreign visitors travelling to a region via air, and the level of trade directly enabled by the transportation of merchandise.²¹ The chart below illustrates the total number of transport sector jobs in the EU 27.²²

Should the presence of the Middle Eastern Air Carriers in Europe continue to increase and the global importance of European hub airports and network airlines continue to decrease this can only mean one thing for European hub airport regions: long term job losses. Looking back to the previous case study comparing a wide body aircraft based in a German hub versus a wide body aircraft based outside of Europe, the aircraft based outside of Europe creates only about one third of the jobs it would create if the aircraft were to be based in Europe.

21 Oxford Economics: Benefits of Air Transport in Belgium

22 Source: AF-KLM EU Affairs Office

Different regions however have different types of airports and it is important to point out that a “one size fits all” approach is not applicable in this situation. Regions with hub airports are likely to be more sceptical towards increased service by Middle Eastern Air Carriers as they are sensitive to job cuts by major hub carriers in their regions: the network carriers serving Europe currently provide and have provided the vast majority of the economic benefits to the European Union. However, smaller secondary and/or regional airports may have a different opinion. While hosting a wide-body aircraft based outside of the airport may offer only a nominal amount of jobs in terms of direct employment, a direct long-haul connection to the Middle East is a way to increase tourism for the region outside of Europe and increased international investment and interest in the region. This will in turn lead to more indirect and catalytic employment by supporting jobs in the region. Most of these types of regions are likely to support increased service from Middle Eastern Air Carriers.

Environment:

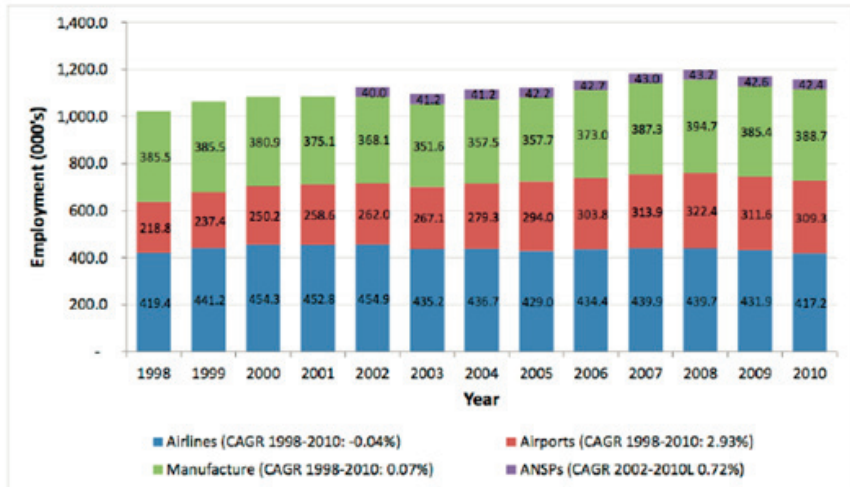
Increased presence by Middle Eastern Air Carriers could be positive for the environment of citizens in European airport regions. As previously discussed, Middle Eastern Air Carriers operate some of the newest, quietest, and emissions friendly fleets in the world, therefore having a positive impact on the environment in which they operate.

Middle Eastern Air Carriers often exceed environmental standards



This hypothesis of a “favourable” environmental effect implies that European airline traffic is actually being replaced by the Middle Eastern Air Carriers traffic, meaning companies operating old fleet are replaced by companies operating new fleet. If the rise of the Middle Eastern Air Carriers “only” generates new traffic, i.e. encourages people who would have not travelled otherwise, to fly, (just as happened with the Low Cost Carriers which created their own market for a large part), then the environmental benefit would be less obvious. Additionally, while the Middle Eastern Air Carriers may not have emissions standards to abide by in their own countries, all carriers both international and domestic must abide by environmental standards when operating in the European Union. The Middle Eastern Air Carrier often exceeds these standards.

Total employment in the air transport sector in EU 27 in 2010 is estimated at 1,157,000.



Governance:

On governance, the most obvious issue regarding the rise of the Middle Eastern Air Carriers is an immediate loss of sovereign decision-making on an regional and national level. Middle Eastern Air Carriers are obviously based in the Middle East and European airport regions and governments will have very little in say in their business plans or models. This is vastly different from how things are currently in the EU, with many European network carriers being former “state owned” carriers and therefore retaining many ties to the government of their country.

Can regions make a difference?

In closing this section, it is obvious that regions have little say in the business plans of private industry; however they can actively lobby on both the European Union and national level to make their concerns heard. Educating policy makers about these facts can have an impact on the airport region whether it is a hub or secondary region.

Scenarios for the Future

We have put forth a provocative question, “Is that the end of the hub?” and we have examined dedicated literature, specialised press, and interviewed industry representatives. Deep attention is being paid to the phenomenon. European network carriers are defining themselves, at best, as indifferent to the rise of the Middle Eastern Carriers, and more frequently as “deeply attentive” if not suspicious.

However, as a matter of fact, the rise of the Middle Eastern Carriers appears to be one more phenomenon affecting the European aviation industry, among others.

The larger European hubs are congested in terms of traffic and the European airlines are currently encountering economic difficulties due to the economic crisis and rise in oil prices.

The aviation economy is no longer “simply” or solely organised around hubs in Europe. The large hubs are still here but, operationally, they are becoming more and more complex for airlines in terms of cost and capacity. If you consider aviation as a system, where all stakeholders are expected to behave rationally, it is only logical that airlines would seek solutions to operate in places that are less constrained. The Low Cost Carriers are implementing the point-to-point business model, some larger airlines are de-hubbing, and some airlines are even implementing “a multipolar hub system.”

Is Europe the only region affected by this phenomenon? The answer is no. Two other regions that are becoming increasingly part of the debate are North American and Australia.

In the United States, Middle Eastern air carriers are slowly starting to enter the market, and have admitted that they were “late to the game.” Emirates has recently expanded service to Washington, D.C.-Dulles, Dallas/Fort Worth, Texas, and Seattle, Washington. Qatar meanwhile has recently announced a Doha-Chicago, Illinois flight. However, due to the geographical location of the US from the Middle East and due to rising jet fuel prices, it is unlikely that more expansion will come in the near future. On the other hand, one part of the world where the Middle Eastern Air Carriers have been making their presence felt is Australia, with flag carrier Qantas recently announcing a \$255 million loss²³ and cancelling aircraft orders. Qantas has fought exhaustively to protect its “Kangaroo route” between Australia and Europe, once a lucrative business, but as we have seen recently heavy losses have been realised and Qantas has even said it will take a full net year loss.²⁴ Globally there is a shifting of economic power to the Middle East and the Far East, and the rise of the Middle Eastern Air Carriers is very descriptive of this.

23 *Air Transport World* 24/08/12

24 “Shift of Power”

In reality, the rise of the Middle Eastern Air Carriers reflects more the global economic evolution of the world than the invalidity of the hub model as such. The “Asian Tigers” are rising economically. China and India are the core of attention of investors worldwide. Tourists from Asia-Pacific are common in Europe and in the Americas. Western travellers are now frequent in every part of Asia. The flow of traffic, both money wise and people wise, are heading towards the East. The rise of the Middle Eastern Carriers illustrates these new silk routes. In terms of industrial policy, some crucial questions need answers. The fact that the Middle Eastern Carriers are also the largest customers of European plane-maker Airbus, and therefore support thousands of European jobs in the aerospace industry, also make this a very challenging issue from a policy perspective both at the national and European level.

Several possible scenarios can be considered as relatively plausible and could affect the European hubs and their airport regions differently.

1. The “laissez-faire” scenario: European network airlines do nothing for or against the rise of the Gulf carriers.

Hypothesis 1.1: the rise of the Gulf carriers is just a conjectural phenomenon and, after a few years of economic hardship, the situation goes back to normal. Several airlines or decisions-makers have played that card in the past. This is no longer possible, and this scenario is unlikely. Several Asian routes are no longer served by direct flights in Europe. Some major European airlines had to cut their routes on certain destinations.

Hypothesis 1.2: the Middle Eastern Air Carriers are continuing to pursue European traffic rights aggressively and undercutting European network carriers. This is an unsustainable approach for the European carriers as in the end it will lead to continuing financial losses and job cuts. As a consequence, the weakened European airlines are even more fragile and will enter a vicious economic circle ending with more job cuts.

2. The economic war scenario:

In this scenario, the European airlines face the new competition jointly. They decrease their prices and increase the quality of their services in order to compete with the Middle Eastern air carriers. This is not a likely option. The economic situation of the European network carriers does not allow them to start a commercial war of that sort. Nevertheless, we can try to project what that would mean for European airport regions. Either the European carriers

or the Gulf carriers would win.

-Hypothesis 2.1: European network carriers win: no change in terms of jobs, the hubs remain as they are now. However, we have seen this as an unlikely possibility because of the European situation.

-Hypothesis 2.2: Gulf Carriers win the market and European carriers go bankrupt. This implies a development of “secondary” or “regional” hubs in Europe, and the weakening of the major hubs: fewer planes based there, less jobs, less decision-making power, but cleaner aircraft.

-Hypothesis 2.3: The fight could be brought to the World Trade Organisation, but, as previously pointed out, air transport is not currently covered by WTO agreements and the competitive advantages of the Middle Eastern Carriers are part of a routine competitive market where situations are different. The only point that could be disputed is whether there is reciprocity when Europe opens its huge market to Middle Eastern Carriers in exchange of their market.

3. The pragmatic approach: Alliances & Joint Ventures.

This is also a very fast moving and evolving topic. In the Mott McDonald report²⁵, it is clearly stated that as of November 2011, the Middle Eastern Air Carriers were not interested in joining any Alliances. In the past few months Air France-KLM is rumoured to be in talks to form a joint venture with Etihad, while Air Berlin and Aer Lingus are becoming slowing becoming the “branch” of the airline in Europe as Etihad has invested in majority stakes in both airlines. Additionally, Qatar Airways has invested in Cargolux and was recently interested in Spanair, before it collapsed. This now looks increasingly unlikely as a scenario, given the “rumoured” Etihad joint venture talks with Air France and even more recently the fact that Qatar is expected to announce membership of the Oneworld Alliance²⁶, something that not even a year ago seemed impossible. In the first week of September 2012, Emirates and Qantas announced a similar alliance, whereby Qantas flights to Europe would no longer halt in Singapore but in Dubai. At the time of drafting this report, the major European airlines had not responded to the announcement. Still observers of the aviation world have commented it as being “yet another signal of the take over of Gulf carriers in traditional markets”²⁷ The European and Australian carriers are applying a “if you can’t beat them, join them” strategy. They would try to take advantage of the competitive pulse of the Gulf carriers to strengthen their own positions at the world level. In terms of jobs for

25 “Middle Eastern Carriers-An Aviation Strategy Perspective”

26 “Shift of Power”

28 Fabrice Gliszczynski 06 September 2012- La Tribune

European hub airport regions, this probably mean that there will be some cuts, as more aircraft will be based in the Gulf and that part of the decision-making power will be shared by another network carrier.

The “Asian Tigers” are rising economically. ” ”

The conclusion that can be drawn from this analysis is probably that it is not the end of the hub. Doha and Dubai are becoming highly strong and competitive hubs. It is more certain that this may be the end of the European hubs as we have come to know them in the past 20 years. More European passengers will either be flying point-to-point when flying short-haul within Europe or flying long-haul and connecting in a hub somewhere in the Middle East. One of our interlocutors pro actively suggested that the next European hub ought to be Dubai. It is up to the European airport regions to decide how they consider their own hub and decide how they want to play in the global game. The first step is certainly to get informed, which we have tried to provide with this report.

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Airport Regions Conference

Rue du Luxembourg 3
1000 Bruxelles

tel: +32 2 501 0835

fax: +32 2 501 0842

info@airportregions.org

www.airportregions.org