

CASE STUDY 4 – UK-US RIGHTS FOR A FAR EAST AIRLINE

A Singapore-Manchester-Washington service by Singapore Airlines

This study considers the possible way in which a Far East airline might use fifth-freedom rights from a UK regional airport. The Singapore-Manchester-Washington route has been used as the basis of this analysis. Singapore Airlines (SIA) has a presence in the US and there are non-stop and one-stop flights from Singapore to both New York and Los Angeles and one-stop flights from Singapore to San Francisco already. CAA Survey data shows that, of the passengers travelling to the US from Heathrow who had made a connection from a Singapore flight, 70% were flying to Washington. The next most popular city in the US for passengers connecting from Singapore was Houston, and this represented only 16% of the total connectors.

SIA operates a Singapore-Frankfurt-New York routeing with fifth-freedom rights on the Frankfurt-New York sector even though this routeing involves the penalty of a turn-round in New York of over ten hours (with a schedule - 2355 depart Singapore; 0605-0820 Frankfurt; 1050-2110 New York; 1050-1200 Frankfurt; 0625 arrive Singapore). So, a Singapore-Manchester-Washington routeing might also be commercially attractive to SIA. Such a route would directly affect the markets between:

- Singapore and Washington;
- Manchester and Washington;
- Manchester and Singapore;
- Manchester and destinations beyond Singapore.

The Singapore-Washington market

The November 2004 OAG advertises a “direct” service from Singapore to Washington by United but this service involves two aircraft changes, at Tokyo and at San Francisco. The only routings advertised involving one change are via Heathrow. The connecting flows between Singapore and Washington over London in 2003 captured by the CAA Survey are shown in Table 1.

Table 1 – Washington-Singapore connections over London

*Passengers travelling
from London to Singapore*

<i>Passengers travelling from London to Washington</i>	<i>BA</i>			<i>Qantas</i>			<i>SIA</i>			<i>Overall Total</i>
	<i>Business</i>	<i>Leisure</i>	<i>Total</i>	<i>Business</i>	<i>Leisure</i>	<i>Total</i>	<i>Business</i>	<i>Leisure</i>	<i>Total</i>	
BA	34	340	375	0	117	117	0	782	782	1,273
United	0	0	0	0	96	96	107	0	107	202
Virgin	0	0	0	0	0	0	0	4,612	4,612	4,612
Total	34	340	375	0	213	213	107	5,394	5,500	6,088

Source: CAA O & D Survey, 2003

Market size

The Singapore-Washington flow over Heathrow is surprisingly small given that it appears to be the preferred connection in the OAG.

SIA use of capacity

SIA uses 747-400s on its London-Singapore services and to Frankfurt and Paris but uses 777-200s on Singapore-Amsterdam, Singapore-Rome and Singapore-Manchester. The smaller aircraft would seem more appropriate for the proposed routing. SIA tends to operate its services on a daily basis and that has also been assumed here. SIA's 777s have three configurations, one with First and two without. The smaller European points are served with a Business/Economy mix and it is assumed that this will apply to the proposed routing and that the 30 Business and 255 Economy seat configuration used by SIA on its heavier 777s would be deployed. (CAA Airports Statistics use a seat estimate of 282 for SIA's 777s.)

Of the 285 seats, it is assumed that the through Singapore-Washington traffic is, on the basis of Table 1, unlikely to occupy more than a third of the aircraft and that the rest would be available for the local markets.

Effect on UK airlines on Singapore-Washington

The Singapore-Washington market generates for UK airlines:

- 34 Business passengers on London-Singapore
- 34 Business passengers on London-Washington
- 340 Leisure passengers on London-Singapore
- 5,851 Leisure passengers on London-Washington

IPS data for 2003 indicates the average one-way yields for UK gateway-to-gateway passengers shown in Table 2.

Table 2 – Average yields in 2003

	<i>Business</i>	<i>Leisure</i>
Heathrow-Singapore	£1,254	£439
Heathrow-Washington	£713	£207

If the revenue from a through passenger is equal to the sum of the sector fares, then these passengers may generate £1.4m revenue for UK airlines although, as intimated above, the survey may understate this flow and hence this revenue.

Using the same diversion/replacement assumptions as in Study 1, UK airlines might lose between 1,600 sector passengers on their London routes with a net revenue loss of £0.37m as a result of a daily SIA service.

The Manchester-Washington Route

Table 3 displays the current schedule for the Manchester-Washington route.

Table 3 - Current Manchester-Washington schedule

<i>Routeing</i>	<i>Airline</i>	<i>Frequency</i>
Manchester-Washington	bmi (a)	6 flights per week

Source: OAG November 2004

Note: (a) bmi operates a code-share agreement with United on this route

Table 4 shows the number of passengers that have travelled from the UK to Washington over the last 10 years.

Table 4 – Washington-UK passenger volumes from 1994

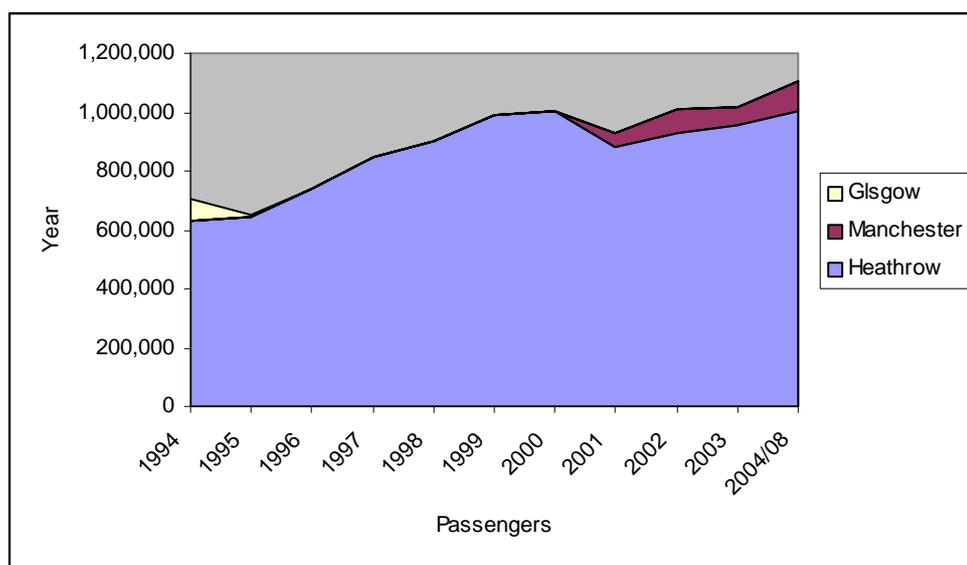
	<i>Heathrow</i>	<i>Manchester</i>	<i>Glasgow</i>	<i>Total</i>
1994	629,430	---	74,508	703,938
1995	646,808	---	1,615	648,423
1996	738,747	---	---	738,747
1997	847,229	---	---	847,334
1998	903,764	---	---	903,764
1999	987,381	---	---	987,381
2000	1,001,500	---	---	1,001,500
2001	878,567	52,471	---	931,038
2002	927,962	84,770	---	1,012,896
2003	956,792	58,046	---	1,014,838
Yr to Aug				
2004	1,003,551	100,944	---	1,104,495

Source: CAA Airport Statistics

Notes: Reduced by 6% to account for non-revenue passengers.
The totals include a small number of diversions.

The Heathrow-Washington route experienced rising levels of passenger volume through the years 1994-2000 but traffic fell sharply in 2001. Since 2001, the number of passengers travelling through Heathrow to Washington has steadily recovered and has just returned to the one million passenger level recorded in 2000. Washington has been served from Manchester by bmi since 2001 but it is unclear, given the other events of 2001, whether there was an impact on the carryings from Heathrow. After a reduction in 2003, bmi's traffic grew strongly in the latest available year (see Figure 1).

Figure 1 – UK-Washington Passenger Carrying, 1994-2004/08



Source: CAA Airport Statistics

Note: Reduced by 6% to account for non-revenue passengers

Table 5 provides further details of the services from Manchester to Washington over the last three years. bmi radically cut back its frequency on Manchester-Washington in winter 2002/3 depressing the total number of flights during 2003. However, the latest available year shows bmi operating six times a week. The cut-back during 2003 will have reduced the survey data for that year so that the evaluation may understate slightly the effect of a new SIA service on UK airlines.

Table 5 - Manchester-Washington scheduled services from 2001

		<i>Point-to-point</i>		<i>Total</i>		<i>Seat</i>
		<i>Passengers</i>	<i>Flights</i>	<i>Passengers</i>	<i>Seats</i>	<i>Factor</i>
2001	bmi	52,470	390	52,470	85,800	61%
2002	bmi	84,770	576	84,770	126,747	67%
2003	bmi	58,046	358	58,046	87,352	66%
Year to Aug04	bmi	100,944	621	100,944	151,524	67%

Source: CAA Airport Statistics

Note: Reduced by 6% to account for non-revenue passengers

Table 6 provides the comparable data at Heathrow for the latest 12-month period.

Table 6 – Heathrow-Washington scheduled services in the year to August 2004

	<i>Point-to-point</i>		<i>Total</i>		<i>Seat</i>
	<i>Passengers</i>	<i>Flights</i>	<i>Passengers</i>	<i>Seats</i>	<i>Factor</i>
BA	367,419	2,123	367,419	527,809	70%
United	459,113	2,391	460,106	616,775	75%
Virgin	177,019	800	177,019	246,320	72%
<i>Total</i>	<i>1,003,551</i>	<i>5,314</i>	<i>1,004,543</i>	<i>1,390,904</i>	<i>72%</i>

Source: CAA Airport Statistics, year to August 2004.

Notes: Reduced by 6% to account for non-revenue passengers.

Assuming 291 seats in BA's 747-400s and 227 seats in BA's 777s.

United now operates four services a day to Washington, BA four and Virgin just over one with departure times from Heathrow in summer as shown in Table 7.

Table 7 – Departure times from Heathrow to Washington in June 2004

United	0800	Daily
BA	1100	Daily
Virgin	1130	Daily
United	1130	Daily
United	1220	Daily
BA	1240	Daily
BA	1500	Daily
United	1635	Daily
BA	1930	Daily
Virgin	2010	Three/week

Source: OAG, June 2004

Table 8 shows the nature of the journey of the passengers on UK-Washington services.

Table 8 –Direct UK-Washington passengers by journey type in 2003

		< - - - - - Connecting at - - - - - >				
		OD	UK	IAD	Both	Total
Heathrow	BA	172,337 46%	187,964 50%	8,814 2%	6,517 2%	375,632 100%
	United	151,982 40%	70,183 19%	103,757 28%	50,688 13%	376,609 100%
	Virgin	89,928 56%	62,509 39%	5,273 3%	2,684 2%	160,394 100%
	Total	414,247 45%	320,775 35%	117,843 13%	63,019 7%	915,884 100%
Manchester	Bmi	23,225 40%	3,640 6%	29,125 51%	1,616 3%	57,606 100%
	Overall Total	437,471 45%	324,415 33%	146,968 15%	64,635 7%	973,490 100%

Source: CAA O & D Survey, 2003

Note: IAD = Washington

Perhaps the most conspicuous point in Table 8 is the proportion of passengers who fly from Manchester to Washington in order to connect onto another US point. Over 50% of BMI's passengers make a connection at Washington, indicating the impact of BMI's relationship with United at one of its main US hubs. Indeed, a higher proportion of bmi's traffic connects at Washington than on United's own Heathrow service. In contrast to this, the UK airlines without an alliance partner of consequence at Washington attract very few US connectors. This category comprises only about 5% of BA's and Virgin's total traffic.

Table 9 shows the residence and journey purpose of the passengers flying from Heathrow and Manchester respectively, and ending their journey in Washington.

Table 9 – Direct UK-Washington OD Traffic by residence and journey purpose, 2003

		<-----UK----->			<-----Foreign----->			<-----Total----->		
		<i>Business</i>	<i>Leisure</i>	<i>Total</i>	<i>Business</i>	<i>Leisure</i>	<i>Total</i>	<i>Business</i>	<i>Leisure</i>	<i>Grand Total</i>
Heathrow	BA	37,141	54,588	91,729	39,797	40,811	80,608	76,938	95,399	172,337
		22%	32%	53%	23%	24%	47%	45%	55%	100%
	United	26,066	16,453	42,519	64,850	44,613	109,463	90,916	61,066	151,982
		17%	11%	28%	43%	29%	72%	60%	40%	100%
	Virgin	20,485	19,215	39,700	19,757	30,470	50,228	40,242	49,685	89,928
		23%	21%	44%	22%	34%	56%	45%	55%	100%
	Total	83,691	90,257	173,948	124,405	115,894	240,299	208,096	206,151	414,247
		20%	22%	42%	30%	28%	58%	50%	50%	100%
Manchester	Bmi	4,705	14,486	19,191	2,079	1,955	4,034	6,784	16,441	23,225
		20%	62%	83%	9%	8%	17%	29%	71%	100%
<i>Overall Total</i>		<i>88,396</i>	<i>104,743</i>	<i>193,139</i>	<i>126,483</i>	<i>117,849</i>	<i>244,333</i>	<i>214,879</i>	<i>222,592</i>	<i>437,471</i>
		<i>20%</i>	<i>24%</i>	<i>44%</i>	<i>29%</i>	<i>27%</i>	<i>56%</i>	<i>49%</i>	<i>51%</i>	<i>100%</i>

Source: CAA O & D Survey, 2003

The main difference between the Heathrow and Manchester routes is that the vast majority of bmi's traffic at Manchester (83%) consisted of UK residents whereas at Heathrow overall, foreign passengers outnumbered UK residents. Also, although 20% of the passengers at both Manchester and Heathrow were UK residents travelling on business, the share of both foreign business and foreign leisure passengers at Manchester were less than a third of those at Heathrow.

Passengers travelling indirectly

As well as being able to travel directly from Manchester to Washington, passengers also had the option of travelling indirectly. Table 10 shows the intermediate points used by passengers who opted to take this route.

Table 10 – Passengers travelling indirectly from Manchester to Washington

	<i>Passengers</i>	<i>Share</i>
Amsterdam	594	3%
Atlanta	671	4%
Paris	1,128	7%
Newark	1,862	11%
Frankfurt	845	5%
Gatwick	242	1%
Heathrow	11,337	66%
Chicago	420	2%
Philadelphia	134	1%
<i>Total</i>	<i>17,232</i>	<i>100%</i>

Source: CAA O & D Survey, 2003

Heathrow was by far the most popular intermediate airport for passengers flying indirectly from Manchester to Washington. About 66% of indirect passengers took this route, with the next most popular intermediate hub, Newark, accounting for only 11% of the indirect total.

Passengers travelling to London by surface

Table 11 shows the surface origin of those passengers who flew directly from Heathrow and Manchester and ended their journey in Washington.

Table 11 – Surface origin of direct UK-Washington Passengers in 2003

<i>By surface and air From</i>	<i>Heathrow</i>	<i>Manchester</i>	<i>Total</i>
East Anglia	8,959	---	8,959
East Midlands	20,274	1,942	22,217
Northern Ireland	9,884	301	10,184
North West	6,723	6,805	13,528
Northern	676	775	1,450
Scotland	6,775	2,032	8,807
South East	337,586	2,221	339,807
South West	16,742	752	17,494
Wales	8,835	1,056	9,891
West Midlands	18,434	3,296	21,730
Yorkshire & Humberside	7,277	7,283	14,560
Other	---	402	402
<i>Total</i>	<i>442,165</i>	<i>26,865</i>	<i>469,030</i>

Source: CAA O & D Survey, 2003

Note: All passengers in the above table began their journey in one of the named UK regions and ended it in Washington, or vice versa

Passengers travelling by air from, say, Glasgow to Heathrow and then on to Washington are classified as having Scotland as their surface origin.

Less than 2% of the Heathrow total was made up of passengers from the North West. Of those passengers flying to Washington from Manchester, the North West and Yorkshire/Humberside together contributed just over half the total traffic. However, in total, the number of people who flew from Manchester to end their journey in Washington was only about 6% of the equivalent number at Heathrow.

Estimated market size

Table 12 summarises the estimated size of the North West-Washington OD market.

Table 12 - The North West- Washington OD market in 2003

<i>Mode of Travel</i>	<i>Flying From</i>	<i>Via</i>	<i>Passengers</i>
By air	Manchester	Direct	6,805
	Manchester	UK	7,441
	Manchester	Other	3,742
By surface	Other UK airports	Directly/Indirectly	---
<i>Total</i>			<i>17,988</i>

The Manchester-beyond Washington markets

Table 8 indicates the potential significance for US services from UK regional airports of connecting traffic at the US gateway when these services are operated by US airlines with a hub at that gateway or for their alliance partners. SIA is a member of the STAR alliance and hence could benefit from the link-up with United's domestic network in the same way that bmi has done. The competition for traffic to the US hinterland is generally not just between airlines serving the same gateway but is also between gateways. There may, of course, be particular back-points which are served exclusively from a single gateway or where there is an obvious choice of gateway because of the relative strength of the gateway-back-point service. But in most cases gateways can compete across a wide range of back-points.

The principal choices facing passengers from the North West wishing to travel beyond the gateways directly served from Manchester are:

- to fly from Manchester to a US hub and connect there;
- to fly to London and travel directly or indirectly from there;
- to connect at another international hub such as Amsterdam.

Table 13 shows the breakdown of North West passengers through Manchester and flying via a connection to a US point (i.e. it excludes the North West passengers who fly from Manchester directly to a US gateway and who terminate their air journey there). The passengers are classified by the airline used on the long-haul sector.

Table 13 – Manchester-US indirect passengers from the North West

UK airlines	International service at MAN	66,198	14%
	via London (UK on long-haul)	121,338	26%
US airlines	International service at MAN	190,203	41%
	via London (foreign on long-haul)	37,604	8%
Other	International service at MAN	46,709	10%
	via London (foreign on long-haul)	1,417	0%
<i>Total</i>		<i>463,469</i>	<i>100%</i>

Source: CAA O&D Survey, 2003

The UK volume flying on international services at Manchester is high mainly because bmi carries about 60,000 connecting passengers on its Chicago and Washington services. That apart, the overall share of UK airlines would still be significant because of the volume of traffic carried over Heathrow and Gatwick (some of which may be travelling to US gateways served directly from Manchester).

The Manchester-Singapore market

Table 14 displays the current schedule for the Manchester-Singapore route.

Table 14 - Current Schedule

<i>Routeing</i>	<i>Airline</i>	<i>Frequency</i>
Manchester-Singapore	SIA (a)	5 flights per week
Manchester-Zurich-Singapore	SIA (a)	2 flights per week

Source: OAG November 2004

Note: (a)SIA operates a code-share with Virgin on both the direct and the one-stop service

The non-stop flight departs from Manchester at 1010 and arrives at Singapore at 0705 the next day. The one-stop flight departs from Manchester at 0955 and arrives at Singapore at 0840 the next day, an additional journey time of 1hr 50min.

In the westbound direction the non-stop flight departs from Singapore at 2350 and arrives at Manchester at 0620 the next day. The one-stop flight also departs from Singapore at 2350 and arrives at Manchester at 0825 the next day, an additional journey time of 2hr 5min.

Table 15 and Figure 2 show the annual passenger carryings over the last 10 years on the UK-Singapore route:

Table 15 – SIA's UK-Singapore passenger volumes, 1994-2003

	<i>Heathrow</i>	<i>Manchester</i>	<i>Total</i>
1994	354,615	47,354	401,969
1995	388,676	60,515	449,191
1996	423,719	71,824	495,544
1997	443,609	86,917	530,526
1998	498,791	100,647	599,438
1999	577,528	121,049	698,576
2000	624,886	132,063	756,949
2001	622,994	132,637	755,631
2002	650,097	142,908	793,006
2003	604,621	131,541	736,162
2004/08	642,070	147,684	789,754

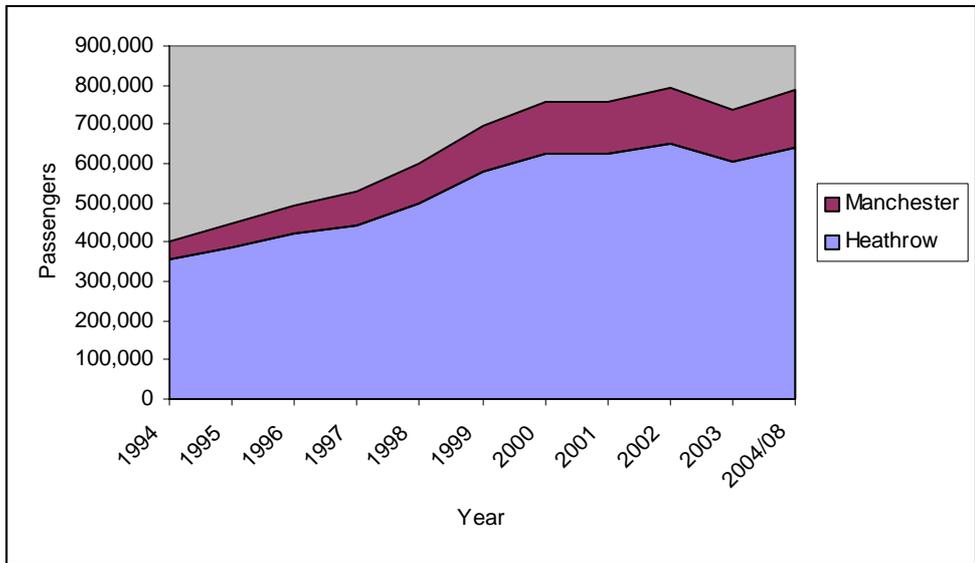
Source: CAA Airport Statistics

Note: Reduced by 6% to account for non-revenue passengers

Many of SIA's Manchester flights have operated over intermediate points such as Mumbai, Brussels, Amsterdam, Paris and Zurich. However, SIA has usually reported all its traffic as Manchester-Singapore.

Table shows only passengers reported as travelling to Singapore by SIA

Figure 2 – SIA Passenger Carryings, 1994-2003



Source: CAA Airport Stats

Note: Reduced by 6% to account for non-revenue passengers

Includes passengers who flew indirectly to Singapore, via an intermediate point such as Bombay, who are assumed to have stopped at the given intermediate points for purely commercial reason

From 1994-2002, SIA carried an increasing number of passengers from Manchester. In 2003, there was a reduction in flights and a fall in passengers, presumably relating to SARS, taking the level below those experienced in 2000. In the latest year there has been a return to growth with traffic levels greater than those in 2002.

Table 16 – Manchester-Singapore scheduled services from 2000

	Point-to-Point Passengers	Flights	Terminal Passengers	Transit Passengers	Total Passengers	Seats
2000	132,063	731	132,063	4	132,067	280,704
2001	132,637	730	132,637	34	132,671	280,320
2002	142,908	732	142,908	622	143,530	281,088
2003	131,541	614	131,541	0	131,541	255,472
Year to Aug 2004	147,684	700	147,684	0	147,684	213,416

Source: CAA Airport Stats

Note: Reduced by 6% to account for non-revenue passengers

Many of SIA's Manchester flights have operated over an intermediate point such as Mumbai, Brussels, Amsterdam, Paris and Zurich. However, SIA has usually reported all its traffic as Manchester-Singapore.

Table 17 displays a breakdown of the type of journey taken by passengers when travelling between the UK and Singapore.

Table 17 – Direct UK-Singapore passengers by journey type in 2003

	Airline	OD	< --- --- Connecting at --- --- >			Total
			UK	Singapore	Both	
Heathrow	BA	48,348 27%	21,250 12%	73,655 40%	38,640 21%	181,893 100%
	Qantas	39,141 16%	13,181 6%	125,768 53%	60,118 25%	238,208 100%
	SIA	145,387 23%	30,048 5%	374,048 60%	73,248 12%	622,731 100%
Total		232,876 22%	64,480 6%	573,471 55%	172,005 16%	1,042,833 100%
Manchester	SIA	15,604 11%	--- ---	117,456 86%	3,119 2%	136,067 100%
Overall total		248,481 21%	64,480 5%	690,927 59%	175,124 15%	1,178,900 100%

Source: CAA O & D Survey, 2003

The conspicuous factor regarding UK-Singapore services appears to be the proportion of passengers connecting in Singapore. At Heathrow, 71% of overall traffic connected in Singapore, while this figure rises to 88% for the Manchester service. SIA has a high share of the end-to-end Heathrow-Singapore market.

Table 18 shows how the residence and journey purpose of passengers flying to Singapore varies by airline and by airport.

Table 18 – Direct UK-Singapore OD traffic by residence and journey purpose, 2003

	Airline	< --- --- UK --- --- >			< --- --- Foreign --- --- >			< --- --- Total --- --- >		
		Business	Leisure	Total	Business	Leisure	Total	Business	Leisure	Total
Heathrow	BA	20,461 42%	23,505 49%	43,967 91%	2,217 5%	2,165 4%	4,382 9%	22,678 47%	25,670 53%	48,348 100%
	Qantas	10,496 27%	18,710 48%	29,206 75%	2,846 7%	7,089 18%	9,935 25%	13,342 34%	25,799 66%	39,141 100%
	SIA	17,337 12%	82,567 57%	99,904 69%	22,140 15%	23,343 16%	45,482 31%	39,477 27%	105,910 73%	145,387 100%
Total		48,295 21%	124,782 54%	173,077 74%	27,203 12%	32,597 14%	59,799 26%	75,498 32%	157,379 68%	232,876 100%
Manchester	SIA	3,044 20%	6,080 39%	9,124 58%	2,152 14%	4,328 28%	6,480 42%	5,196 33%	10,409 67%	15,604 100%
Overall Total		51,339 21%	130,863 53%	182,201 73%	29,354 12%	36,925 15%	66,279 27%	80,693 32%	167,788 68%	248,481 100%

Source: CAA O & D Survey, 2003

BA carried a greater proportion of UK residents (90%) than any other airline flying to Singapore from either Heathrow or Manchester although the sample size for this estimate is quite small. Overall, the majority of passengers (74%) travelling from Heathrow were UK residents. At Manchester, the majority of SIA's traffic is made up of UK residents (58%) but the foreign resident share is surprisingly high compared first with the Singapore services at London and second with other regional long-haul routes. This again perhaps indicates sample size problems. The business/leisure split is similar at both London and Manchester (about one third business and two thirds leisure).

Table 19 shows the surface origin of the passengers travelling directly to Singapore and ending their journey here.

Table 19 - Surface origin of direct UK-Singapore OD Passengers in 2003

<i>By surface/air From</i>	<i>Heathrow</i>	<i>Manchester</i>	<i>Total</i>
East Anglia	7,980	0	7,980
East Midlands	27,312	657	27,969
Northern Ireland	707	0	707
North West	6,331	9,550	15,881
Northern	1,921	1,083	3,004
Scotland	11,853	147	12,001
South East	154,734	327	155,061
South West	28,034	0	28,034
Wales	2,073	74	2,147
West Midlands	6,875	1,356	8,231
Yorkshire & Humberside	5,405	2,409	7,814
Other	1,184	0	1,184
<i>Total</i>	<i>254,407</i>	<i>15,604</i>	<i>270,012</i>

*Note: All passengers in the above table began their journey in one of the named UK regions and ended it in Singapore, or vice versa
Passengers travelling by air from, say, Glasgow to Heathrow and then on to Singapore are classified as having Scotland as their surface origin.*

Heathrow predominantly serves the South East with approximately 60% of its passengers originating there. Manchester's core catchment area is the North West, and overall, the Manchester market size represents only 6% of the London market. To the extent that the small sample size allows conclusions, a significant proportion of the North West demand travelled over London despite the direct service.

The 2003 Manchester survey estimated that 9,413 passengers travelled from Manchester to Singapore over Heathrow, of which 5,411 originated in the North West. Table 20 shows the foreign intermediate hubs used by those passengers who travelled indirectly from Manchester to Singapore and who ended their air journey there. The most popular intermediate airport was Amsterdam.

Table 20 – Manchester-Singapore indirect OD traffic over foreign hubs in 2003

<i>Via</i>	<i>Passengers</i>
Amsterdam	14,241
Paris	1,157
Dubai	965
Frankfurt	608
Istanbul	1,192
Kuala Lumpur	3,074
<i>Total</i>	<i>21,237</i>

Source: CAA O & D Survey, 2003

Of this total only about 15% was recorded as originating in the North West. Nearly 60% originated in the West Midlands. Although these shares seem implausible, possibly as a result of sampling errors, they have been used in the following market estimation.

The North West-Singapore OD market

Table 21 shows an estimate of the size of the North West-Singapore OD market.

Table 21 – The North West-Singapore OD market

<i>Mode of Travel</i>	<i>Flying From</i>	<i>Via</i>	<i>Passenger Numbers</i>
By air	Manchester	Direct	9,550
	Manchester	UK	5,411
	Manchester	Other	3,143
By surface	Other UK airports	Directly/Indirectly	337
<i>Total</i>			<i>18,441</i>

The markets between Manchester and points beyond Singapore

Table 22 shows the number and destination of passengers flying from Manchester to Singapore in order to catch a connecting flight onto an onward destination.

Table 22 - The Manchester-beyond Singapore market

	<i>Passengers</i>	<i>Share of Connectors</i>
Australia	81,690	70%
New Zealand	24,215	21%
Hong Kong	2,264	2%
Indonesia	1,900	2%
Malaysia	1,803	2%
Others	5,587	97%
<i>Total</i>	<i>117,457</i>	<i>100%</i>

Source: CAA O & D Survey, 2003

Australia is by far the most popular destination for passengers flying from Manchester and connecting in Singapore. 70% of passengers ultimately end their journey in Australia, with the second most popular destination, New Zealand, accounting for a further 21% of connecting passengers. This study therefore focuses on changes in the Manchester-Australia market as a consequence of SIA's new service and scales up the results to reflect the whole of the beyond-Singapore markets.

The size of the North West-Australia OD market was assessed in Study 1 and the results are shown in Table 23.

The North West-Australia OD markets

Table 23 estimates the size of the North West-Australia market.

Table 23 - The North West-Australia OD market

<i>Mode of Travel</i>	<i>Flying From</i>	<i>Via</i>	<i>Passenger Numbers</i>
By air	Manchester	Direct	---
	Manchester	UK direct	34,783
	Manchester	UK indirect	9,542
	Manchester	Other	88,955
By surface	Other UK airports	Directly/Indirectly	10,741
<i>Total</i>			<i>144,021</i>

The economic evaluation

The evaluation assumes that, as a result of obtaining fifth-freedom rights, SIA operates non-stop every day between Manchester and Singapore (as opposed to five a week non-stop and two a week one-stop) and operates the aircraft through to Washington on a daily basis. Although passengers travelling to and beyond Singapore benefit from time savings of about two hours on two days a week, they also suffer a loss because of the assumption that a third of the overall capacity is now given over to transit passengers. If half the capacity on the present one-stop flights is allocated to Manchester passengers then they currently have available 3,420 seats a week. If SIA with fifth-freedom rights operates all its Manchester-Singapore services non-stop but allocates one third of the capacity to Singapore-US passengers then Manchester passengers would have fewer seats available (2,660 seats a week).

The CPI assumptions are as follows:

- On Manchester-Singapore the CPIs of the new service are the same as SIA's current CPIs;
- On Manchester-Australia (and hence Manchester-other points beyond Singapore) the CPIs of the new service are the same as those of foreign sixth-freedom carriers as a whole (including SIA) at Manchester;
- On Manchester-Washington the CPIs of the new service are 0.5 times those of the third/fourth freedom carrier;
- On Manchester-beyond Washington the CPIs of the new service are 0.5 times those of the US airlines at Manchester (given SIA's alliance with United through STAR).

Scaling up factors

North West originating passengers' account for approximately 50% of long haul scheduled passengers flying from Manchester, and therefore any effects on the UK market from the introduction of additional services to Singapore, which will have significant effects on the Australia market, have to be multiplied by two in order to calculate the impact on all UK consumers using the airport. Additionally a scaling factor of 1.4 (1/0.70) has been applied to the results for the North West-Australia markets in order to capture the impact from all the markets beyond Singapore.

The results of the economic evaluation

Table 24 contains the results of the analysis and shows that the impact is negative overall, mainly due to the effect on bmi's Manchester-Washington service and the assumption concerning the loss of capacity to UK passengers travelling to Singapore and beyond.

Table 24 - The results of the economic evaluation

	<i>IAD- SIN</i>	<i>MAN- SIN</i>	<i>MAN- IAD</i>	<i>MAN- BEYOND SIN</i>	<i>MAN- BEYOND IAD</i>	<i>Total</i>
UK direct passenger benefits (£m)	---	-0.19	0.60	-4.84	1.97	-2.47
UK indirect passenger benefits (£m)	---	---	---	---	---	---
UK airline revenues (£m)	-0.37	0.10	-2.63	1.25	-2.67	-4.31
UK airline profits (£m)	-0.33	0.10	-2.56	1.23	-2.58	-4.15
Aviation-related spend in the UK (£m)	---	-0.03	4.84	-0.36	2.73	7.16
Aviation-related profit (£m)	---	-0.01	1.49	-0.10	0.84	2.22
Tourism spend in the UK (£m)	---	-0.55	0.16	-1.49	2.38	0.50
Tourism profit (£m)	---	-0.07	0.02	-0.19	0.31	0.07
<i>Net effect on UK (£m)</i>	<i>-0.33</i>	<i>-0.17</i>	<i>-0.45</i>	<i>-3.91</i>	<i>0.53</i>	<i>-4.33</i>

Note: The split of the airport related effects between the different eastbound and westbound segments is purely for the purposes of the calculation