

The past 10 years has seen the opening of a large number of routes in all the world's long-haul markets, as well as high rates of traffic growth on established routes. How airlines have added capacity to accommodate this growth reveals that most have increased frequencies and opted for aircraft smaller than the 747-400.

The development of long-haul markets 2000 to 2009

The debate about the size of long-haul aircraft that airlines will require has continued for the past 10 years. Airbus has argued that airlines will need large aircraft and the A380, in particular, since most passengers will continue to be transported via trunk routes. Boeing's philosophy has been that, while some trunk routes will continue to need large aircraft, a large number of new city- or airport-pairs will be opened by airlines as traffic growth progresses. Most long-haul aircraft will therefore need to have 250-350 seats. It is possible that both Airbus and Boeing could be proved to be partially right. If new routes are opened at a smaller rate than Boeing's forecast then more traffic would remain on trunk routes.

Analysing the long-haul schedule and fleet-planning strategies that airlines have actually followed reveals how they have accommodated traffic growth in the eight main long-haul markets over the past 10 years, and suggests the policies that airlines are likely to follow for the next 10-20 years.

Airline strategies

Comparing 2000 and 2009 capacity and scheduled data on all the world's significant long-haul routes reveals that airlines have increased frequency in line with total capacity, while aircraft size has reduced marginally (see table, page 15). Only on routes to and from the Middle East has average aircraft size increased.

The average aircraft size on most routes is now 200-300 seats. The A330-200, A330-300, all A340 models, the 777-200 and 777-300 have become the most used types on long-haul routes over

the past 10 years.

The 747 is still present on the busiest routes and operated by the largest carriers, but is less prevalent now than it was 10 years ago. A lot of fleet changes have been seen by airlines such as Iberia, KLM, Air France, Air Canada, All Nippon Airways (ANA) and United Airlines which have exchanged a large number or all of their 747s for the A340 and 777. Moreover, Japan Airlines, British Airways and Lufthansa have also reduced their 747-400 fleets by a substantial percentage. The portion of their fleets accounted for by smaller types has increased.

The A380 is so far only operated on the world's busiest routes at a limited number of frequencies by some of the most dominant airlines.

The first strategy airlines have followed in absorbing traffic growth has been to accept higher factors, and avoid the need to increase or change capacity.

Once load factors have reached higher levels, airlines have increased frequencies in response to long-term traffic growth, thereby allowing them to provide a range of attractive departure and arrival times each day on each route. While airlines operating on established routes like London-New York, London-Dubai and London-Singapore have already saturated their frequencies, most airlines on most routes still have a limited number of daily or weekly services. When an airline opens a new route it may only operate four or five services per week in both directions. Even a daily service has limited marketing appeal, and most would like to operate at least 14 flights per week (two per day or 730 per year) in both directions. The capacity data for each airline on each route for 2000 and 2009 indicates that

most airlines are actually aiming to offer three or four daily services.

Only when further frequencies become impractical for various reasons on each route (at least twice a day in most cases, and up to five or six daily services on a few of the busiest airport-pairs) do airlines generally follow the third option of using larger aircraft to accommodate higher passenger numbers.

A resumption of growth, following the global recession, will first see most airlines continue to add frequencies on most routes. Continued growth will eventually see airlines satisfy their frequency and schedule requirements, so larger types will eventually be needed. An increasing number of routes will have high enough traffic volumes for each airline operating the service to require types like the 777-300, A350-1000, 747-8 and A380.

Europe-South America

The disappearance of VARIG of Brazil has been the main change of the past 10 years, along with the collapse of Aerolineas Argentinas in 2001, which was re-nationalised in 2008 after years of turmoil.

The main established arteries between South America and Europe run from Madrid to: Buenos Aires, Argentina; Sao Paulo, Brazil; Bogota, Colombia; Lima, Peru; Caracas, Venezuela; and Santiago de Chile, Chile. There has been a large increase in capacity on these routes, and Iberia has been one of the key components of this rise.

From 2000 to 2009, however, South American routes to and from Paris gained considerable market share, because Air France re-organised its schedule and hub

LONG-HAUL ROUTE DEVELOPMENT 2000 TO 2009

Established Market	Number of Flights			Number of Seats			Aircraft size change from 2000	Average size 2009
	Total 2009	Change from 2000	% change	Total 2009	Change from 2000	% change		
Europe-South America	17,993	6,266	+53.4%	5,000,000	1,890,000	+60.6%	12	279
Europe-North America	131,519	459	+0.4%	34,200,000	-1,850,000	-5.1%	-15	260
Europe-Caribbean	10,647	1,848	+21.0%	2,220,000	174,000	+5.7%	-44	303
Trans-Pacific	41,375	-3,962	-8.7%	13,480,000	-2,200,000	-14.2%	-21	326
Europe-Asia	57,100	14,550	+34.2%	16,000,000	3,960,000	+32.9%	-2	281
Middle East-Africa	2,438	1,127	+86.0%	731,000	435,000	+144.1%	72	302
Middle East-Asia Pacific	18,243	9,959	+120.2%	5,875,000	3,380,000	+135.2%	20	322
Middle East-Europe	30,400	13,345	+78.1%	8,616,000	4,450,000	+106.7%	39	283
Middle East-North America	3,283	484	+17.3%	1,047,000	132,000	+14.4%	-8	319
Trans-Asia	27,000	4,714	+27.3%	6,414,000	1,150,000	+21.8%	-13	291
Asia-Australia	28,162	7,375	+35.5%	8,859,000	2,190,000	+32.9%	-6	315
Africa-Asia	3,083	783	+34.0%	845,000	200,000	+31.1%	-6	274
Africa-Europe	24,000	4,980	+26.1%	6,772,000	1,310,000	+23.9%	-5	281
North America-South America	18,200	-1,242	-6.4%	4,020,000	-494,000	-10.9%	-11	221

connection times at Charles de Gaulle (CDG) airport to attract higher passenger volumes.

Flights from Madrid to Buenos Aires increased during this period from 947 to 1,643 a year, despite the decimation of Aerolineas Argentinas' services in 2001. Iberia replaced it as the main operator. By 2009 Aerolineas was well behind, before it hit troubled times in 2009 and ceased operations at the end of the year.

The second largest route in terms of flights is Paris-Sao Paulo. Air France and TAM each have about 50% of capacity. The route has grown little since 2000, but it has therefore been relatively stable.

In contrast, the Madrid Sao-Paulo route saw a slight contraction, from 1,099 to 1,071 services. Iberia and TAM have taken up the capacity vacated by Aerolineas Argentinas and VARIG.

Six of the top 10 routes from Europe to South America are operated out of Madrid, but Paris to Rio has lost VARIG and gained TAM. Air France is now the main operator. While by 2009 TAM operated a daily A330 service, Air France had gone from an A340 operating 196 frequencies a year to a daily service with a 747, and an A330 service operated 241 times a year. Air France has therefore been the main beneficiary of VARIG's demise in this market.

London-Sao Paulo is the only route between London and South America to appear in the top 10; the ninth largest with 730 flights a year operated by British Airways and TAM. Frankfurt-Sao Paulo has the same number of flights being operated by Lufthansa and TAM. The volume on the route has dropped only slightly since 2000 with VARIG going, and it is likely to grow fast in the future as the Brazilian economy grows.

Overall the Europe-South America market has experienced one of the higher rates of capacity growth. The number of flights has risen by 53% to 17,993 and

seats increased by 61% to 5 million. Average aircraft size increased by 12 seats to 279 (see table, this page).

There are also 25 new routes in the market. The top five new routes are dominated by four services out of Madrid to: Ecuador; Cali, Colombia; Montevideo, Uruguay; and Santa Cruz, Bolivia. Others include Amsterdam-Lima, Barcelona-Bogota, Barcelona-Buenos Aires, Paris-Santiago de Chile, Lisbon-Brasilia, and Lisbon-Belo Horizonte.

While Madrid seems to have become the European entry point for South America, several services have been abandoned since 2000. These are Paris-Cayenne, Amsterdam-Caracas, Frankfurt-Rio de Janeiro, London-Buenos Aires, London-Bogota, London-Caracas. British Airways' merger with Iberia will, if it is finalised, give BA excellent access to South America. Iberia will gain from BA's strong northern transatlantic network.

Europe-North America

When comparing capacity data for both 2000 and 2009 for the northern transatlantic market, it immediately

becomes clear that London has lost some of its dominance to Paris, Amsterdam, Frankfurt, Munich, Madrid, Rome and Dublin/Shannon. Routes from these European cities all grew.

Routes from Manchester also grew to a lesser degree. Barcelona saw an almost doubling of services even though it is a relatively minor European destination.

Brussels saw the biggest decline, reflecting the demise of Sabena in 2001. Zurich's capacity dropped significantly due to the demise of Swissair in 2002. Swiss International Air Lines is now operating as part of the Lufthansa group, which has added back much of the capacity.

The top transatlantic route, which is also one of the world's largest, is still London-New York at 8,965 frequencies and 2.49 million seats each way per year. Capacity has declined, however, from 2000 when 11,100 flights and 3.22 million seats were operated.

Amsterdam/Paris-New York (Amsterdam and Paris are considered here as one due to the merger of Air France and KLM) had 6,452 flights each way in 2009, up from 6,126 in 2000.

CAPACITY DATA FOR NEW ROUTES

Market	Number of routes added	Number of flights added	Number of seats added	Average aircraft size
Europe-South America	25	2,620	675,000	258
Europe-North America	68	14,350	3,137,000	219
Europe-Caribbean	25	2,718	730,000	269
Trans-Pacific	33	10,492	2,989,000	285
Europe-Asia	96	17,636	4,679,000	265
Middle East-Africa	17	5,208	1,513,000	290
Middle East-Asia Pacific	34	9,084	2,563,000	282
Middle East-Australasia	8	3,065	861,000	281
Middle East-Europe	35	6,293	1,676,000	266
Middle East-North America	24	5,720	1,604,000	280
Trans-Asia	27	4,774	1,210,000	253
Asia-Australia	22	3,307	948,000	287
Africa-Asia	15	1,837	449,000	245
Africa-Europe	35	5,260	1,221,000	232
North America-South America	21	4,609	948,000	206

Although they have half the capacity, the next four largest routes are all operated out of London Heathrow to Chicago, Los Angeles, Washington and Toronto. London Heathrow-Boston is the tenth largest with 2,189 services each way a year.

Shannon/Dublin, Frankfurt, Rome and Madrid to New York, which are in the Europe-North America top 14, have 1,800 services a year each, while Paris/Amsterdam to Montreal is the other notable route, at eighth in the list with 2,315 services.

One large area of growth has come from expansion of services by Lufthansa at Munich. The airline has clearly followed a strategy of developing this as its second long-haul hub after Frankfurt.

The failure of Swissair, Sabena, Alitalia and Olympic Airlines explains a large part of the reduction in capacity in this market. Swiss and Alitalia have re-emerged, but have smaller long-haul networks. Olympic Air replaced Olympic Airlines, but Olympic Air does not operate any long-haul services. Brussels Airlines has replaced Sabena, with a smaller long-haul operation.

There was only a 0.4% growth in transatlantic traffic on established routes, with 459 flights added but, interestingly, a drop of 5.1% in the number of seats to

34.2 million. The overall effect was for average aircraft size to decrease by 15 seats to 260 (see table, page 15). This is explained by some 747 frequencies being exchanged for types like the 777 on many routes. The Europe-North American market has changed where the 767 used to be the most used type to the A330, A340 and 777 accounting for most operations.

In terms of new transatlantic services, 68 were introduced between 2000 and 2009 (representing 14,350 flights and 3.14 million seats each way in total). This adds to the 131,519 services each way operated in 2009 on established routes. The total number of services each way therefore increased to 145,410.

Europe-Caribbean

This market grew by 21% in terms of operations, but only 5.7% in seat numbers. Average aircraft size therefore dropped from 346 to 303 (see table, page 15). There were 25 routes added to the market, mostly operating out of London Gatwick and Manchester, England.

One of the main routes to the Caribbean is Paris-Martinique, operated by Air France, Air Caraïbes and Corsair. This has seen growth from 1,052 to 1,223 services a year with 747s and DC-

10s giving way to 777s and A330s. Paris-Haiti services have also grown, from 951 to 1,355.

Madrid is another major gateway to the Caribbean, mainly to Havana, Cuba. This grew from 753 to 941 annual services from 2000 to 2009. Average aircraft size fell from 326 to 244 seats.

Air France also managed to move to daily services to Havana from Paris CDG, using 777s to supplement its 747 services, reducing average aircraft size from 461 to 361 seats.

Another major Caribbean destination is Barbados, where services are dominated by BA, Virgin and Caribbean Airlines (which operated services from London as a codeshare with BA). Services on London Gatwick-Barbados increased from 607 to 1,007, while aircraft average size decreased from 364 to 306 seats. In 2000 the route was operated only by BA and Virgin but, as mentioned already, Caribbean Airlines now shares the route. The carrier was incorporated in 2006 to replace BWIA.

Trans-Pacific

Capacity on established trans-Pacific routes has reduced a considerable amount following fragmentation of the market.

Tokyo still dominates the Asian side

X = -16

LOWER EMISSIONS.

X equals CFM's* revolutionary LEAP-X engine. An engine that burns 16% less fuel, so it produces 16% less CO₂ than current CFM56 engines. It also emits up to 60% less NO_x compared to current regulations, and is quieter. Friendlier to the environment and to endangered profit margins, it's the engine for

of the trans-Pacific market, but it has lost ground since 2000 to other destinations, such as Seoul, Hong Kong, Shanghai and Beijing. This is because longer-range variants of aircraft, such as the 777-200ER and -200LR, have made it possible for airlines to fly more direct flights from US cities that can bypass Japanese hubs. Moreover, liberalised bilateral agreements between the US and various Asia Pacific destinations have allowed new non-stop routes to be opened.

What can also be seen clearly is that capacity on routes to and from Taipei and Nagoya have also declined. Services to and from Osaka have suffered the largest reductions in capacity, with the number of flights decreasing from 3,441 in 2000 to 1,187 in 2009.

Services to and from Auckland have also declined.

Overall, there has been a shift to direct services being operated between the US and fast-growing Chinese cities at the expense of the more traditional Japanese cities. The only traditional Asia Pacific hub not to be affected is Hong Kong.

Many of these new direct services are at a stage where few airlines could consider deploying larger aircraft as they cope with the global recession, share the market with competitors, and try to build

frequencies.

Despite the change in the market, the four trans-Pacific routes with the most flights operated are still to and from Tokyo. These are routes to Honolulu, Los Angeles, San Francisco and New York. Dallas is also a major route from Tokyo, while other routes with high volumes include Taipei to Los Angeles and San Francisco. These have lost 20% in terms of frequencies. Taipei's links with Vancouver and Honolulu have dwindled even more substantially.

The increase in capacity between Seoul and the US has been largely accounted for by its longer-range routes to cities like New York and Chicago. It is routes like these that account for the increase in the number of long-range twins in airline fleets.

Other trans-Pacific routes between Seoul and Los Angeles, San Francisco and Vancouver have seen only an increase in capacity of about 5%.

Capacity on Hong Kong-San Francisco has increased, because of San Francisco's large Chinese population. Other routes to and from Hong Kong have experienced only a small overall increase in capacity.

Hong Kong-Los Angeles has seen flight numbers reduce from 955 to 671 annual services. Osaka-Honolulu has also

seen a large reduction in capacity from 1,461 annual flights to only 721.

Compared to 2000, there were 3,962 fewer flights annually in 2009, resulting in a drop of 8.7%, and seat numbers falling by 14.2%. This first reflects a shift from aircraft such as the 747 to smaller widebodies such as the 777. This is not surprising given that many airlines opted to fly longer, non-stop routes that avoided Tokyo. This has clearly impacted JAL and ANA. JAL's long-haul fleet since 2000 has changed from 78 747s and nine 777s to 45 747s and 46 777s. ANA has also decreased its 747 fleet from 38 to 13, but has doubled its 777 fleet to 43 aircraft in the same time.

The new direct routes will have lower passenger volumes than traditional services transiting Tokyo. Average aircraft size for the whole market declined 21% to 326 seats (see table, page 15). The drop in the number of services also reflects the large number of routes across the Pacific that stopped in this period; especially those operating to and from Japan, such as Air Canada's daily service between Osaka and Vancouver with an A340-300.

The trans-Pacific saw 33 new routes opened between 2000 and 2009. The top new route is Hong-Kong-New York, operated by Continental and Cathay



THE POWER
OF FLIGHT

% CO₂

THAT'S THE POWER OF X.

the next generation of aircraft against which all others will be measured. An engine worthy of inheriting the mantle of the world's most reliable engine. The legendary CFM56. Do your homework on the power of X. Visit www.cfm56.com/xpower

LEAP-X

CFM, CFM56 and the CFM logo are all trademarks of CFM International, a 50/50 joint company of Snecma and General Electric Co.



Pacific with 777s. At 16 hours' duration this is one of the longest routes operated anywhere. It has still grown to 1,095 annual flights in 2009.

Other similarly long routes that have opened are Beijing-New York, Delhi-New York, Mumbai-New York and Shanghai-Chicago. Flights from Delhi and Mumbai operate westerly over European airspace, rather than across the Pacific.

The 33 new trans-Pacific routes opened during this period now have 10,492 annual flights in each direction, and almost 3 million seats. Average aircraft size is 285 seats, with the A340 and 777 dominating operations.

Routes that ceased operating include: China Airlines' services between Haneda and Honolulu; JAL's services serving Honolulu from Fukuoka, Sapporo, Nigata, and Hiroshima; and Narita-Las Vegas, which was also dropped by Northwest. Of the 23 routes which have been stopped, many were services to and from Honolulu, suggesting that Hawaii is now also being overflowed due to the availability of non-stop services. This trend is also likely to accelerate with the signing of a new US-Japan open skies agreement in December 2009.

Europe-Asia

The Europe-Asia Pacific market was one of the larger growing markets in the 10-year period to 2009. Established routes saw daily services increase by 34%, from 42,554 in 2000 to 57,099 in 2009. Overall seat numbers increased by 33% to 16 million, so average aircraft size hardly changed, and remained at 281 (see table, page 15).

Flights to and from London and Paris/Amsterdam were at similar levels in

2000, at almost 13,000 each. By 2009 annual operations to and from London had grown to 17,933, while those to and from Paris/Amsterdam had increased to 15,296.

The largest growth in services was to and from Moscow. The number of annual flights grew from 6,463 to 10,143. It almost reached traffic volumes equivalent to Frankfurt, which had grown from 9,704 to 11,487 annual flights.

London, Paris/Amsterdam, Frankfurt and Moscow account for the most routes to and from Asia Pacific destinations. While London experienced high growth, it saw average aircraft size reduce from 365 to 327, despite historical slot constraint problems. This is explained by many airlines swapping the 747 for the A340 and 777.

London-Singapore, however, is one of the world's busiest routes. By 2009 one-way annual capacity totalled 950,000 seats and almost 2,500 flights. Total seats and flights had only grown by 5% since 2000, probably because frequencies on this route had reached saturation. All flights on the route were operated with 747-400s in 2000. With Singapore Airlines (SIA) taking delivery of the A380, the aircraft has naturally been deployed on this route. The A380 is only operated by SIA at peak times, while some of its other flights are operated with 777-300s instead of 747-400s. BA has also swapped 747-400s for 777-200s on some of its flights on the route.

Other busy routes in the market are London-Hong Kong (1,186,000 seats and 3,520 flights), London-Tokyo (530,000 seats and 1,605 flights) and Amsterdam/Paris-Tokyo (766,000 seats and 2,428 flights). Overall seat numbers on these routes declined, as more direct

Iberia is an example of many airlines that have significantly reduced their 747 fleets and acquired larger numbers of smaller widebodies to operate at higher frequencies. The airline has expanded its capacity on its network to South America.

routes were opened, and average aircraft size also declined by 20-60 seats.

It may be that following sustained growth on the busiest routes, many routes will have reached frequency saturation and the A380 will be required by some airlines at peak times.

Meanwhile, interesting developments have been seen in the Europe-Asia Pacific market at smaller hubs such as Helsinki, Amsterdam and Istanbul. Helsinki saw the establishment of seven new routes to the Asia Pacific. Finnair has taken advantage of its position close to the great circle routes between European and Asia Pacific cities. Istanbul has similar ambitions, benefiting from the recent rapid growth of Turkish Airlines. Annual flights to and from Istanbul grew from 759 in 2000 to 1,680 in 2009.

Rome also experienced growth, from 1,346 annual flights to 1,764. There was also a lot of development from Munich (505 to 882). Capacity to and from Brussels also increased from 257 to 913 flights, due mainly to more flights to India. Stockholm also increased, from 271 to 589 annual flights. Services to and from Zurich decreased as a result of Swissair's demise. Capacity from Copenhagen also declined, possibly due to competition from Helsinki.

Moreover, 25 new routes were opened, adding another 17,636 annual services and 4.7 million seats each way per year.

The most new routes were added from Frankfurt, numbering 11 (2,240 operations and 568,000 seats). Nine new routes were added from Paris/Amsterdam (1,985 flights and 625,000 seats), eight from Munich (2,409 flights and 553,000 seats) and seven from Helsinki (1,484 flights and 402,000 seats). London saw six new routes opened; adding a further 1,715 operations and 438,000 seats annually. Average aircraft size on these new routes was 265 seats, with the A340 and 777 dominating.

The Middle East

The Middle East market has grown rapidly over the past 10 years. Established routes serving the region to the Asia Pacific, Europe and Africa all experienced the highest rates of increase in capacity, both in terms of flights and seats, of all long-haul markets.

The Middle East needs to be



examined in a different way to the traditional markets, such as the transatlantic and trans-Pacific. Dubai, Abu Dhabi, Doha and Muscat have all created new hubs that act as major transit points for traffic flows to and from the Asia Pacific, Australasia, Europe and the Americas. This could see these four hubs equal London, Frankfurt, Tokyo and New York.

The rapid increase in capacity to and from these four hubs is characterised by both established routes and new airport-pairs. Moreover, capacity data show that established routes to and from the Middle East are the only ones where average aircraft size has increased, because the growth in passenger numbers has been so high that frequency saturation on many airport-pairs was reached at an early stage.

On established routes, the largest market is Middle East-Europe. Routes to and from Dubai almost doubled in terms of operations, while seat numbers grew by 132% to 2.65 million. Average aircraft size leapt from 240 to 326; one of the largest increases around the globe. This market includes London-Dubai, where the A380 is now used by Emirates. It also includes several routes which have experienced a lot of development. An example is Dubai-Munich, where services have gone from operations with A310s to flights using the A330, A340 and 777.

The activity at Dubai even dwarfs Abu Dhabi, which experienced a 140% increase in seat numbers and almost reached the one million mark.

Percentage growth in Doha was the greatest. Seat numbers on established routes increased fivefold to about

860,000. Average aircraft size only increased by 26 seats, with frequency growth almost matching seat numbers.

Over the past 10 years the overall number of flights in the Middle East-Europe market has increased by 78%, and the number of seats by 107% to 8.6 million (*see table, page 15*). Average aircraft size has increased by 39 seats. Capacity has grown on the main routes from 17,000 flights per year in 2000 to 30,000 flights in 2009. Seats have increased to 8.6 million.

The Middle East to Asia Pacific is the second largest market. Since 2000, the number of annual flights has increased by 120% to 18,243 and total seat numbers by 135% to 3.38 million. The higher increase in seats has seen average aircraft size rise by 20 to 322 (*see table, page 15*).

Established routes on the Middle East-North America market account for the third largest market, although it experienced only small increases in capacity from 2000 to 2009. Annual flights increased from 2,799 to 3,283, and seats rose by 14.4% to 1.05 million. Average aircraft size fell slightly, from 329 to 319 (*see table, page 15*).

The small number of routes in the Middle-East Africa market is the fourth largest group of established routes. This saw seat numbers rise by 144% to 738,000. This group of airport-pairs also experienced the largest rise in average aircraft size by 72 seats to 302. (*see table, page 15*). There are relatively few large hubs in either Africa or the Middle East, so this would suggest that traffic between these centres increased to optimal frequencies in a few years, so that larger aircraft were required. Another

Air Canada is one of many airlines that have phased-out their 747 fleets and replaced them with smaller widebodies. In many cases they are operated at higher frequencies.

significant factor is the effect of bilateral agreements limiting the numbers of frequencies.

The several markets serving the Middle East also saw a large number of new routes. The four established markets saw a total of 110 new routes opened that provided 26,300 flights and 7.36 million seats. Average aircraft size was 266-290 seats, with the A330, A340 and 777 families accounting for virtually all operations. Most of these new routes were to secondary major cities in their respective regions.

Development over the period also saw eight new routes opened to Australasia, and four new routes to South America. These two groups of new routes had average aircraft sizes of 281 and 259 in 2009. These routes have been opened with A340-200s, 777-200LRs and other A330/340 and 777 family members.

Trans-Asia

Trans-Asian long-haul flights on established routes grew from 17,294 services to 22,008: a 27% increase. Seat numbers rose by 22% to 6.41 million. The average number of seats was therefore down marginally at 291 seats (*see table, page 15*).

The busiest trans-Asian routes are between Tokyo and cities such as Bangkok and Singapore. The notable development has been on routes such as Mumbai-Hong Kong, which grew from just 84 operations in 2000 to 889 in 2009. Beijing-Singapore grew from 1,008 flights in 2000 to 1,832 flights in 2009, while Delhi-Singapore saw the number of annual flights rise by 156% (from 508 to 1,299). Despite this large increase in overall capacity, average aircraft size still fell from 261 to 201 seats, with a shift from the 747 to A330s and other types as competition increased.

On busy and established routes such as Singapore-Beijing, optimum frequency was already reached and by 2009 SIA was operating slightly larger aircraft in competition with China Airlines.

There were 27 new long-haul services opened in the trans-Asia market over the period, including routes from Bangalore, Mumbai, Delhi, Seoul, Saigon and Shanghai. These provide a total of 4,774 annual flights and 1.2 million seats.

The small number of A380s so far in service are operated on the world's busiest routes. This includes London-Dubai. The rate of traffic and capacity growth on routes serving the Middle East means large numbers will be some of the first to require the A380.

Another part of the trans-Asia market is routes between the Asia Pacific and Australasia, mainly from Auckland, Perth, Sydney, Brisbane and Melbourne to Bangkok, Osaka, Tokyo, Singapore, Kuala Lumpur, Seoul and Shanghai. These routes had a total of 28,200 flights and 8.8 million seats in 2009. The number of flights and seats had both increased by about 35% over the period, with the result that average aircraft size only reduced a little to 315 seats.

Some of the routes with the highest rates of capacity increase were Singapore-Sydney, Hong Kong-Sydney, and Bangkok-Sydney.

Unlike the situation in Europe and the US, there were no major bankruptcies. The exception is Ansett, although it was a relatively small carrier.

It is clear that in Australia Sydney lost out to Melbourne and Brisbane on routes to Singapore and other cities, because Sydney was by-passed by the smaller A330, A340 and 777 families.

There were also 22 new routes opened between Asia and Australasia. These added a further 3,307 flights and 948,000 seats. Average aircraft size was 285 seats, with the A330, A340 and 777 dominating here also.

Other markets

There are several other smaller markets, including Africa-Asia. Examples of routes are Nairobi-Mumbai and Johannesburg-Hong Kong. The latter is operated by South African Airways and Cathay Pacific. Annual flights grew from 328 in 2000 to 730 in 2009. Both carriers have increased their daily services. Cathay continued to use 747s on the route, but only for the peak services, and used 777s and A340s otherwise.

Several new routes to Asia were also established out of Cairo, but these are at frequencies of once or twice a week.

Traffic between North and South America also dropped markedly, with 6.4% fewer flights representing a 10.9% drop in seat numbers. This is mainly explained by the failure of VARIG; a major operator in this market in 2000.

The number of flights and seats between Europe and Africa increased by 26.1% and 23.9%, with the result that average aircraft size reduced slightly to 281 seats (see table, page 15).



Conclusion

The market development data for established routes shows that between 2000 and 2009 the capacity provided in all markets, except routes to and from the Middle East. This growth in capacity was provided by increasing frequencies and number of flights; the rates of increase for the two almost matching. In actual fact the number of frequencies has increased slightly higher than total seat numbers, and so average aircraft size in most of these markets has declined (see table, page 15). This reflects a basic policy by airlines of managing total seat numbers by gradually replacing lower frequency services with 747s to higher frequency services with fewer 747s and more A330, A340 and 777 variants. Most airlines have yet to reach the stage where they need types larger than the 777.

It seems the trend on most established routes will continue to be airlines increasing frequencies. This will be until each airline reaches its optimum number of daily services, or is constrained by airport and airspace congestion.

By the time traffic volumes have grown where larger aircraft will be required again, the 747-400 is likely to be too dated. While the 747-8 is in a size class of its own, and can provide airlines with the right number of seats between the 747-400 and A380 if required, it remains to be seen what appetite there is from airlines for this aircraft.

For now there are routes where the 747-400 caters for demand at peak times. On an increasing number of routes the A380 will cater for peak needs, although

there are limited examples at present. Long-range twins serve to maintain the service frequency efficiently at other times. Airlines are always keen to keep market share and valuable slots, which can be subject to 'use it or lose it' rules.

The major hubs have grown, but will face increasing competition from other secondary hubs. Gradually some of these will have services that will justify larger aircraft, a move from 777s to A380s, for example, at times of peak demand. Current capacity data indicate, however, that aircraft with 250- to 370-seat capacity will continue to operate the majority of long-haul services.

The four established markets serving the Middle East have seen an increase in aircraft size. High traffic growth rates saw frequencies reach optimum levels at an early age, and aircraft size has had to increase. Aircraft operating on these routes will get bigger as traffic growth continues, and it can be seen that these routes will require the largest types before most other markets will need them.

With new route development, it can be expected that the shift will continue towards long, thin, and direct routes. This is especially as the new 787 and A350 start to have an effect and further stimulate the opening of these airport-pairs. This will only serve to draw traffic from established routes, lessening the need for more capacity and delay the requirement for larger aircraft. **AC**

To download 100s of articles like this, visit:
www.aircraft-commerce.com