Route network strategies of Gulf Carriers

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Summary:
The number of destinations of the three major airlines of the Gulf - Qatar Airways, Emirates and Etihad – has increased rapidly in the last decade. Their route network organization between those destinations is based on the "hub-and-spoke" approach due to the airlines' ability to generate and distribute traffic. Key features of their "hub-and-spoke" approach is their geographical location, fleet-size of wide-bodied aircraft, concentration on developing markets in the Indian subcontinent, Africa and Australia, and securing further traffic through code-sharing agreements.

Key Words: Etihad, Qatar Airlines, Emirates, Hub and Spoke, Route Networking

1. Introduction

The three major airlines of the Gulf – Qatar Airways, the flag carrier of Qatar, Emirates Airways, the Dubai-based company, and Etihad Airways, the national flag carrier of the UAE based in Abu Dhabi – were established on the ashes of the financially ailing Gulf Air with the support of their governments: the emirates of Dubai and Abu Dhabi, as well as the state of Qatar. The state support for development of aviation industry is evident throughout the history of civil aviation and aimed at providing national security and economic ties (Oum and Yu, 2000). However, in the case of those three airlines each airline represents each government's vision to provide employment for the local population; to acquire greater expertise in an industry traditionally associated with the industrialized nations; and to boost their international image. To achieve all this, the Gulf airlines rely on heavy support from the state and the ruling families and represent not necessarily for-profit entities but rather tools of their governments due to oil rent. However, there are some achievements as of today. For example, Emirates Group, the parent company of Emirates Airlines, accounted for approx. 25% of the Dubai's GDP in 2009 and for majority of the jobs generated for the local population outside of the public sector.[2]

The three Gulf carriers have attracted the attention of airline management specialists and commentators for their high number of orders for wide-bodied aircraft such as Airbus A380, Airbus A350 and Boeing B787 (e.g. Hanlon 2007, 137-140; Doganis 2011, 233), and the ability to expand in

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2 http://gulfnews.com/business/aviation/emirates-share-is-nearly-fourth-of-dubai-s-gdp-1.69429

times of economic depression and worsened financial performance of the traditional airlines (AACO 2010). Relying on the income from hydrocarbon industry, those airlines defy the rules of the industry and are more than capable of maintaining the high growth levels.

Still, research on the management and business performance of these airlines is limited due to the lack of publicly available financial reports and third-party verified accounts. Their company structures of government-backed up entities waivers that necessity. However, the lack of financial performance parameters still could not limit the scientific enquiry in other fields of their management practices. Not only are those companies characterized by high number orders for modern aircraft, but also by the increase in double digits on annual basis of the available seat kilometers (ASKs) and revenue passenger kilometers (RPKs) for each of the three companies (AACO 2010). Therefore, their performance is not only associated with the ability to acquire aircraft but also to efficiently deploy them on different routes to secure greater load factor and increased revenues.

In this paper, I would like to present the strategy of the route networking for the three major Gulf airlines – Emirates, Qatar Airways and Etihad – and investigate whether there are similarities in their key principles of traffic accumulation and distribution.

Due to the limitation of publicly available data, for my research I would rely on documents from international air transport organizations such as International Air Transportation Association (IATA) and Arab Air Carriers Organization (AACO); documents from the three airlines; and statements of the management team of these companies and of their competitors.

2. Hub-and-spoke and the Gulf airlines

Route network is the way the destinations of an airline are organized in relation to each other in relation to an airlines' main airport. The main airports for these three airlines are Abu Dhabi for Etihad, Doha for Qatar Airways and Dubai for Emirates. From there they fly to their destinations worldwide. There are two main types of networks: point-to-point[3] and hub-and-spoke[4]. The hub-and-spoke system, as noted by Douganis (2011, 244-6), leads to greater connectivity via the hub among the end points and greater number of cities served; and could result in dropped air fares and increased number of passengers. The hub is important for development of internationally competitive air transportation, since it allows for circumventing the necessity of a bilateral agreement between the governments of each end point in the network of an airline and requires agreements between hub and end point only. Thus, the hubbing approach relies on "sixth freedom" of the Chicago Convention for transportation of traffic between two states different from the state where the airline/the hub is based. Furthermore, the airlines in the Gulf use the fifth freedom to continue their flights to a third country on routes of the

[3] Point-to-point network could take shape of grid and line. An example for line network is the relationship between the destinations on Continental Micronesia flight between Palau and Hawai. A grid is the domestic network of many airlines such as United or Lufthansa.

[4] Hub-and-spoke approach has two patterns: hourglass hub and hinterland hub. Former refers to long-distance between each end-point; later refers to close-range between the end points and the hub.

long-haul flights especially on the Trans-Tasman segment, e.g. Abu Dhabi-Brisbane-Auckland flight, and into the South American segment, e.g. Dubai-Sao Paolo-Buenos Aires. Besides, the airlines of the Gulf try to also develop destinations based on "seventh freedom", internationally domestic flights in USA, South Africa and Australia, on a flights originating from the Gulf, e.g. Doha-Perth-Melbourne. Route networking based on the hub-and-spoke approach is however not a novel idea. In the Asia-Pacific region and the greater Middle East several states and airlines tried to establish their main airports as the major hubs for the region. Such airlines include: Egypt Air, Middle East Airlines, Royal Jordanian, Gulf Air, Saudia, Thai Air, Singapore Airlines, Cathay Pacific and Korean Air. Still, there are several differences between the three major Gulf airlines and those airlines.

2.1 Alliance membership

Etihad, Emirates Airways and Qatar Airways are not members of any alliance and the leadership of each organization has rejected the idea of joining any alliance, mainly due to the perceived limitation of growth in the airline's network upon joining any alliance. As Oum (1997) and Jangkrajarng (2011) demonstrate the alliance serves as a means of expanding market coverage when the airline is unable to achieve it on its own. However, the ability to grow their fleet and to reach more bilateral agreements with other countries, assisted by their governments, allows the three Gulf airlines to pursue independently greater connectivity. Furthermore, alliance membership restricts the expansion in market coverage because the traffic in alliance is shifted between hubs of member airlines responsible for the coverage of specific region.

2.2 Market coverage versus market focus

Oum and Yu (2000) argue that the growth in the number of destinations serviced by the airlines from Asia Pacific is conditioned by attempts of each airline to achieve greater interregional coverage in its destination. However, the heavily regulated market and the growth of the low-cost carriers in the region have made that endeavor impractical in recent years. The Gulf airlines, arguably, have been trying to gain greater regional interconnectivity by deploying hinterland hub-and-spoke approach. Still, they focus on connecting specific markets and customer needs and to reach more regions than Asia.

2.3 Trunk routes versus secondary cities

The major airlines restricted by the number of their aircraft, the alliance membership, profitability concerns and bilateral agreements are focused on servicing major trunk routes between their hub and the hub of a partner country or the business center of this country. For example, in India Thai Air, Singapore Airlines, Cathay Pacific have flights to Delhi, the capital, and Mumbai, the financial center of the country. However, many smaller cities, called also secondary, having different travelling needs – business, cultural, family, leisure, and etc. are excluded from this development and need to transfer at the major hub in their countries to reach their final destinations. Therefore, by offering more routes in India, for example, to cities such as Chennai, Lucknow and Amritsar, the Gulf airlines represent an alternative to their major national airlines and are able to address better customer needs.

2.4 Specific markets development

The approximate location to the holy cities for Islam – Medina and Mecca and the growing income of Muslim populations in ASEAN and North African countries have increased the necessity for Hajj pilgrimage flights. Moreover, connectivity to the islands of Indian Ocean such as Mauritius, the Seychelles and the Maldives is strength for the Gulf airlines, as well, for being able to offer flights to there from different origin points – Europe, Asia, Middle East and Australia to these remote places.

2.5 Less restrictive bilateral agreements

Asian airlines networks, as demonstrated by Goedeking (2010), operate still in heavily regulated environment with fixed fares and type of aircraft in their bilateral civil aviation agreements. On the other hand, the Gulf airlines operate within more flexible conditions, heavily assisted by their civil aviation authorities. The management of those regulators and the board of directors of the three airlines are filled often by the same persons or at least by relatives in the ruling royal family. Therefore, it is not surprising that these airlines are able to achieve more deregulated bilateral agreements allowing for change of gauge and increase of the flight frequencies. That support is derived from the state policy for the development of the civil aviation industry and is helped by oil as a diplomatic tool.

2.6. Geographical location

The location of the three Gulf carriers is of great benefit to the establishment of effective and all-encompassing hub-and-spoke network. Called the “new Silk Road”, the network of those airlines is closely located to Europe, North Africa, the Indian Subcontinent and East Asia. Within 8 hour flight live more than 4.5 bln people, or close to 70% of the world population, in some of the fastest growing economies of the world, e.g. China, India and ASEAN. These are regions with major flows of traffic, subject to the “sixth freedom”. Moreover, there are very few natural hubbing regions in the world connecting so many people. For example, there is little traffic to justify such hub-and-spoke in South America, Australia or Africa. Also, their location gives an opportunity for two types of hub-and-spoke rise – hinterland and hourglass, or long-haul and short-haul flights which requires different sets of aircraft. Furthermore, the geographical location gives them ability to deploy different aircraft and crews on each leg of a flight such as Heathrow – Dubai – Mumbai via their hub, the so-called “change-of-gauge”. Moreover, the geographical location assists the development of each hub as a center for aerospace industry of their respective governments with all servicing industries (Emirates Group 2010, Etihad Airways 2010, Qatar Airways Homepage). A secondary hub developed, however, is off the card for these three airlines for the time being.

3. Challenges to the hub-and-spoke route networking in the Gulf

To develop a successful hub-and-spoke approach each airline has several constraints: geographical location, dependency on developing new routes and infrastructure: airports and aircraft (Burghouwt 2007, 32-33). However, in the case of the Gulf carriers the location is one of their major advantages, as been demonstrated in the previous section. On the other hand, as relatively new companies their fleet expansion is of serious importance to serve a multifold of their destinations. In this section, I would review two major challenges – the timely delivery of aircraft and infrastructure.

3.1 Fleet expansion and network growth

The delivery of aircraft could hinder the expansion of the route network and the effective development of the hub-and-spoke operations of each airline. Currently, Emirates has the largest fleet of the three with 63 Airbus planes with 145 on order and 92 Boeings with 49 on order; Qatar Airways has 69 Airbus with 155 on order, 25 Boeings with 39 on order and 50 options; Etihad has the smallest fleet of them with 44 Airbuses with 67 on order and 65 options and 6 Boeings with 42 on order and 49 options. Besides, the fleet of the three airlines is very young (Emirates Airways – 6,6 years; Qatar Airways – 4,3 years; Etihad – 4,2 years) and predominantly composed of wide-bodied modern aircraft. However, those three airlines' weakness is that they first agree a route before having available airplane, as in the case of Qatar Airways' route expansion in Central Asia and Caucuses, and often risk failing to provide routes agreed in advance in case of late delivery of aircraft.

3.2 Airport infrastructure

The airport infrastructure to accommodate the rising number of flights in the Gulf needs expansion. Currently, all three hub-airports are undergoing upgrades. In Abu Dhabi, the current capacity of the airport is 12 mln passengers per year, and is expect to reach 40 million in 2015 with completion of construction of Midfield Terminal Complex (MTC).   The Doha airport undergoes expansion and is to increase its capacity by 2 mln and reaches 16 mln passengers per year, but the there is an additional airport being constructed – New Doha International Airport with initial capacity of 24 mln passengers operational from 2012 and further double increase of its capacity to 50 mln passengers per year. The Dubai airport is undergoing expansion with a special terminal for Airbus A380s and is expected to increase its capacity to 60mln passengers per year. Therefore, the infrastructural bottleneck should not hinder the destination growth of Gulf airlines.

4. Key features of the route networks of the three airlines

As of June 2011, Emirates Airlines flies to 100 commercial destinations worldwide with 4 forthcoming in the next six months and the company plans to expand its network to "several hundred destinations"[5]. The Doha-based Qatar Airways prides itself in servicing more than 100 destinations as

[5] http://www.msnbc.msn.com/id/42974732/ns/travel-news/t/emirates-flight-path-set-anger-european-airlines/

of May 2011 and is on the path to fly to more than 120 in 2013, a serious result for an 18-year-old company.[6] Etihad's current route network of 67 destinations as of June 2011 is a remarkable accomplishment for such a recent market entrant. Despite the fact that its overall available capacity is still 24% of that of Emirates and 63% of that of Qatar Airways, its growth overlaps the growth of Qatar Airways by 4% on an annual basis and is almost equal to that of Emirates trailing only with 1%. Those networks have been developed backed by the strengths of the "hub-and-spoke" approach for the Gulf carriers and followed the idea for securing greater volumes of traffic. To distribute this traffic these airlines have implemented several principles – coverage of each continent, development of untapped markets or secondary cities, code-sharing and development of boutique routes.

4.1 Six-continent coverage

Flights to each continent have been of importance for the three airlines due to the prestige associated with that and the growth in possible connections and serviceable markets. The sixth continent for all those airlines is South America. In 2007, Emirates became the first Middle Eastern airline to operate a non-stop flight to Sao Paulo, upgraded to a daily service the following year.[7] This route was followed by a second non-stop route to the business and leisure centers of Argentina and Brazil – Buenos Aires and Rio de Janeiro – operational from January, 2012. Similarly, Qatar Airways stepped into the final continent with a flight to Sao Paolo and Buenos Aires in 2010.[8] Also, after the runway expansion at Narita airport and start of direct flights to the Japanese airport, the Qatari company aimed at offering a less painful alternative to the North American and European hub, where most of the business and leisure travelers need a transit visa to transfer to their next destinations. South America remains the only continent not served by Etihad. In 2010, James Hogan vowed that the company would start a direct service to the last continent in 2015, at the latest.[9]

4.2 Flights to secondary cities

Vying for better connectivity via their hubs the three Gulf airlines have developed a diversified network of destinations serving a multifold of markets.

To reach its goal of "several hundred destinations", Emirates works on specific markets, which are largely underserved by their competitors. Such are the markets where there is no direct flight to Dubai offered by their domestic airlines – Scandinavia/Copenhagen/ and Eastern Europe/Kiev, St. Petersburg/; limited number of flights from domestic airlines to the Gulf – Western Europe/Madrid, Nice/ and Australia and Oceania/Perth; Christchurch/; and markets such as Africa largely neglected by European and North American companies, where it has 19 destinations more than any other Gulf carrier including countries such as Uganda, Cote d'Ivoire and Senegal. Still, the company is focused

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[6] http://www.arabiansupplychain.com/article-5874-qatar-airways-in-talks-to-order-60-airbus-planes/1/print/
[7] http://www.emirates.com/jp/english/about/news/news_detail.aspx?article=349913
[8] http://www.qatarairways.com/global/en/newsroom/archive/press-release-10Mar10.html
[9] http://www.arabiansupplychain.com/article-4414-etihad-ceo-slams-subsidised-carriers-free-kicks/

on developing “visiting friend and relatives market” such as the flights between Australia and Ireland.[10]

Qatar Airways has indentified underserved and untapped markets for its network such as the African continent, Central and Eastern Europe, Scandinavia, Central Asia and Caucuses, the migrant communities and Canada. The Doha-based company still lags behind Emirates in connectivity to the African continent’s market having only 13 destinations there. Still, its policy of developing new routes is closely linked with having both commercial and cargo aviation services to a specific airport, as the case with the route to Entebbe, Uganda.[11] Building cargo flights network has been a priority of the company coinciding with the construction of the New Doha International Airport. In Europe, Qatar Airways focuses on the development of route network that services cities which are not connected to any of the hubs in the Middle East or to the business, travel and cultural destinations in the Asia-Pacific region. In Western Europe, such untapped markets for the company have been the Iberian peninsula /Barcelona/, Germany /Stuttgart, Berlin/ and Scandinavia /Copenhagen, Oslo, Stockholm/. In Central and Eastern Europe, the Doha-based airline offers services to the capital cities of Hungary, Bulgaria and Romania[12]. Therefore, Qatar Airways not only offers better connectivity to the European continent, but it is also able to increase its presence in the European market. Untapped market for the Gulf airlines, according to Qatar Airways, still exists in Central Asia and Caucasus. In 2011, it announced a flight to Tbilisi, Georgia, which makes a stop at Baku, Azerbaijan. Another focus of the company is servicing the migrant communities of the Middle East and the Indian Subcontinent, who live in the Gulf region, North America or Europe, to their hometowns and communities. For example, in 2009 the Qatari company launched a service to Amritsar, despite the great number of services to India and its huge penetration Qatar Airways became the first Gulf airline to connect this holy for the Sikh community city with its network[13]. Another example of this trend is the announcement of flights to Shiraz, South Iran, the southern economic center of the country and an alternative to the Teheran airport[14]. Iran has one of the largest numbers of expatriate workers and immigrant communities in the world reaching four to five million people, many of whom live in Europe and North America, where Qatar Airways is connected well to different cities via its Doha terminal. However, the Doha-based company has faced trouble with securing additional landing rights – in Austria and Canada, which it services only with three weekly passenger flights.[15] The desire of Canadian authorities to protect the national flag carrier – Air Canada – is perceived to be the cause of the stalled negotiations between Qatari and Canadian authorities, an issue faced by the other two airlines as well.

Etihad has not been dedicated as of yet to developing specific untapped or underserved markets despite having bilateral agreements. It remains relatively underrepresented in the African, Central

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[10] http://www.arabiansupplychain.com/article-4587-interview-maurice-flanagan-emirates-airline/1/print/
[11] http://www1.qatarairways.com/global/en/newsroom/archive/PressRelease1_2May11.html
[12] http://www.qatarairways.com/global/en/newsroom/archive/PressRelease1_05Apr11.html
[13] http://www1.qatarairways.com/global/en/newsroom/archive/press-release-12Oct09.html
[14] http://www.qatarairways.com/global/en/newsroom/archive/PressRelease1_19Feb11.html
[15] http://www.arabiansupplychain.com/article-5226-qatar-canada-sign-agreement-on-air-landing-rights/

Asian, Western and Central Europe, the Balkans and the Indian subcontinent due to the small size of its fleet and delays by Boeing and Airbus to fulfill its orders.

4.3 Development of routes on key markets

As argued in the second section, the hub-and-spoke system depends on traffic and for these three airlines the major traffic comes from their key competences – to serve markets from Asia and Australia to Europe and Africa.

The cap on flights between UK and India, the lack of commercial viability for flights from Australia to the Gulf for non-Gulf airlines and the EU ban on African airlines have helped all Gulf carriers establish key competitive routes – UK and Australian market; out-of-Africa market; and Europe – India market. Furthermore, the diversification of its destinations has enabled Emirates to offer bigger choice to its customers. As demonstrated by O'Connell (2011, 341), the company has increased between 2004 and 2009 the number of weekly flights originating from its key markets such as India by 238%, the United Kingdom 53%, China 444% and Australia 75%. Still, those flight frequency increases have been constrained by aircraft availability. As a result of flight frequency increases, the company has achieved better competitiveness – by offering flying schedules to customers in key airports such as Sydney and Heathrow where there are several daily flights to its hub in Dubai.

The key market for Qatar Airways has been the Indian subcontinent. India, in particular, provides 10% of its network, and is constantly upgraded. In 2010, the flight frequency on Indian routes was increased by 20%, reaching 88 weekly flights, but still dwarfs the 185 flights of Emirates to India.[16]

Still, Etihad has not followed the strategy to increase flight frequency between its hub and its most successful destinations due to the limited aircraft aviable. As of June 2011, only Beirut and Kathmandu have been given more flights due to popularity of services among expatriate workers.[17]

4.4 Development of specific markets

The greater connectivity of Emirates has enabled it to pursue route network coverage in specific markets. With its growing network presence among Muslim communities and countries, Emirates is able to attract more passengers who go on to Hajj pilgrimage to the holly cities of Medina and Mecca in Saudi Arabia. In 2010, the company offered four times a week service during the summer to Medina and due to strong demand from the UAE, the Indian subcontinent and the African markets the company started a permanent service to this destination. To satisfy the diversified needs of the customers through its network, Emirates focused on premium leisure tourism as well. The company increased offer flights from Dubai to Mauritius and the Seychelles as a means to promote tourism to these islands for European and North American customers. Emirates work with local tourism associations, and an economic study done by Oxford Economics, a consultancy group, has calculated

[16] http://www.arabiansupplychain.com/article-4856-qatar-airways-invests-in-major-india-expansion/
[17] http://www.arabiansupplychain.com/article-3353-etihad-to-fly-daily-to-kathmandu/

that Emirates services to the island of Mauritius resulted in 1% increase in the Mauritius' GDP (Oxford Economics 2011, 4).

4.5 Code-sharing agreements

The three Gulf Airlines have relied on code-share agreements. Still, those agreements implemented by Etihad and Qatar Airways should be of note because code-sharing allows for further channeling of their traffic through their network.

The Doha-based company relies on code-share agreements with several airlines such as United Airlines and bmi in order to compensate for the lack of better penetration into the North American and the UK Ireland markets compared to Emirates. Still, those agreements give Qatar Airways some new destinations for the Gulf region – such as Belfast, Jersey and Edinburgh – and provide for better marketing of the flights via its Doha hub.

Awaiting the delivery of the wide-bodied aircraft from Airbus and Boeing, the Abu Dhabi-based Etihad could only develop its network with its relatively small fleet by having code-share agreements with other international airlines. In August 2011, it has 29 of them extending its network with 100 additional destinations allowing it penetration in regions such as the British isles, Central Europe, East Asia, North Africa, the Middle East, Mediterranean, Oceania, New Zealand and North America. As demonstrated by the other two airlines, one of the major traffic routes for the companies in the Gulf is between Australia and Oceania to Europe and North America via their hubs. The traffic between the Gulf and Australia is of a little magnitude and is mainly concentrated on foreign workers in the Gulf or Emirati/Qatari students in Australia. Besides, it makes very little commercial sense to Australian or Biritsh airlines to fly via the hub, thus the opposition mainly in Australia coming from the national carrier – Qantas Airways – opposes granting additional landing rights to Gulf carriers. To avoid that opposition the Abu Dhabi-based company entered into a partnership with Virgin Australia Group of Airlines /domestic airline – Virgin Australia; Pacific Blue – flying to islands in Oceania; and V Australia – the international carrier flying off Melbourne and Sydney/ to expand its presence in the Australian market and increase revenues from transit flights via its hub.

5. Conclusion

This paper set out to understand what the route networking strategies of the three Gulf carriers/Emirates, Qatar Airways and Etihad/ are and to find out whether there are any similarities in their key principles of organization of their destinations and traffic distribution. Their main strategy was the "hub-and-spoke" approach while shunning away from alliance membership and a secondary hub.

The development of the hub-and-spoke route network pattern for the three airlines has been enabled by their geographical position; their modern fleet of predominantly wide-bodied aircraft; their focus on specific traffics from key markets such as Africa, Indian subcontinent and Australia; and, securing feeder traffic through code-share agreements. Moreover, there have been similarities in their key features of route network development such as six-continent coverage, development of underserved and untapped regions throughout Europe and Central Asia.

These airlines development has been backed by their governments but their network growth have been constrained by timely and continual intake of aircraft both from Airbus and Boeing. Still, their networking should be of note for European, North American and Asian airlines, which pursue different strategies such as alliance membership or mergers and acquisitions. Oil revenues of their governments have assisted the airline growth and they have used for economic development purposes.

In conclusion, this paper offered a limited view of those three airlines' business models. Research on the financial performance of each route or market would be of enormous benefit to understand the connectivity of the three Gulf carriers. Moreover, research on their competitors' behavior and response would give us a better understanding of the contemporary airline industry. Finally, an inquiry in the management and leadership of the companies would help us understand their business styles better.

Acknowledgments

I owe a great deal to Prof. Hirotaka Yamauchi, Graduate School of Commerce, Hitotsubashi University, for his mentorship, advice and provided materials.

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