Airlines in the Middle East have enjoyed high rates of traffic growth and network development over the past 10 years. Emirates, Etihad, Qatar Airways and Turkish Airlines in particular have experienced the highest rates of development of all global airlines.

The perpetual growth of Middle East airlines

The Middle East has had among the highest growth rates in air traffic and capacity over the past 10 years. One consequence of this has been to generate orders for large numbers of aircraft, particularly large widebodies. Capacity growth has been extensive on both new and existing routes. What has fuelled this development, and what aircraft types are the major operators utilising?

Examination of capacity provided by the major airlines reveals that the number of operations and seats increased by a factor of about 2.5 from 2000 to 2010; equal to a compound annual growth rate of 10-11%. Load factors have increased for most carriers over the same period. Emirates' load factor, for example, increased from 74% in 2000 to 80% in 2010. The implication is that the major airlines in the Middle East have experienced compound annual traffic growth rates of at least 12% over the past decade. This is more than double the annual average for the whole industry. The Chinese and Indian markets have seen similar rates of development and capacity growth during the same period.

Some individual airlines in the Middle East have experienced particularly high rates of traffic growth, and so rates of capacity development. Emirates, for example, has seen passenger numbers increase by an annual rate of more than 20% for seven of the years from 2000 to 2010.

Growth strategies

The three Middle Eastern airlines with the highest rate of development over the past 10 years are Emirates, Qatar Airways and Etihad. These are based at Dubai (DXB), Doha (DOH) and Abu Dhabi (AUH) respectively. Despite their close proximity, the number of operations and amount of annual seat capacity passing through these airports has also grown at continuously high rates. Combined annual seat capacity on all routes serving these airports has increased by a factor of 3.3; equal to an annual compound growth rate of 13%. So what has triggered this sustained spurt of traffic and capacity growth?

Emirates was the first to adopt a strategy of using its hub as a connecting point for long-haul passengers. Using its advantage of cheap labour, a likely advantage over other global airlines in fuel price, and an overall lower unit cost compared to many other major airlines elsewhere in the world, Emirates is able to offer lower fares for multi-leg, transiting flights than European, Asia Pacific and other airlines are able to offer for point-to-point services. Emirates has therefore been able to attract passengers flying between North America and Europe, and the Indian sub-continent and the Asia Pacific to its services, transiting via DXB.

Using this strategy, Emirates has developed one of the world's largest long-haul and intercontinental route networks. It serves more than 100 destinations, of which only 16 are in the Middle East. The remainder are on other continents, and constitute a large number of long-haul and ultra-long-haul routes.

The fast development of its route network is illustrated by the fact that 34 of these destinations have been added to its network since 2000. Not only does Emirates have a large intercontinental route network, but it serves all its destinations with large widebodies. Its fleet grew from 36 aircraft in 2000 to 148 in 2010. The majority of its fleet are large or ultra-large widebodies.

The same strategy has broadly been used by other airlines in the region, in particular by Qatar Airways at DOH and Etihad at AUH. These two airlines' route networks and overall capacity have grown at even higher rates than Emirates', despite the three airlines' bases being close to each other. By the end of 2010, Qatar Airways was serving 84 destinations, 69 of them outside the Middle East. Its fast rate of development is illustrated by the fact that it has opened 52 of these intercontinental destinations since 2000.

Qatar Airways also operates with a fleet of large widebodies, but it also operates narrowbodies. Its fleet grew from just 12 aircraft in 2000 to 91 in 2010, of which 59 are widebodies.

Etihad has developed at an even faster pace. Starting operations in 2001, it has developed an international route network that serves 61 destinations, of which 46 are outside the Middle East.

These three large intercontinental route networks, and the rate at which they have grown, demonstrate the success of the airlines' strategies, as well as the stimulus of competitive fares for intercontinental operations. The ability to stimulate large volumes of connecting traffic is further demonstrated by the fact that 30 of the major international destinations are served by all of the three major Middle East airlines, while another 26 are served by two of the three. Despite this overlap, all three of the major airlines have experienced high rates of capacity growth on these routes. This is reflected by an increase in average aircraft size of these sectors.

Another example of the success of the strategy of offering connecting long-haul services via hubs in the Middle East is the lower rate at which competing airlines have added capacity on the same routes as Emirates, Qatar Airways and Etihad to

MIDDLE EASTERN MAJOR AIRLINES' ANNUAL OPERATIONS 2000 & 2010

Hub city	Major airline	Major airline operations 2000	Major airline seats 2000	Major airline average aircraft size 2000	Major airline operations 2010	Major airline seats 2010	Major airline average aircraft size 2010
Dubai	Emirates	13,740	3,625,043	264	58,786	18,319,372	312
Istanbul	THY	39,583	6,408,389	162	98,820	16,112,620	163
Doha	Qatar Airways/Gulf Air	11,988	2,030,835	169	43,358	9,522,349	220
Riyadh	Saudia	24,604	4,967,703	202	32,507	5,961,864	183
Jeddah	Saudia	22,449	4,888,446	218	30,672	5,754,945	188
Abu Dhabi	Etihad/Gulf Air	9,181	1,631,157	178	27,380	5,628,533	206
Bahrain	Gulf Air	12,172	2,194,023	180	23,703	3,935,802	166
Muscat	Oman Air/Gulf Air	11,205	1,658,276	148	16,624	2,708,208	163
Sharjah	Air Arabia/Gulf Air	1,243	169,048	136	17,050	2,557,500	150
Amman	Royal Jordanian	6,090	954,270	157	17,826	2,443,540	137
Kuwait	Kuwait Airways	7,093	1,440,634	203	8,850	1,781,496	201
Beirut	Middle East Airlines	4,809	764,600	159	9,524	1,525,511	160

and from DXB, DOH and AUH. The 30 intercontinental destinations that are all served by the big three Middle Eastern airlines include Bangkok, Beijing, Frankfurt, London, Melbourne, Milan, Munich, Paris, New York and Singapore.

New York, Milan and Melbourne are all operated by Emirates, Etihad and Qatar Airways without any competition. Moreover, all three operate these routes at single or twice-daily frequencies with large widebodies, providing a total of: 480,000 seats each way between New York and DXB, DOH and AUH; 386,000 seats each way between Milan and DXB, DOH and AUH; and more than 300,000 seats each way between Melbourne and their three hubs.

London, Frankfurt, Munich, Paris and Milan are all destinations where the Middle Eastern carriers have added large amounts of capacity compared to other airlines.

Emirates, Qatar Airways and Etihad collectively added more than 1.35 million seats each way between their hubs and London from 2000 to 2010. In contrast, other airlines on the same routes only added 138,000 seats over the same period. British Airways added about 41,000 seats on London-DXB. Virgin Atlantic entered the route and provides about 112,000 seats per year with a daily A340-600 service, but its capacity replaced that of other airlines that left the route, however.

Similarly, over 10 years, the big three Middle East airlines added 509,000 seats between Frankfurt and their hubs, while Lufthansa added about 41,000 seats on Frankfurt-DXB. It also entered the Frankfurt-AUH route which it operated with 71,000 seats in 2010. Other airlines have left the three routes to and from Frankfurt, so the net effect is that all airlines, other than the three big Middle East airlines, added only about 43,000 seats from 2000 to 2010.

Similarly, the three major Middle East airlines have increased seat numbers at higher rates than other airlines on routes between their hubs and Munich, Paris and Bangkok. On their services to Munich Emirates, Qatar Airways and Etihad increased one-way seat numbers by about 313,000. The largest increase comes from Emirates, which has added 153,000 seats. The only competitor in this market is Lufthansa, which has added only 93,000 seats since 2000.

On the routes to Paris the three large Middle East airlines have added 606,000 seats compared to 100,000 by Air France. The routes serving Bangkok have also been increased by an impressive amount. Emirates, Qatar Airways and Etihad have increased total seat numbers by a factor of five by adding 912,000 seats each way from 2000 to 2010. Meanwhile Thai International increased its one-way seat capacity by about 65,000. Other airlines have left the market.

Routes to Singapore and Beijing are the few examples where competitors to the big three Middle East airlines have added similar numbers of seats over the 10 years to 2010. The main competitors are Singapore Airlines, Hainan Airlines, Air China and China Southern Airlines.

Major airlines

Most of the other airlines with large route networks in the region have also grown at high rates during this period. The exception is Gulf Air. In 2000, it served multiple hubs of Bahrain (BAH), AUH, DOH, Muscat (MCT) and Sharjah (SHJ). Since then its presence and size of operations at AUH, MCT and SHJ have declined as it has given way to the expansion of Air Arabia, Etihad, Oman Air and Qatar Airways at their respective hubs of AUH, DOH, MCT and SHJ. Prior to 2000, Gulf Air also had a large operation at DXB, and served several destinations from there. These operations shrank as Emirates grew and developed its operation.

Gulf Air's operation of intercontinental routes in 2010 was therefore confined to its hub at BAH.

The other airlines in the Middle East that have experienced high rates of growth and network development are Fly Dubai, Middle East Airlines (MEA), Royal Jordanian, Air Arabia, Oman Air and Turkish Airlines (THY). Saudia also increased the size of its operations during the 10-year period, but at a modest rate.

By 2010, Emirates had the largest operation of all airlines. When looking at capacity data on a one-way basis, it operated almost 59,000 flights and provided more than 18 million seats *(see table, this page)*. This was five times the size of its operation in 2000, as a result of continued high growth rates.

THY was the largest airline in 2000, and was still the second largest in 2010. The other airlines with the highest rates of development are MEA and Royal Jordanian.

Further insight into the development is gained by examining each airline.

Emirates

Emirates has enjoyed sustained high growth rates that have led to a high volume of passengers on most of its routes. It has the largest operation of carriers in the Middle East in terms of annual seat capacity across its route network *(see table, page 13)*.

The airline's strategy of providing long-haul connecting services via Dubai revolves around three connection banks per day. This limits the number of daily frequencies on each route to three in most cases. Other limits to the number of frequencies that can be added are restrictions within bilateral agreements and the number of take-off and landing slots available.

Many routes are operated at single daily frequencies. About 30, however, have two daily frequencies, five routes have three, and 10 have four. A few routes, such as services to London, have higher frequencies. Emirates' strategy has generally been to open a route with a type such as an A330 or 777. Second and then third daily services are added, as permitted, following continued traffic growth. Further growth is accommodated by using a larger type on the first daily frequency. This has been with the use of the A380, configured with 489 seats, on some routes since 2008.

Emirates operates 15 A380s, which are used on 11 of its routes. Some of these are among the busiest serving the Middle East, and are also the highest capacity intercontinental routes such as London Heathrow and Bangkok. It also uses the A380 on other city-pairs, such as Manchester, Paris and Toronto, because it can only operate at low frequencies.

Emirates' high rates of traffic growth mean that 34 of its routes serving DXB have become high volume, so that the total number of annual seats provided by all operators on a one-way basis exceeds 300,000. The rate of increase of total seat numbers provided by all operators on these 34 routes, from 2000 to 2010, exceeds 200% in most cases. That is a tripling of capacity, equal to a compound annual growth rate of 11.5%.

A few routes have had higher rates of growth. DXB-Hong Kong, for example, had almost seven times the amount of capacity in 2010 compared to 2000. Routes to Kuala Lumpur and Madras also had some of the highest growth rates.

Some new routes opened since 2000 have also experienced high rates of growth. By 2010 Emirates was operating to Jakarta, Hyderabad, Tehran and Beijing with more than 300,000 seats each way.

The combination of high traffic volumes, and frequencies on most routes being limited to two of three daily services, means that average aircraft size on many routes has to be large.

In addition to 11 routes requiring the A380, 60 of its routes also utilise the 777-300. Configured at 364 and 380 seats, this is Emirates' second largest aircraft.

As traffic growth continues, higher passenger numbers will require Emirates to use a larger number of 777-300s and A380s on more services and routes. The airline has a firm order backlog of 199 passenger-configured aircraft, split between six 777-200s, 48 777-300s, 70 A350s and 75 A380s.

The high rates of traffic and capacity growth from 2000 to 2010, and the resulting need for large aircraft on many of its routes in 2010, and a larger number of its city-pairs in the future, is illustrated by the annual capacity, average aircraft size and increase in aircraft size since 2000 on its top 30 routes *(see table, page 13)*. With one exception, all 30 routes have experienced a high rate of capacity development since 2000. Most of these routes have also reached a high level of service frequency, with 14 of them operating at three or more daily services.

The high rate of seat capacity growth has led to the use of larger types, and most of the routes have required an increase in average aircraft size. All but one route use the 777-300 for some of the frequencies, and seven routes already utilise the A380. A lot more of its routes will operate with the A380, given that Emirates has another 75 on firm order. Twenty of the routes have an average aircraft size larger than 300 seats, and 13 have an average aircraft size larger than 350 seats.

Qatar Airways

Qatar Airways experienced a higher rate of growth than Emirates from 2000 to 2010. Its one-way seat capacity across its route network increased by a factor of 4.7; equal to a compound annual growth rate of 17%. This has taken Qatar Airways from being the eighth largest operator in the Middle East to the third largest in 10 years.

It operates to 84 destinations, of which 69 are intercontinental. A large number of these have experienced some of the highest growth rates in the region, including services to Geneva (GVA), Munich (MUC), Frankfurt (FRA), Alexandria (ALY), Kochi, Manila, Milan and Singapore. All of these routes have had an increase in seat numbers by at least a factor of eight.

Qatar Airways' development strategy has been similar to that of Emirates, and its rate of development is particularly impressive given the small size of its operation in 2000. It now provides about half the number of seats that Emirates does. Another impressive feature of Qatar Airways' development is that it also competes with Emirates and Etihad for connecting long-haul passengers on 30 of its intercontinental routes, and competes with one of these airlines on another 23. Taking its whole route network into consideration, it competes with Emirates on 51 routes and with Etihad on 45.

While Qatar Airways' network and size of operation has grown at a fast rate, many of its routes still have single daily frequencies. Of its top 30 city-pairs, 20 are intercontinental routes, of which 13 are operated with single daily services and four have dual daily frequencies. Only Kathmandu, Colombo and London have three or four daily services.

The other 10 of its top 30 routes are to cities in the Middle East, to which Qatar Airways operates at high frequencies. Many of these routes have three or more daily services.

Unlike Emirates, Qatar Airways operates with both widebodies and narrowbodies, the latter mainly being confined to Middle East routes. In 2000 its fleet of 12 aircraft was six A300-600s and six A320s. By 2010 this had grown to 91 passenger aircraft, including 31 A320 family types, three A300-600s, 29 A330-200s/-300s, four A340s and 23 777-200s/-300s. The percentage of widebodies has therefore increased, and its expectations of continued high rates of future growth are reflected by 135 firm orders, of which 120 are for widebodies, including four 777-300s, 80 A350s and five A380s.

Sustained growth has resulted in 44 of its 69 intercontinental routes becoming high volume: 12 now have annual seat capacities of more than 300,000; another 27 have annual capacities of 250,000-300,000; and five have seat volumes of 200,000-250,000.

The largest aircraft operated by Qatar Airways is the 777-300, configured with 335 seats, and used on 19 of its intercontinental routes. Aircraft size has been increasing on most of its routes, of which 40 have an average aircraft size of at least 250 seats. This includes 30 of the 56 routes that it has opened since 2000. Destinations include Bangkok, Singapore, Melbourne, Beijing, Shanghai, Dhaka, Paris, London, Frankfurt, Munich and New York; with Qatar Airways having a monopoly on these routes, and limited competition from other carriers on most of its other intercontinental routes.

The 777-300, 777-200 and A330-300 are prominent on its highest-density routes.

Etihad Airways

Since its inception in 2001, Etihad has expanded Gulf Air's original operation. Gulf Air's route network seat capacity in 2000 had increased by a factor of 3.5 by 2010. Since 2003, Etihad has increased the number of intercontinental routes by 28 to 50, and services to Middle East cities by four to 11. It served 61 destinations in 2010.

EMIRATES' 30 BUSIEST ROUTES - CAPACITY DEVELOPMENT 2000 TO 2010

Airport pair	2010 Annual flights	annual seats	Average aircraft size-seats	10-year growth -flights	10-year growth -seats	10-year change -size
DXB-LHR	1,825	745,645	409	66%	111%	88
DXB-BKK	1,457	591,799	406	298%	344%	42
DXB-BOM	1,825	556,179	305	81%	149%	84
DXB-DOH	1,825	460,981	253	134%	160%	25
DXB-DEL	1,460	417,514	286	298%	451%	80
DXB-KHI	1,460	403,460	276	49%	30%	-40
DXB-KWI	1,460	393,354	269	180%	194%	13
DXB-KUL	1,067	376,492	353	N/A	N/A	N/A
DXB-LGW	1,095	374,218	342	199%	331%	105
DXB-JNB	1,096	373,186	340	204%	342%	106
DXB-IKA	1,095	363,177	332	N/A	N/A	N/A
DXB-MAA	1,095	314,363	287	1,464%	2,168%	89
DXB-CDG	730	311,651	427	365%	738%	190
DXB-DAC	883	299,093	339	141%	125%	-25
DXB-CMB	777	288,818	372	111%	165%	76
DXB-MAN	730	280,970	385	94%	214%	148
DXB-JFK	730	273,470	375	N/A	N/A	N/A
DXB-HYD	1,092	270,325	248	N/A	N/A	N/A
DXB-BAH	1,106	269,294	243	71%	89%	23
DXB-MNL	735	267,540	365	134%	134%	0
DXB-BHX	730	265,720	364	5,114%	7,908%	127
DXB-SIN	731	266,084	364	39%	49%	26
DXB-FRA	730	265,988	364	99%	197%	120
DXB-SYD	668	259,083	388	N/A	N/A	N/A
DXB-CGK	705	256,546	364	N/A	N/A	N/A
DXB-BEY	861	240,435	279	312%	335%	15
DXB-PEK	730	239,376	328	N/A	N/A	N/A
DXB-MLE	694	238,415	344	230%	454%	139
DXB-PVG	735	232,135	316	N/A	N/A	N/A
DXB-AMM	775	229,427	296	195%	299%	78

Etihad has employed broadly the same strategy as Emirates and Qatar Airways, which has resulted in high rates of traffic and capacity growth and development. The rate of sustained capacity growth has been equal to an annual compound growth rate of about 13%. Etihad's operation is now the fifth largest in the Middle East. Its fleet has therefore grown in parallel from just two A330s in its first year of operation to 15 A320 family aircraft and 36 widebodies in 2010. It also has 20 A320s and 81 widebodies on firm order. This includes 12 777-300ERs and 10 A380s.

Etihad's route network has grown from a small base, so many of its routes operate at low frequencies and still have relatively small amounts of capacity, despite high growth rates and the extensive use of widebodies. Of its 61 routes, 50 have daily services or fewer than 365 flights per year. Only 13 have dual or higher daily frequencies. Similarly, 42 of its routes have a one-way annual seat capacity of less than 100,000 seats, and another 13 city-pairs have seat capacities of 100,000-150,000. Only seven routes have more than 150,000 seats annually each way. If growth rates are sustained, however, then frequencies are likely to reach two or three times daily on many routes.

Etihad's top routes from AUH are Bahrain, Doha, Bangkok, London and Manila, all with more than 200,000 seats each way in 2010. Frankfurt and Sydney are also large routes.

Like Emirates and Qatar Airways, Etihad provides most or all of the seat capacity on many of its routes. Of the highest-density city-pairs in its network, Etihad has a monopoly on routes serving Bangkok, Beijing, Tokyo, Sydney, Melbourne, Milan, Manchester and New York. It also provides most of the capacity on routes serving Singapore, Lahore, Karachi, Frankfurt, Paris and London.

As a result of the monopoly or majority of capacity on many intercontinental routes, coupled with low frequencies and high growth rates, large aircraft are needed on routes to North America, Europe, Johannesburg, some cities on the Indian sub-continent and in the Asia Pacific, on which Etihad has an average aircraft capacity of 250-335 seats. Etihad's largest aircraft are the 777-300 configured with 378 seats, the A340-600 with 286 seats, and the A330-300 with 296 seats. These aircraft are used on most of these high-density routes. The A330-200, configured with 262 seats, is used in combination on some of these routes, plus other lower-density city-pairs.

Its routes serving the Middle East and most points in the Indian sub-continent are operated with a mix of A320s and smaller widebodies, with average aircraft sizes on most being less than 200 seats.

Continued growth has resulted in Etihad increasing service frequencies to Paris, Manchester, Geneva, Milan, Brussels, Beijing and Bangalore, and increasing aircraft size on its Chicago service to a 777-300ER, which replaces the smaller A340-500 and -600.

Turkish Airlines

Istanbul (IST) and THY have long dominated the Middle East. Istanbul was the largest hub in terms of operations and seat numbers in 2000, and THY had the largest and busiest route network of all major airlines. DXB and Emirates were the second largest hub and airline in the region in 2000. With sustained high growth rates DXB and Emirates became the dominant hub and operator by 2010, leaving IST and THY as the second largest.

THY operates the largest network of all Middle East airlines, and serves 164 destinations. Since 2010 a second airport at Istanbul, Sabiha Gocken (SAW), has become a major hub. THY and Pegasus Airlines have developed extensive operations from SAW. THY's combined operations at IST and SAW almost equal Emirates' operation at DXB *(see table, page 13)*. Since 2000, THY's total operation and annual capacity have grown by a factor of 2.5, equal to a compound growth rate of 9.5% per year. While lower than younger airlines in the Middle East, it is about twice the global average rate of development. The percentage of THY's traffic that is connecting intercontinental traffic at Istanbul is about 45%. Interestingly, about 50% of its passengers at Istanbul fly on international routes; indicating that a high proportion use THY for transiting services.

THY's route network includes 59 destinations in Europe and 55 in the Middle East, including a large number of airports in Turkey on its domestic operation. It also serves 28 cities in the Asia Pacific, including 16 in the Commonwealth of Independent States (CIS).

THY serves 28 destinations from SAW, of which 22 are also served from IST. All destinations from SAW are European or within 1,350nm so they are all operated with narrowbodies.

THY has developed its intercontinental route network as a long-haul connecting hub in recent years, so its strategies are similar to those used by Emirates, Qatar Airways and Etihad. By 2010, THY was serving 49 destinations in North America, Africa, the Indian sub-continent and the Asia Pacific. Almost half of these routes have been opened

since 2000, and include destinations such as Mumbai, Delhi, Sao Paulo, Washington DC, Seoul, Lagos, Shanghai, Singapore and Toronto. THY has almost doubled the number of destinations it serves since 2004. In 2005 it opened six new routes, 24 in 2006, 12 in 2009, and 11 in 2010. It has also started operations to another 17 destinations in 2011, including Los Angeles and Guangzhou. It will also open services to destinations in the Asia Pacific, North America, Africa and Europe before the end of 2011.

THY has a monopoly on many of its new routes, and uses large widebodies on many. Its largest types are the A340-300, configured with 271 seats, and the 777-300 with 312.

Another 27 established intercontinental routes are operated, and THY has a monopoly on nine of these. Average aircraft size is higher than 250 seats on these. THY provides most of the capacity on another 14 of the established routes, to destinations in Africa or the CIS. Narrowbodies provide most of THY's capacity on these routes.

Overall, THY's intercontinental operation is about 2.6 times the size it was in 2000, equal to an annual compound growth rate of 10%. While this is not as high as the development of the big three Middle East airlines, THY has grown faster than its competitors on its intercontinental network.

Other airlines

Other Middle East airlines that have experienced high rates of network and capacity development since 2000 are Oman Air, Fly Dubai, Air Arabia, Royal Jordanian and Middle East Airlines (MEA).

Oman Air's operation increased by a factor of 1.6 between 2000 and 2010. This is equal to annual compound growth rate of about 5%.

In addition to a large number of cities in the Middle East, Oman Air serves 14 destinations on the Indian sub-continent, four in Europe and two in the Asia Pacific from its base at MCT. Ten of these routes have been added since 2000. The airline's fleet includes 15 737NGs and two A330-200s. The A330-200s are used on its operations to Europe, the Asia Pacific and some cities in India.

Fly Dubai started operations in 2008 as a low-cost, short- and medium-haul carrier operating from Dubai. It utilises a fleet of 17 737-800s to serve a total of 23 routes up to 2,300nm. The airline's operation has grown to an annual one-way seat capacity of more than 1 million. It has 39 aircraft on order, indicating continued high rates of development are forecast.

Air Arabia operates from Sharjah, and had a small operation and fleet in

ETIHAD'S 30 BUSIEST ROUTES - CAPACITY DEVELOPMENT 2000 TO 2010

Airport pair	2010 Annual flights	annual seats	Average aircraft size-seats	10-year growth -flights	10-year growth -seats	10-year change -size
AUH-LHR	1,095	312,402	285	150%	232%	70
AUH-BKK	730	270,372	370	589%	777%	79
AUH-BAH	1,460	257,404	176	-23%	-18%	11
AUH-MNL	625	224,070	359	862%	1098%	71
AUH-DOH	1,460	209,442	143	39%	26%	-15
AUH-FRA	718	189,824	264	23,833%	26,711%	28
AUH-MAN	730	163,330	224	n/a	n/a	n/a
AUH-SYD	574	161,542	281	n/a	n/a	n/a
AUH-KWI	1,095	145,976	133	584%	571%	-3
AUH-CDG	521	144,802	278	252%	348%	60
AUH-MCT	1,095	143,192	131	13%	-24%	-63
AUH-BEY	938	139,682	149	1,704%	638%	-215
AUH-JED	389	138,130	355	274%	452%	114
AUH-RUH	417	134,224	322	283%	513%	121
AUH-CAI	682	129,212	189	109%	151%	32
AUH-DUB	482	126,284	262	n/a	n/a	n/a
AUH-CGK	365	119,874	328	n/a	n/a	n/a
AUH-COK	730	117,165	161	n/a	n/a	n/a
AUH-DMM	677	104,056	154	n/a	n/a	n/a
AUH-KUL	365	101,198	277	128%	172%	45
AUH-ORD	365	99,514	273	n/a	n/a	n/a
AUH-DAM	730	98,138	134	251%	227%	-10
AUH-LHE	365	98,528	270	121%	278%	112
AUH-AMM	730	97,268	133	693%	372%	-91
AUH-MUC	365	95,630	262	n/a	n/a	n/a
AUH-JNB	365	95,630	262	n/a	n/a	n/a
AUH-DAC	364	93,718	257	198%	201%	2
AUH-JFK	365	91,694	251	n/a	n/a	n/a
AUH-MEL	365	91,464	251	n/a	n/a	n/a
AUH-BRU	313	82,006	262	n/a	n/a	n/a

QATAR AIRWAYS'S 30 BUSIEST ROUTES - CAPACITY DEVELOPMENT 2000 TO 2010

Airport pair	2010 Annual flights	annual seats	Average aircraft size-seats	10-year growth -flights	10-year growth -seats	10-year change -size
DOH-DXB	2,869	615,122	214	144%	203%	42
DOH-LHR	1,460	446,026	305	257%	405%	89
DOH-BAH	2,078	382,173	184	352%	446%	32
DOH-AUH	1,799	274,553	153	98%	91%	-6
DOH-BKK	791	256,755	325	606%	961%	109
DOH-KWI	1,460	246,590	169	599%	656%	13
DOH-MNL	730	226,316	310	1,304%	1396%	19
DOH-CDG	730	224,916	308	8,011%	11,,470%	92
DOH-KTM	1,006	199,598	198	179%	201%	14
DOH-CMB	1,009	196,054	194	543%	564%	6
DOH-KUL	574	172,995	301	n/a	n/a	n/a
DOH-MCT	1,095	165,770	151	4,661%	4,244%	-15
DOH-DAC	524	154,144	294	216%	338%	82
DOH-BEY	928	154,207	166	307%	315%	3
DOH-FRA	522	147,264	282	3,629%	4,357%	46
DOH-DMM	892	139,252	156	465%	512%	12
DOH-IAD	365	122,275	335	n/a	n/a	n/a
DOH-JED	372	121,301	326	137%	295%	130
DOH-SIN	365	119,829	328	n/a	n/a	n/a
DOH-ATH	713	116,590	164	n/a	n/a	n/a
DOH-KRT	730	115,685	158	616%	448%	-48
DOH-IKA	713	114,910	161	n/a	n/a	n/a
DOH-JFK	365	114,903	315	n/a	n/a	n/a
DOH-MLE	545	112,206	206	n/a	n/a	n/a
DOH-CAI	391	110,939	284	87%	238%	127
DOH-PVG	340	110,458	325	n/a	n/a	n/a
DOH-MAN	365	109,774	301	n/a	n/a	n/a
DOH-MAD	365	109,048	299	n/a	n/a	n/a
DOH-MXP	365	108,553	297	n/a	n/a	n/a
DOH-BOM	365	108,575	297	75%	262%	153

Since starting operations in 2003, Etihad has become the fifth largest airline in the Middle East. It services more than 60 destinations; and 50 of these are intercontinental cities. Its fleet has grown to 51 aircraft, and it has firm orders for 101 aircraft. This includes 12 777-300ERs and 10 A380s.

2000. By 2010 its annual operation had grown to 17,000 flights and an annual one-way capacity of 2.6 million seats. It has a fleet of 20 A320s, and has another 40 on firm order. The airline serves a total of 40 destinations, most of which are in the Middle East and the Indian sub-continent. It also flies to a few African and European destinations.

Royal Jordanian increased the size of its operation from Amman by a factor of 2.6 from 2000 to 2010. It served 59 destinations in 2010, including 24 in the Middle East, 19 in Europe, eight in North Africa, and small numbers in the Asia Pacific, the Indian sub-continent and North America. Of these routes, 21 had been opened by Royal Jordanian since 2000, including four routes to North America, six to Europe and six to the Middle East.

The airline experienced high growth rates on about 16 of its routes, but unlike the big three Middle East airlines, Royal Jordanian's high growth has been mainly confined to routes serving points in the Middle East. The airline operates with low service frequencies across most of its network.

MEA, based in Beirut, has seen its operation double in size from 2000 to 2010. Its route network increased from 20 destinations to 36 over the 10-year period. The rate at which the airline has grown is mainly due to opening 16 new routes, most of which are to points in the Middle East. Its other routes are either to European or African cities. It has needed to deploy the A330-200 on its busier routes as traffic has continued to grow, but it has not developed an intercontinental connecting network.

Summary

The high rate of intercontinental network development has been confined to Emirates, Qatar Airways, Etihad and THY. As described, these airlines have structured their route networks by using their hubs as points to serve a large number of intercontinental connections. This has been combined with low unit costs, which have allowed these airlines to provide a high level of in-flight service.

The rate of growth in annual operations and capacity, fleets, average aircraft size and number of new routes that have been added is a clear indication of the success of this strategy. These airlines have been able to stimulate demand for long-haul services, as well as providing alternatives for established passengers.

The overall effect on other airlines is varied. British Airways and other incumbent airlines, for example, have had smaller growth in the number of annual operations and seat capacity between London and Singapore (SIN) or Hong Kong (HKG) than the big three Middle East airlines have on their connecting services.

First, on the London Heathrow (LHR)-HKG route, incumbent airlines increased annual one-way seat capacity by 279,000 from 2000 to 2010 in their non-stop services. In contrast, Emirates, which did not operate a DXB-HKG route in 2000, increased its annual seat capacity on its LHR-DXB and DXB-HKG routes by a combined total of 509,000. Over the same period, Qatar Airways increased annual seat capacity on its LHR-DOH and DOH-HKG routes by 445,000 seats. Like Emirates, Qatar Airways did not operate a service to HKG in 2000.

A similar effect is seen on services between LHR and SIN. Incumbent airlines on non-stop LHR-SIN services decreased annual one-way seat numbers by about 24,000 from 2000 to 2010. In contrast, Emirates, Etihad and Qatar Airways increased annual one-way seats on their combined services from LHR to their respective hubs, and on from their hubs to SIN, by a combined total 1.12 million from 2000 to 2010.

These two examples illustrate how Emirates, Etihad and Qatar Airways have taken the majority of traffic growth on some of the world's major long-haul markets. In the case of the Europe-Asia Pacific market, passengers have the inconvenience of transiting at a Middle East hub, and a longer total transit time compared to a direct route. While business passengers still prefer the direct services, and so remain loyal to the incumbent carriers, lower-yield and leisure passengers have a competitive alternative, both in terms of product quality and fare.

For passengers on other long-haul connecting markets, the big three Middle East airlines and THY offer a simple alternative in terms of total journey times and number of stops or transits. That is, passengers travelling between Europe and Australia or New Zealand have similar total transit times when selecting the Middle East airlines compared to the traditional services that transited via Bangkok, Kuala Lumpur, Singapore and Hong Kong. The same applies to passengers travelling from North America to the Asia Pacific. Using Middle East airlines to travel via DXB, AUH or DOH is a new alternative to the traditional trans-Pacific routes, which are operated by US or Asia Pacific carriers.

The Middle East airlines appear to have an overall more appealing product when the rate at which their networks have grown compared to their competitors is analysed. The strategies described have clearly stimulated traffic volumes. The issue is, however, how long can traffic growth continue at the rates seen over the past 10 or 11 years? AC