



THE DEPARTMENT  
OF TRANSPORT

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# Transport Statistics Report

United Kingdom Airfreight 1980-1990



Prepared by the Government Statistical Service

STATS.  
R.M.  
(221)







CONTENTS

United Kingdom Airfreight 1980-1990



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## FOREWORD

- 1 Airfreight is an important branch of freight transport, and there is a need to make the available statistics more accessible both within government and outside. This report seeks to bring together the principal statistics in this field, both published and unpublished, for general and specialist use.
- 2 The first edition of this report ('United Kingdom Airfreight 1977-1987') was published by HMSO in 1989. For this edition, we have been able to:
  - a improve the layout of tables
  - b update all tables. Where available, figures have been included to 1990, and, in many cases, extra details or extra years to show the trend over a 10 year period have been added. In most tables, figures for 1987 have been given to allow calculation of changes since the first edition of this report.
  - c increase the use of graphs to illustrate and aid the interpretation of the data in the tables.
- 3 The two principal sources of routine statistics relating to United Kingdom airfreight are Customs and Excise entries, and returns made to the Civil Aviation Authority by UK airports and UK airlines. The latter are published in the CAA annual publications 'UK Airports' and 'UK Airlines' respectively. Both sources were used to provide a comprehensive picture.
- 4 The Report consists of an Introduction followed by 3 sections:
  - Section 1 Outline of airfreight
  - Section 2 Countries and commodities
  - Section 3 United Kingdom airlines.The tables in Section 1 are derived from the CAA airport returns, those in Section 2 from Customs entries, and those in Section 3 from CAA airline returns. More details about the sources of information are provided in the Appendix and in the notes at the end of each Section.
- 5 There remain, however, areas which are not covered adequately by either source, and which remain major weaknesses in the available statistics. These are discussed in the Appendix, and include:
  - a transshipment at United Kingdom airports
  - b transshipment at continental airports
  - c express and courier parcels traffic
  - d airfreight trucking.



## INTRODUCTION

- 1 The importance of airfreight lies in its use for international transport of goods. Domestic airfreight forms a very small proportion of non-bulk domestic freight in terms of tonnes lifted, and value, accounting for well under 1 per cent. Table A shows that in 1990 United Kingdom airtrade as recorded by HM Customs was under 1 per cent by weight, but 19 per cent by value of total international trade, illustrating that airtrade tends to include the higher value items. Excluding dry bulk and tanker trade, airtrade is still under 1 per cent by weight, but 21 per cent by value.
- 2 Included in "airtrade" in Customs statistics, are some consignments which, although cleared at an airport, are trucked (ie transported by road) to/from the Continent rather than picked-up/set-down by aircraft using the airport. Heathrow's total airtrade includes a significant proportion of such consignments, estimated as 18 per cent of export entries in 1985 (more recent figures are not available). Thus, allowing for consignments which are classified as airtrade but trucked from the airport would reduce the value of airtrade in Table A by a few percentage points. However, this may be partly compensated for by adjustments due to the following:
  - a Low value consignments, with a value of less than £600 (£475 prior to 1988) are excluded from Table A. As about 4/5 of low value consignments are carried by air, inclusion of low value consignment would increase the relative value of airfreight by about 1 per cent.
  - b Goods that were transhipped at a United Kingdom airport or seaport and were held under bond are also excluded from Table A. Transhipped freight is not part of UK international trade, but passes through an airport or seaport en route to its destination. Although there are no statistics available relating to transshipment in the United Kingdom, it is believed that this traffic forms a substantially larger proportion of airfreight than of seaborne freight.
- 3 Over the period 1980 - 1990 the overall growth of airfreight has been reduced by a tendency for expansion on long haul routes to be partially offset by a decline on the short haul routes to Western Europe. This reflects the increased ability of road hauliers using roll-on roll-off services to capture existing and potential airfreight traffic. Indeed the competitiveness of road haulage to/from the Continent in terms of cost and speed of delivery is such that major airlines have responded by developing their own truck services which they use both to collect and distribute much of their long haul transshipment traffic to/from their hub airports and to carry some of their intra-European cargo. Some of these airlines truck services have been given flight numbers and included in cargo service timetables. The ABC cargo guide identifies truck services as a separate "aircraft" type.
- 4 As a result of rapid increase in imports by air in the mid 1980's, by 1990 the tonnage imported was about 50 per cent higher than the tonnage exported.
- 5 The bulk of international airfreight was, between 1980 and 1990, carried on scheduled services. United Kingdom airlines carried a third of the total airfreight carried on international scheduled services, this share remaining approximately constant between 1980 and 1990. Of freight carried on non-scheduled services, the United Kingdom airlines' share fell sharply from 82 per cent in 1980 to 38 per cent in 1986, recovering to 49 per cent in 1990. More details are presented in Table 1.4.



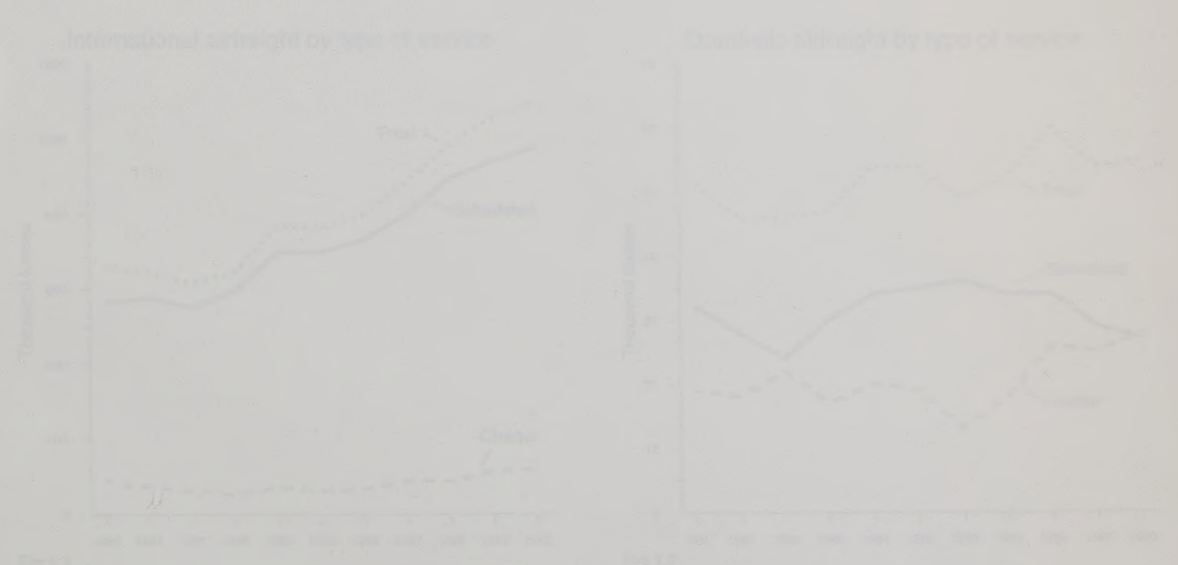
Table A: International trade (imports + exports)<sup>1</sup>

(a) Value	£ billion <sup>2</sup> /per cent					
	1980		1987		1990	
	Value	Per cent	Value	Per cent	Value	Per cent
Seaborne trade	137.9	77.8	161.4	77.8	175.1	76.2
of which:						
Tanker cargo	22.4	12.7	15.9	7.7	13.7	6.0
Dry bulk cargo	9.0	5.1	7.8	3.7	7.7	3.4
Other dry cargo	106.5	60.1	137.8	66.4	153.7	66.9
Airtrade	33.5	18.9	37.7	18.2	43.7	19.0
Irish land boundary <sup>3</sup>	2.4	1.3	3.8	1.8	4.0	1.7
Other <sup>4</sup>	3.5	2.0	4.6	2.2	6.9	3.0
Total trade <sup>5</sup>	177.3	100.0	207.5	100.0	229.8	100.0

(b) Weight	Million tonnes/per cent					
	1980		1987		1990	
	Weight	Per cent	Weight	Per cent	Weight	Per cent
Seaborne trade	231.0	94.6	297.9	93.9	300.7	94.0
of which:						
Tanker cargo	112.3	46.0	148.0	46.7	136.5	42.6
Dry bulk cargo	64.5	26.4	73.6	23.2	77.7	24.3
Other dry cargo	54.2	22.2	76.3	24.1	86.6	27.1
Airtrade	0.5	0.2	0.6	0.2	0.8	0.2
Irish land boundary <sup>3</sup>	2.9	1.2	4.2	1.3	5.5	1.7
Other <sup>4</sup>	9.7	4.0	14.4	4.5	13.0	4.0
Total trade <sup>5</sup>	244.1	100.0	317.1	100.0	320.0	100.0

1 See Appendix for a discussion of the coverage of this table. Source: Customs & Excise  
 2 Adjusted to 1990 constant prices using the GDP deflator.  
 3 May be road or rail  
 4 Includes ships, boats and aircraft under own propulsion. Imports of oil and gas in pipelines. North Sea installations, ie, drilling or production platforms.  
 5 Total from available sources.

6 International airfreight is heavily concentrated at the London airports, in particular Heathrow. In terms of tonnage in 1990 the London airports handled 88 per cent of international airfreight, Heathrow alone handling 63 per cent. The Heathrow tonnage includes an unknown proportion of transshipment traffic, ie, freight that is not part of United Kingdom international trade, but which passes through the airport en route to its destination. This transshipment traffic is part of United Kingdom "airfreight" but not United Kingdom "airtrade". Similarly a proportion of United Kingdom international trade is transhipped at Continental airports before or after a long haul flight.





## SECTION 1 - OUTLINE OF AIRFREIGHT <sup>1</sup>

### Use of scheduled and charter services

Table 1.1 shows the weight of airfreight handled by United Kingdom airports each year. The overall tonnage handled rose by 62 per cent between 1980 and 1990, with the largest yearly increase being 129,000 tonnes or 19 per cent in 1983-84. However, the yearly growth rate fluctuated. During the economic recession in the early 1980's there was a decline in the tonnage handled both of international and domestic airfreight, and a slight decline in 1985. After 1985, the volume of domestic airfreight fluctuated, while international airfreight increased by nearly half between then and 1990.

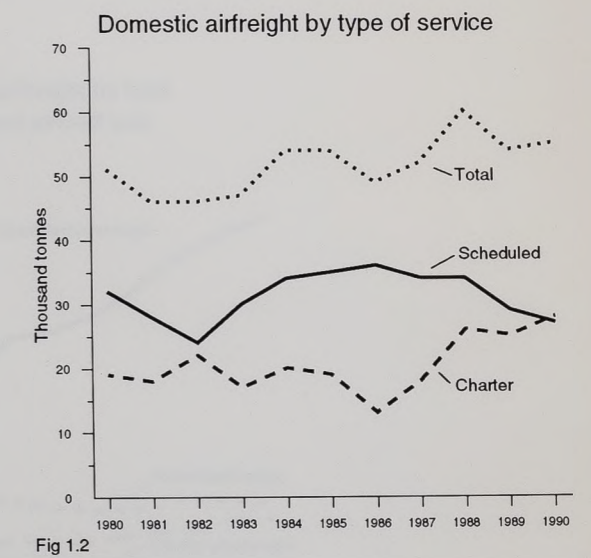
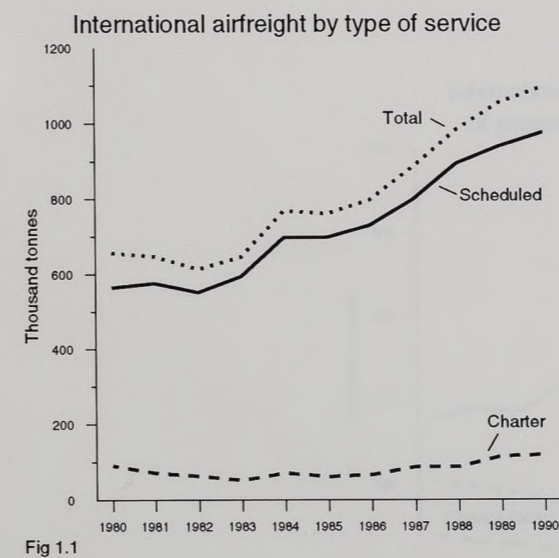
International traffic at United Kingdom airports has been growing strongly compared to domestic traffic. This pattern can be seen in Figs 1.1 and 1.2. Between 1980 and 1990 international traffic grew by two-thirds while domestic traffic remained fairly constant. The domestic share of the total airfreight was only 5 per cent in 1990. The lack of growth probably reflects some loss of traffic to competing surface modes of freight transport. In this respect domestic airfreight is probably similar to international airfreight to and from the continental EC countries.

### 1.1 International and domestic airfreight by type of air service used

	Thousand tonnes (gross)						Total
	International			Domestic			
	Scheduled	Charter	Total	Scheduled	Charter	Total	
1980	565	91	657	32	19	51	708
1981	575	72	647	28	18	46	693
1982	551	63	614	24	22	46	660
1983	594	51	645	30	17	47	692
1984	696	71	767	34	20	54	821
1985	697	62	759	35	19	54	813
1986	730	66	796	36	13	49	845
1987	798	87	885	34	18	52	937
1988	894	88	982	34	26	60	1,042
1989	938	115	1,053	29	25	54	1,107
1990	975	118	1,093	27	28	55	1,148

Source: Civil Aviation Authority: UK Airports annual returns

Table 14: International & domestic cargo comparison with the previous year



<sup>1</sup> See notes and definitions at end of Section.



### Use of scheduled and charter services (continued)

Table 1.2 shows the breakdown of international airfreight into that carried on passenger and cargo services. The use of scheduled passenger services to carry international airfreight grew steadily over the period, the weight carried more than doubling between 1980 and 1990, while the weight carried by scheduled cargo services fell by 30 per cent over the same period. The trend is reversed for charter services: between 1980 and 1990 the weight carried in charter passenger services fell by over a third, while that carried in charter cargo services increased by a similar amount.

The steady shift toward the use of the belly holds of scheduled passenger services was brought about primarily through the introduction of wide-bodied passenger aircraft with enhanced load dimensions, and the rapid expansion of scheduled passenger services. These developments greatly increased the available freight carrying capacity on scheduled passenger services and it was clearly in the interests of the airfreight industry to make use of this relatively low cost capacity. The introduction of "combies", planes that can be used in part cargo/part passenger configuration or exclusively for one purpose also contributed towards the shift away from the use of pure freighter aircraft. In the CAA statistics "combies" are treated as passenger aircraft except when operating as cargo only planes.

### 1.2 International airfreight by type of air service and aircraft use (continued)

	Thousand tonnes (gross)/percent								
	Scheduled				Charter				Total
	Passenger		Cargo		Passenger		Cargo		
	Weight	%	Weight	%	Weight	%	Weight	%	Weight
1980	357	54.4	208	31.6	11	1.6	81	12.3	657
1981	381	58.8	194	30.0	8	1.3	64	9.9	647
1982	373	60.6	179	29.1	9	1.4	54	8.8	614
1983	440	68.3	154	23.9	10	1.6	40	6.3	645
1984	542	70.7	154	20.1	11	1.4	60	7.8	767
1985	559	73.7	137	18.1	8	1.0	54	7.2	759
1986	599	75.2	131	16.4	7	0.8	59	7.5	796
1987	661	74.8	136	15.4	5	0.6	82	9.2	885
1988	740	75.4	154	15.7	8	0.8	80	8.1	982
1989	789	74.9	149	14.1	8	0.8	108	10.2	1,054
1990	829	75.9	146	13.4	7	0.6	110	10.1	1,092

Source: Civil Aviation Authority: UK Airports annual returns  
Table 14: International & domestic cargo comparison with the previous year

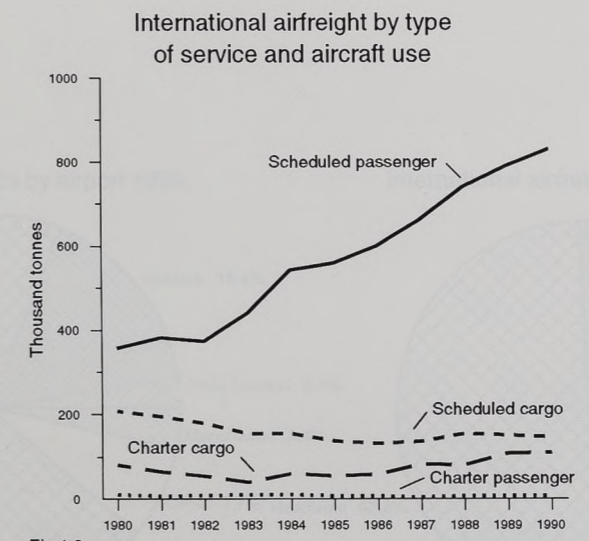
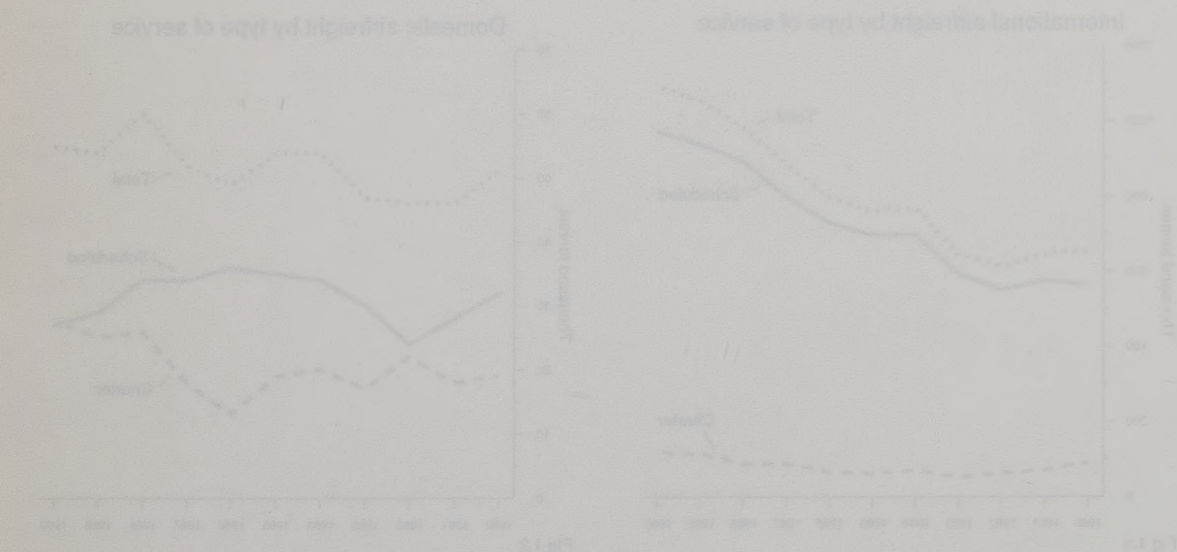


Fig 1.3



## Airfreight by airport

London airports account for by far the largest proportion of international airfreight, with Heathrow and Gatwick accounting for almost all the traffic. Manchester is the only other airport with a significant share. London airports handled on average 90 per cent of international airfreight over the period 1980 - 1990. In 1990 Heathrow handled 63 per cent of United Kingdom international airfreight and Gatwick handled 20 per cent. Given the range of destinations served by scheduled services from Heathrow and Gatwick, which to a considerable extent function as a single airport for airfreight, and their facilities for transshipment, this preponderance is hardly surprising. However, although the percentage handled at London airports remained constant over the period, there was some redistribution from Heathrow to the other London airports.

## 1.3 Airfreight tonnage (gross) by airport

											Per cent
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Heathrow	70.1	68.5	70.3	71.4	69.8	68.4	66.7	64.2	64.7	64.4	62.8
Gatwick	16.4	18.9	18.0	16.2	17.8	20.2	20.2	21.2	19.3	19.6	19.9
Other London <sup>1</sup>	2.4	2.6	2.8	4.3	3.6	2.7	2.9	3.4	4.3	5.2	5.7
Total London airports	88.9	90.0	91.1	91.9	91.2	91.2	89.8	88.9	88.3	89.2	88.4
Aberdeen	0.6	0.6	0.7	0.7	0.7	0.6	0.5	0.4	0.4	0.3	0.4
Belfast	0.1	0.1	0.1	0.1	0.4	0.1	0.0	0.1	0.0	0.0	0.0
Birmingham	0.4	0.3	0.3	0.2	0.2	0.4	0.6	1.0	1.0	1.2	1.6
Bournemouth	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
East Midlands	0.8	0.4	0.4	0.5	0.8	1.0	1.6	1.5	1.8	1.3	0.9
Glasgow	0.9	0.9	0.9	0.7	0.9	0.7	0.9	0.5	0.8	0.8	1.0
Liverpool	1.2	0.4	0.5	0.5	0.5	0.4	0.2	0.1	0.1	0.3	0.5
Manchester	3.4	4.1	3.5	3.5	3.5	3.9	4.5	5.3	5.4	5.0	5.5
Prestwick	2.4	2.4	1.7	1.4	1.2	1.2	1.2	1.2	1.5	1.4	0.9
All other airports	1.3	0.7	0.7	0.4	0.6	0.4	0.7	1.0	0.7	0.5	0.8
Total U.K. airports	100 = 656,593	100 = 646,980	100 = 614,334	100 = 644,722	100 = 766,932	100 = 758,872	100 = 795,970	100 = 884,659	100 = 981,910	100 = 1,052,918	100 = 1,092,788

1 Luton, Stansted and London City

Source: Civil Aviation Authority: UK Airports annual returns  
Table 14: International & domestic cargo comparison with the previous year

International airfreight by airport 1980

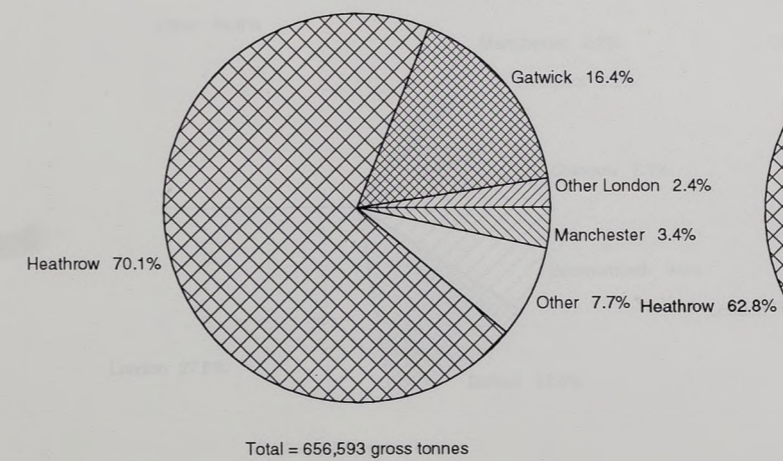


Fig 1.4

International airfreight by airport 1990

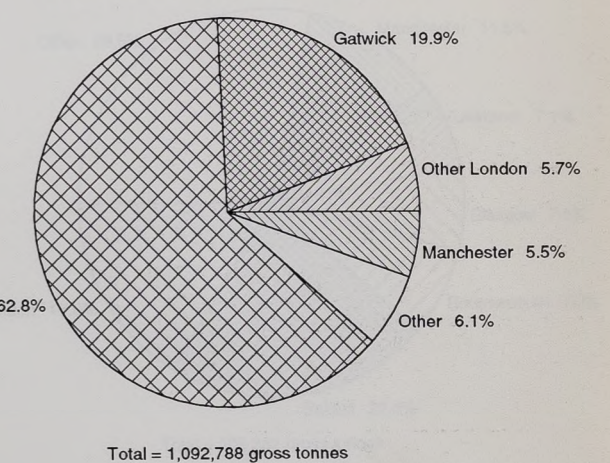


Fig 1.5



### Airfreight by airport (continued)

Unlike international traffic, domestic traffic is counted twice in the CAA statistics once at the airport of departure and once at the airport of arrival, hence no airport could account for more than 50 per cent of this traffic. The figures in Table 1.3(b) table therefore differ from those in Table 1.1, where double counting of domestic freight has been eliminated. The percentages in Table 1.3(b) represent, for each airport, the average of the percentage of total domestic airfreight picked up and the percentage set down at that airport.

The percentage of domestic airfreight picked up/set down at London airports has fallen from 28 per cent in 1980 to 16 per cent in 1990. Although Heathrow's percentage increased slightly, there was a fall at Gatwick and the other London airports.

The most significant growth occurred at Belfast and at Manchester. At Belfast, the share of airfreight picked up/set down increased from 14 per cent in 1980 to 22 per cent in 1990, with a peak of 26 per cent in 1987. Belfast now handles the highest proportion of United Kingdom domestic airfreight. At Manchester between 1980 - 1985, the share was about 2 per cent. Since then, it has risen to 12 per cent with a peak of 19 per cent in 1987, when Datapost's airfreight operations were transferred there. Bournemouth's relatively large market share is due to trade with the Channel Islands.

### 1.3 Airfreight tonnage (gross) by airport (continued)

	(b) Domestic											Per cent
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	
Heathrow	6.2	5.2	4.8	5.6	6.0	6.3	6.9	5.9	6.1	7.6	8.6	
Gatwick	11.0	8.4	9.7	6.5	4.2	3.8	3.3	3.4	2.4	2.5	2.6	
Other London <sup>1</sup>	10.3	11.0	8.7	7.5	10.4	12.2	6.2	4.1	7.5	4.9	5.1	
Total London airports	27.5	24.7	23.1	19.6	20.6	22.4	16.4	13.4	16.0	15.1	16.2	
Aberdeen	4.3	4.4	4.1	3.4	3.0	3.0	2.5	2.3	2.1	2.4	2.4	
Belfast	13.4	16.4	18.2	21.5	21.2	21.5	24.5	26.0	25.6	23.4	22.4	
Birmingham	0.6	0.6	0.4	2.1	2.5	2.7	1.9	5.3	4.5	2.1	3.3	
Bournemouth	9.0	9.0	9.1	9.3	9.5	7.4	8.3	7.7	7.3	8.3	7.3	
East Midlands	1.2	1.4	4.5	5.3	6.5	6.8	8.3	0.9	2.0	1.7	1.4	
Glasgow	7.1	7.8	8.1	7.6	7.7	4.8	6.5	6.3	6.8	7.3	7.0	
Liverpool	6.2	7.2	7.7	7.3	5.3	5.7	5.7	0.7	1.3	6.9	7.1	
Manchester	2.2	2.2	2.4	2.4	2.3	2.6	4.0	18.7	14.4	11.9	11.5	
Prestwick	3.6	2.8	1.6	1.5	0.9	2.8	1.0	1.6	2.2	2.6	3.1	
All other airports	24.7	23.7	20.7	20.1	20.4	20.3	20.9	17.1	17.7	18.3	18.1	
Total U.K. airports	100 = 95,861	100 = 85,636	100 = 85,692	100 = 88,507	100 = 101,942	100 = 98,271	100 = 91,600	100 = 97,642	100 = 112,274	100 = 101,242	100 = 105,332	

1 Luton, Stansted and London City

Source: Civil Aviation Authority: UK Airports annual returns  
Table 14: International & domestic cargo comparison with the previous year

Domestic airfreight by airport 1980

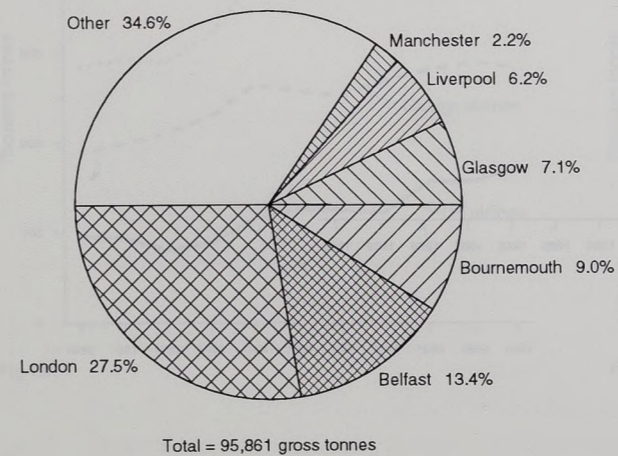


Fig 1.6

Domestic airfreight by airport 1990

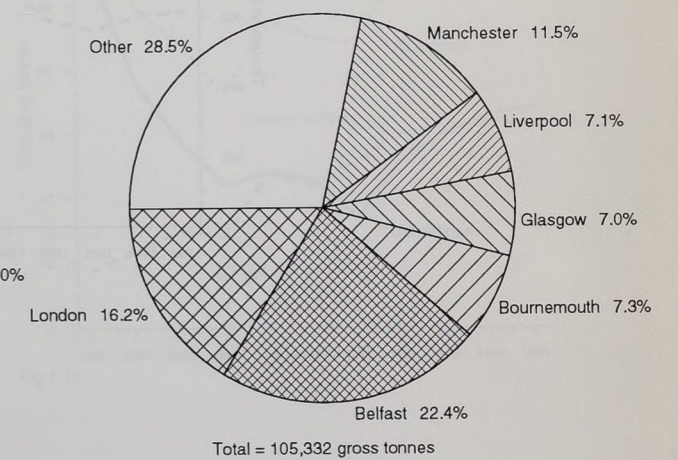


Fig 1.7



## International airfreight picked-up and set-down

Table 1.4 shows the tonnages and percentage of airfreight handled by United Kingdom and Foreign airlines at United Kingdom airports. From 1980 - 1987 the tonnage of international airfreight picked-up exceeded the tonnage set-down, both for United Kingdom airlines and Foreign airlines. However, after 1987, the opposite happened, and set-down exceeded pick-up by 12 per cent for United Kingdom airlines and by 11 per cent for Foreign airlines in 1990. Both tonnage picked-up and tonnage set-down include an unknown proportion of transshipment traffic, as discussed in the Appendix.

Over the period of 1980 - 1990 the difference in growth rate between picked-up and set-down was very large; picked-up grew by 49 per cent while set-down grew by 87 per cent.

The Foreign airlines' share of scheduled freight picked up has fallen steadily from a peak of 72 per cent in 1982, and their share of freight set down has shown a similar pattern. For charter services, the share carried by Foreign airlines has increased considerably over the period 1980 to 1990. Combining both charter and scheduled services over the period to 1990, the United Kingdom airlines' share of airfreight picked-up was 44 per cent in 1980 and 40 per cent in 1990.

The slight fall in the tonnages picked-up and set-down for all sectors between 1981 and 1982 reflected the economic recession at the time.

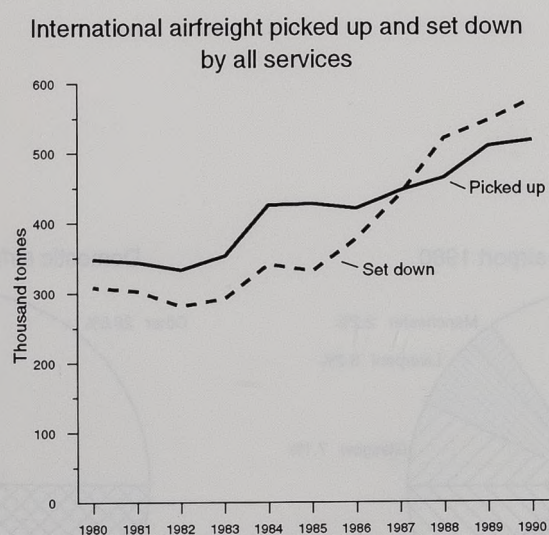


Fig 1.8

## 1.4 International airfreight by type of service and nationality of operator

(a) Picked-up

Thousand tonnes (gross)/per cent

	Scheduled			Charter			All				
	UK airlines		Foreign airlines	UK airlines		Foreign airlines	All lines				
	Weight	%	Weight	%	Weight	%	Weight	Weight			
1980	96	34	188	66	283	56	86	9	14	65	348
1981	94	32	198	68	292	38	76	12	24	50	343
1982	80	28	210	72	289	29	66	15	34	44	333
1983	89	28	228	72	318	22	62	14	38	36	353
1984	115	30	263	70	378	24	50	24	50	48	425
1985	125	33	257	67	382	23	51	22	49	45	427
1986	124	33	251	67	376	17	40	26	60	44	420
1987	122	31	268	69	389	26	47	30	53	56	445
1988	133	32	280	68	413	30	59	21	41	51	464
1989	156	35	288	65	444	33	51	32	49	65	509
1990	170	38	282	62	452	34	52	31	48	65	517

Source: Civil Aviation Authority: UK Airports annual returns

Table 13.1: Cargo by type and nationality of operator

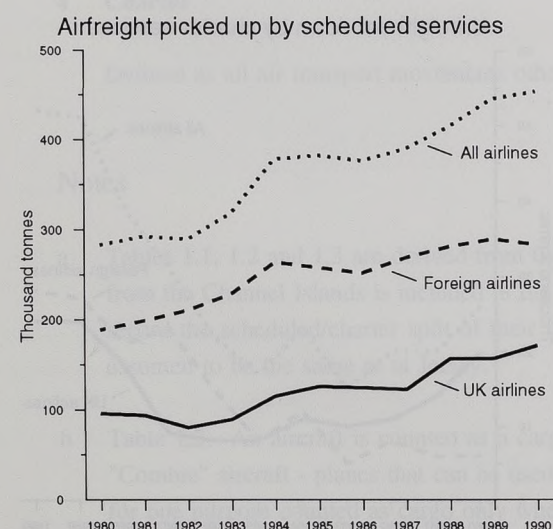


Fig 1.9

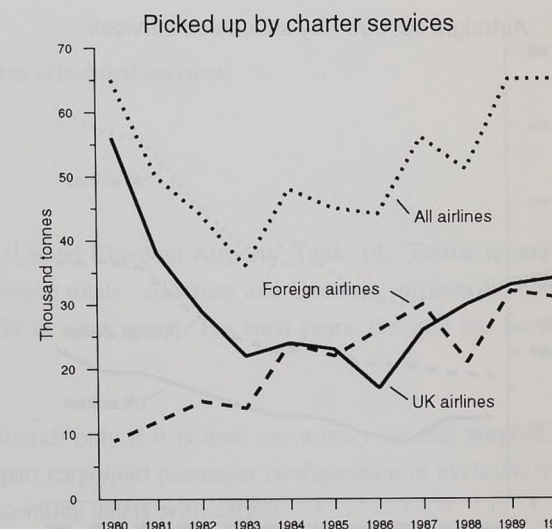


Fig 1.10



1.4 International airfreight by type of service and nationality of operator (continued)

(b) Set-down

Thousand tonnes (gross)/per cent

	Scheduled					Charter					All
	UK airlines		Foreign airlines		All lines	UK airlines		Foreign airlines		All lines	
	Tonnes	%	Tonnes	%		Tonnes	%	Tonnes	%		
	Tonnes	%	Tonnes	%	Tonnes	%	Tonnes	%	Tonnes		
1980	113	40	168	60	282	20	77	6	23	26	308
1981	110	39	172	61	282	14	71	6	29	20	303
1982	80	30	182	70	262	11	58	8	42	20	281
1983	93	34	184	66	277	10	68	5	32	15	292
1984	112	35	207	65	319	11	49	12	51	23	341
1985	115	37	200	63	315	8	50	8	50	17	331
1986	132	37	222	63	354	8	35	15	65	22	377
1987	152	37	257	63	409	9	28	23	72	31	440
1988	171	36	310	64	481	18	46	21	54	39	520
1989	174	35	320	65	494	24	47	27	53	51	545
1990	204	39	319	61	523	24	46	28	54	52	575

Source: Civil Aviation Authority: UK Airports annual returns  
Table 13.1: Cargo by type and nationality of operator

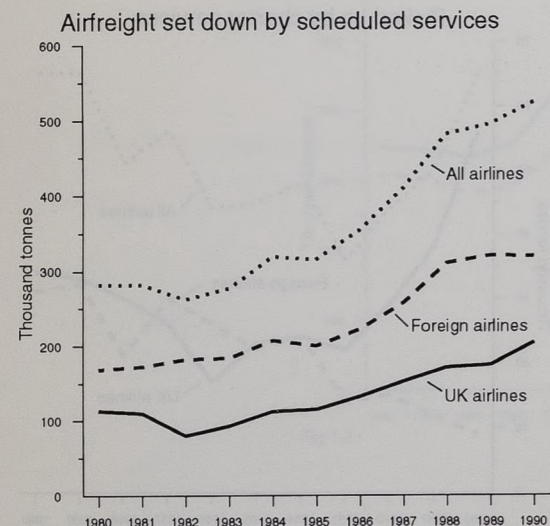


Fig 1.11

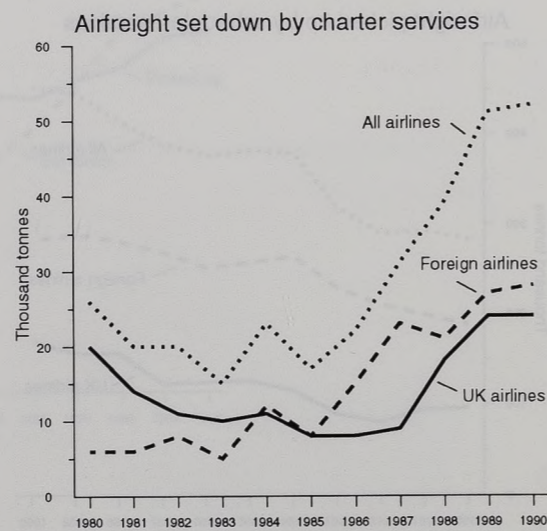


Fig 1.12

NOTES AND DEFINITIONS

(Section 1)

Data for tables in this Section are derived from the CAA publication 'United Kingdom Airports, annual statements of movements, passengers and cargo', Table 13.1 and 14.

Definitions

1 Cargo

Defined as the weight of property carried on an aircraft including for example the weight of vehicles, packaging, excess baggage and diplomatic bags, but excluding mail and passengers' and crews' permitted baggage. Thus CAA cargo tonnage figures are on a gross basis and hence different from Customs & Excise data which is net tonnage. Cargo in transit through a United Kingdom airport on the same aircraft is excluded.

2 Domestic cargo

This is counted twice by the CAA, at the airport of departure and at the airport of arrival. In this Report figures for domestic cargo in all tables, except Table 1.3b, are divided by two to place them on an equitable basis for comparison with international cargo.

3 Scheduled

Defined as those flights performed according to a published timetable, including those supplementary thereto, available for use by members of the public.

4 Charter

Defined as all air transport movements other than scheduled services.

Notes

- a Tables 1.1, 1.2 and 1.3 are derived from CAA 'United Kingdom Airports' Table 14. Traffic to and from the Channel Islands is included in the domestic totals. Alderney and Guernsey airports did not record the scheduled/charter split of their freight in some years. For such years, the split has been assumed to be the same as at Jersey.
- b Table 1.2. An aircraft is counted as a cargo aircraft only if it is used exclusively for that purpose. "Combie" aircraft - planes that can be used in part cargo/part passenger configuration or exclusively for one purpose counted as cargo only when operating solely with cargo.
- c Figures for Table 1.4 are derived from CAA 'United Kingdom Airports' Tables 13.1 and 14. Domestic totals from CAA Table 14 have been apportioned equally between picked-up and set-down and then subtracted from United Kingdom Airlines totals from CAA Table 13.1 to give the international totals in Table 1.4. (Foreign airlines are not permitted to carry cargo within the United Kingdom).



## SECTION 2 - COUNTRIES AND COMMODITIES <sup>2</sup>

### United Kingdom airtrade: major countries

#### Ranked by tonnage

Table 2.1 shows the top 10 countries for imports and exports by air handled at United Kingdom airports. Trade with the USA accounts for the largest proportion both of value and tonnage in both exports and imports. By tonnage, the USA accounts for over one third of all imports throughout the period. The share for exports was 17 per cent in 1980, by 1990 it was 27 per cent. Between 1980 and 1990, the weight of exports to the USA rose by 90 per cent whereas imports for the same period rose by only 69 per cent.

The dominance of the USA in terms of airtrade is shown by the fact that in 1990 the next largest market share was that of Japan, with 6 per cent by weight of exports and 8 per cent of imports.

The overall tonnage cleared at United Kingdom airports has risen more rapidly for imports - by 83 per cent (or by 213,000 net tonnes), than for exports - by 18 per cent (or by 49,000 net tonnes) over the period.

The fact that only half the countries appear on both the import and export sides of the tonnage league table indicates the "imbalance" of airtrade.

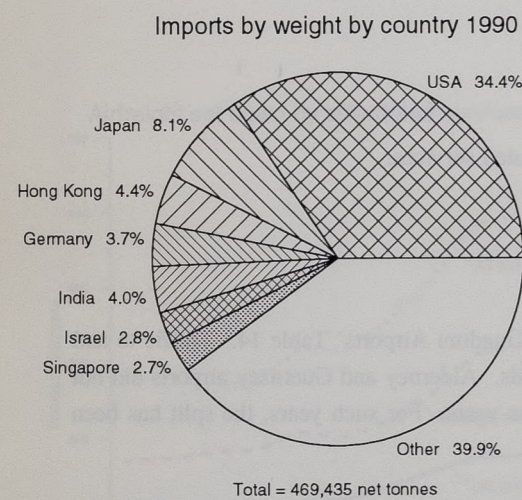


Fig 2.1

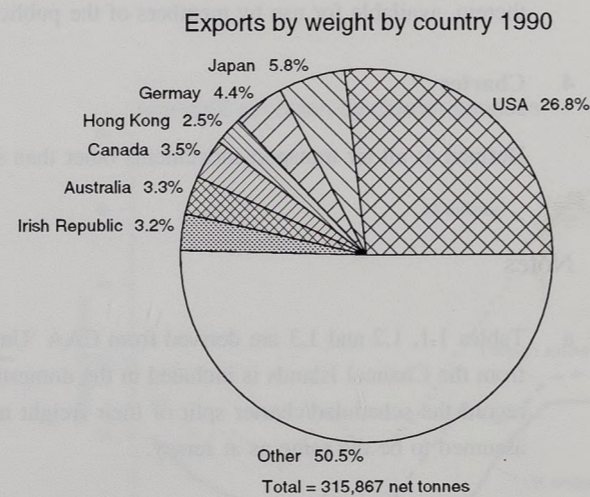


Fig 2.2

<sup>2</sup> See notes and definitions at end of Section

### 2.1 Airtrade: major countries

(a) Ranked by tonnage

Tonnes (net) / £ million at 1990 constant prices

Imports								
1980		1987		1990				
Weight	Value <sup>1</sup>	Weight	Value <sup>1</sup>	Weight	Value <sup>1</sup>			
USA	95,924	5,697	USA	111,722	6,295	USA	161,540	7,788
Germany [Fed. Rep.]	12,536	1,251	Japan	26,404	1,577	Japan	38,119	1,878
Japan	10,798	537	Hong Kong	16,315	413	Hong Kong	20,715	502
Kenya	9,161	29	Germany [Fed. Rep.]	14,937	1,137	India	18,744	336
France	8,687	899	Israel	13,674	194	Germany <sup>3</sup>	17,306	1,223
Cyprus	8,504	116	Kenya	11,053	27	Israel	13,114	214
India	8,294	145	India	10,872	224	Singapore	12,500	527
Hong Kong	8,252	403	Taiwan	10,623	206	Kenya	11,095	27
Israel	7,734	125	South Korea	7,189	175	Taiwan	10,361	243
Spain	7,171	167	Spain	5,729	79	Spain	9,437	132
All countries	256,300	19,642	All countries	335,046	17,980	All countries	469,435	22,157

Exports								
1980		1987		1990				
Weight	Value <sup>2</sup>	Weight	Value <sup>2</sup>	Weight	Value <sup>2</sup>			
USA	44,693	2,937	USA	90,506	5,047	USA	84,771	5,270
Nigeria	13,733	278	Japan	13,372	896	Japan	18,239	1,446
Irish Republic	11,864	278	Irish Republic	12,837	341	Germany <sup>4</sup>	13,946	1,384
France	11,551	936	Canada	11,730	531	Canada	11,022	578
Germany [Fed. Rep.]	11,137	1,157	Germany [Fed. Rep.]	11,600	1,172	Australia	10,559	486
Saudi Arabia	10,360	581	Nigeria	8,078	139	Irish Republic	10,007	413
Italy	8,919	438	Australia	8,021	384	Spain	8,773	346
Zambia	8,386	103	France	7,094	907	Hong Kong	7,922	411
Canada	6,904	322	Saudi Arabia	7,049	984	France	7,347	1,043
Netherlands	6,420	381	Israel	6,819	360	Saudi Arabia	7,253	977
All countries	267,081	18,478	All countries	304,085	19,674	All countries	315,867	21,580

1 c.i.f (carriage insurance and freight)

2 f.o.b (free on board)

3 Includes East Germany (weight = 6 tonnes, value = £8 million)

4 Includes East Germany (weight = 41 tonnes, value = £6 million)

Source: Customs & Excise



## United Kingdom airtrade: major countries (continued)

### Ranked by value

The ranking of countries by value differs from their ranking by tonnage because the mix of commodities traded varies greatly from country to country (see Table 2.4), resulting in very different average values per tonne. There appears to be no strong link between the average values per tonne and the distance of the country from the United Kingdom. However, the USA still comes top of the list, accounting for over a third by value of imports and a quarter of exports in 1990.

Goods of highest value by weight are traded with some of the countries closest to the United Kingdom ie Netherlands, Germany and France. Belgium/Luxembourg and Switzerland owe their position in the table to trade in high value minerals, diamonds and other precious stones.

The speed and efficiency of road transport to the EC may result in only very high value or time sensitive goods being transported by air. Conversely goods imported from Taiwan and South Korea have low values per tonne, likewise goods exported to the Republic of Ireland - where newspapers and other publications account for most of the weight.

Between 1980 and 1990, the value (at 1990 constant prices) of imports by air rose by 13 per cent, and of exports, by 17 per cent.

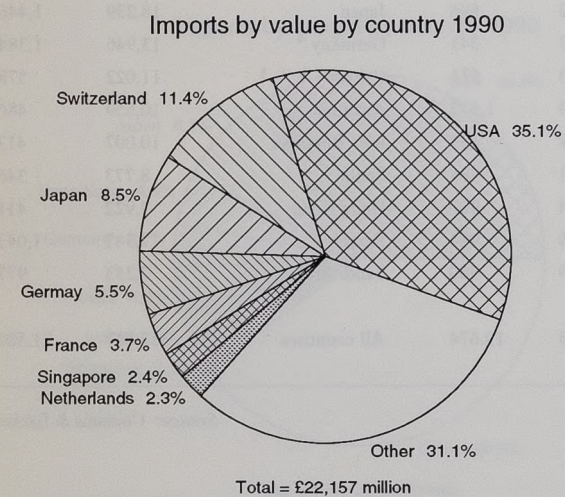


Fig 2.3

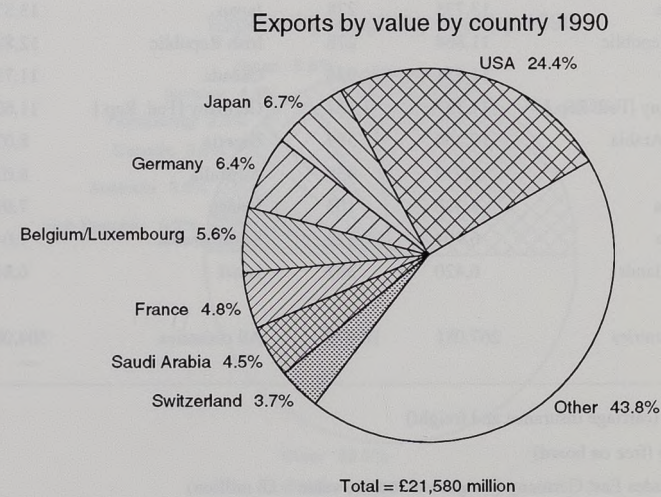


Fig 2.4

## 2.1 Airtrade: major countries (continued)

### (b) Ranked by value

£ million at 1990 constant prices / tonnes (net)

Imports								
	1980		1987		1990			
	Value <sup>1</sup>	Weight	Value <sup>1</sup>	Weight	Value <sup>1</sup>	Weight		
USA	5,697	95,924	USA	6,295	111,722	USA	7,788	161,540
Austria & Switzerland	3,823	4,047	Switzerland	2,273	3,365	Switzerland	2,534	3,526
Germany [Fed. Rep.]	1,251	12,536	Japan	1,577	26,404	Japan	1,878	38,119
France	899	8,687	Germany [Fed. Rep.]	1,137	14,937	Germany <sup>3</sup>	1,223	17,306
Belgium/Luxembourg	897	3,576	France	707	5,073	France	818	5,917
South Africa	752	2,906	Italy	441	4,250	Singapore	527	12,500
USSR	590	184	Canada	413	4,925	Netherlands	507	5,680
Japan	537	10,798	Hong Kong	413	16,315	Hong Kong	502	20,715
Saudi Arabia	425	2,474	Netherlands	398	4,571	Canada	487	6,812
Hong Kong	403	8,252	Belgium/Luxembourg	347	3,570	Italy	483	4,303
All countries	19,642	256,300	All countries	17,981	335,046	All countries	22,157	469,435

Exports								
	1980		1987		1990			
	Value <sup>2</sup>	Weight	Value <sup>2</sup>	Weight	Value <sup>2</sup>	Weight		
Austria & Switzerland	3,943	4,778	USA	5,047	90,506	USA	5,270	84,771
USA	2,937	44,683	Belgium/Luxembourg	1,229	3,489	Japan	1,446	18,239
Belgium/Luxembourg	1,539	4,819	Germany [Fed. Rep.]	1,172	11,600	Germany <sup>4</sup>	1,384	13,946
Germany [Fed. Rep.]	1,157	11,137	Saudi Arabia	984	7,049	Belgium/Luxembourg	1,219	3,848
France	936	11,551	France	907	7,094	France	1,043	7,347
Saudi Arabia	581	10,360	Japan	896	13,372	Saudi Arabia	977	7,253
India	465	4,381	Switzerland	728	3,209	Switzerland	799	2,864
Italy	438	8,919	India	670	5,424	India	655	5,227
Netherlands	381	6,420	Italy	550	4,337	Italy	598	5,192
Japan	375	4,621	Canada	531	11,730	Canada	578	11,022
All countries	18,478	267,081	All countries	19,673	304,085	All countries	21,580	315,867

1 c.i.f (carriage insurance and freight)

2 f.o.b (free on board)

3 Includes East Germany (weight = 6 tonnes, value = £8 million)

4 Includes East Germany (weight = 41 tonnes, value = £6 million)

Source: Customs & Excise



## United Kingdom airtrade with EC countries

### Ranked by tonnage

Airtrade with EC countries has changed little compared to the changes with non-EC countries (Table 2.1). Rankings have remained more or less constant, noticeable exceptions being the export rankings of Germany and Spain which have both increased over the period. In 1990, Germany accounted the largest share both of imports and of exports - 32 per cent of imports and 23 per cent of exports -

Spain's ranking in the import table is largely due to the import of fruit and vegetables from the Canary Islands. Along with Greece and Portugal, airtrade with Spain has the lowest value per tonne. Exports to Mediterranean countries also have relatively low value per tonne. This may reflect the greater distance from the United Kingdom making road haulage a less attractive alternative.

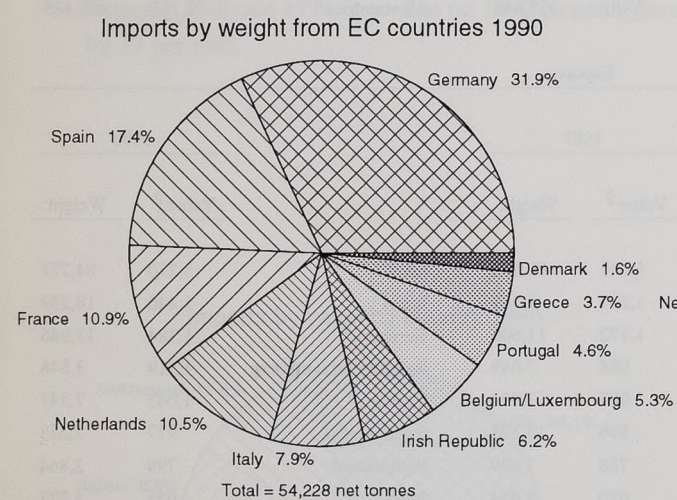


Fig 2.5

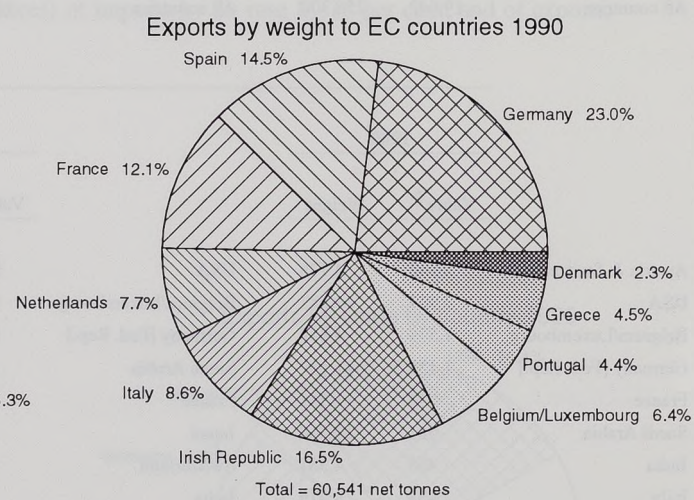


Fig 2.6

## 2.2 Airtrade with EC countries

### (a) Ranked by tonnage

Tonnes (net) / £ million at 1990 constant prices

	Imports							
	1980		1987		1990			
	Weight	Value <sup>1</sup>	Weight	Value <sup>1</sup>	Weight	Value <sup>1</sup>		
Germany [Fed. Rep.]	12,536	1,251	Germany [Fed. Rep.]	14,937	1,137	Germany <sup>3</sup>	17,306	1,223
France	8,687	899	Spain	5,729	79	Spain	9,437	132
Spain	7,171	167	France	5,073	707	France	5,917	818
Italy	5,089	390	Netherlands	4,571	398	Netherlands	5,680	507
Netherlands	4,146	283	Italy	4,250	441	Italy	4,303	483
Irish Republic	3,595	184	Belgium/Luxembourg	3,570	347	Irish Republic	3,369	254
Belgium/Luxembourg	3,576	897	Irish Republic	2,708	265	Belgium/Luxembourg	2,847	422
Portugal	1,512	42	Portugal	2,574	68	Portugal	2,494	73
Greece	1,219	57	Greece	2,326	51	Greece	2,002	53
Denmark	998	99	Denmark	765	87	Denmark	873	107
All EC countries	48,529	4,270	All EC countries	46,503	3,580	All EC countries	54,228	4,072

	Exports							
	1980		1987		1990			
	Weight	Value <sup>2</sup>	Weight	Value <sup>2</sup>	Weight	Value <sup>2</sup>		
Irish Republic	11,864	278	Irish Republic	12,837	341	Germany <sup>4</sup>	13,946	1,384
France	11,551	936	Germany [Fed. Rep.]	11,600	1,172	Irish Republic	10,007	413
Germany [Fed. Rep.]	11,137	1,157	France	7,094	907	Spain	8,773	346
Italy	8,919	438	Spain	6,676	276	France	7,347	1,043
Netherlands	6,420	381	Netherlands	4,834	440	Italy	5,192	598
Belgium/Luxembourg	4,819	1,539	Italy	4,337	550	Netherlands	4,676	512
Spain	3,578	204	Belgium/Luxembourg	3,489	1,229	Belgium/Luxembourg	3,848	1,219
Greece	2,030	77	Greece	2,369	72	Greece	2,713	89
Denmark	1,435	109	Portugal	2,139	87	Portugal	2,660	109
Portugal	1,350	53	Denmark	1,607	131	Denmark	1,379	150
All EC countries	63,103	5,171	All EC countries	56,982	5,203	All EC countries	60,541	5,863

1 c.i.f (carriage insured and freight)

2 f.o.b (free on board)

3 Includes East Germany (weight = 6 tonnes, value = £8 million)

4 Includes East Germany (weight = 41 tonnes, value = £6 million)

Source: Customs & Excise



## United Kingdom airtrade with EC countries (continued)

### Ranked by value

Rank by value does not follow rank by weight due to the variation in price per tonne. Germany accounted for the largest share by value both of imports and of exports in 1990 - 30 per cent of imports and 22 per cent of exports. Since 1980 the tonnage of airfreight imported from EC countries has risen by 12 per cent while exports to the EC countries have fallen by 4 per cent. By value, at 1990 constant prices, imports have fallen by 5 per cent and exports have risen by 13 per cent over the same period.

The high value and low tonnage of exports to Belgium/Luxembourg was due to the inclusion of quantities of diamonds and gems.

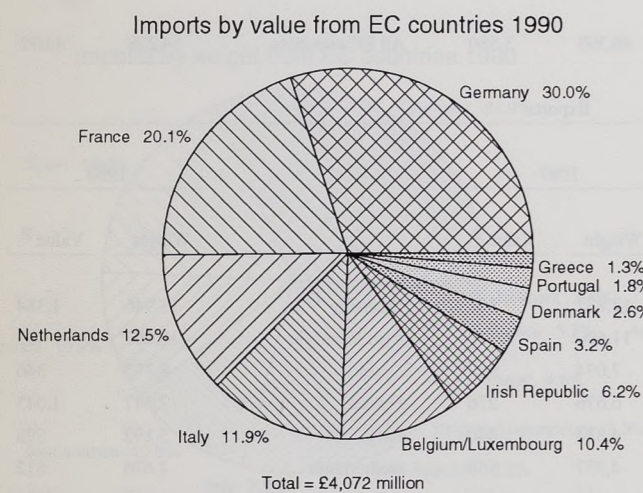


Fig 2.7

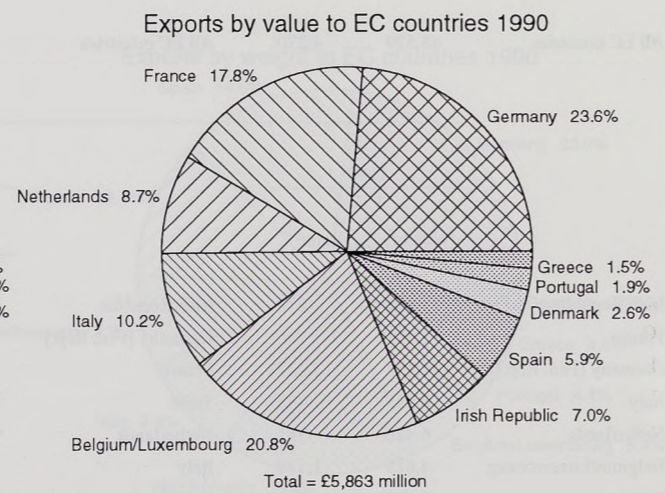


Fig 2.8

## 2.2 Airtrade with EC countries (continued)

### (b) Ranked by value

£ million at 1990 constant prices / tonnes (net)

	Imports							
	1980		1987		1990			
	Value <sup>1</sup>	Weight	Value <sup>1</sup>	Weight	Value <sup>1</sup>	Weight		
Germany [Fed. Rep.]	1,251	12,536	Germany [Fed. Rep.]	1,137	14,937	Germany <sup>3</sup>	1,223	17,306
France	899	8,687	France	707	5,073	France	818	5,917
Belgium/Luxembourg	897	3,576	Italy	441	4,250	Netherlands	507	5,680
Italy	390	5,089	Netherlands	398	4,571	Italy	483	4,303
Netherlands	283	4,146	Belgium/Luxembourg	347	3,570	Belgium/Luxembourg	422	2,847
Irish Republic	184	3,595	Irish Republic	265	2,708	Irish Republic	254	3,369
Spain	167	7,171	Denmark	87	765	Spain	132	9,437
Denmark	99	998	Spain	79	5,729	Denmark	107	873
Greece	57	1,219	Portugal	68	2,574	Portugal	73	2,494
Portugal	42	1,512	Greece	51	2,326	Greece	53	2,002
All EC countries	4,270	48,529	All EC countries	3,580	46,503	All EC countries	4,072	54,228

	Exports							
	1980		1987		1990			
	Value <sup>2</sup>	Weight	Value <sup>2</sup>	Weight	Value <sup>2</sup>	Weight		
Belgium/Luxembourg	1,539	4,819	Belgium/Luxembourg	1,229	3,489	Germany <sup>4</sup>	1,384	13,946
Germany [Fed. Rep.]	1,157	11,137	Germany [Fed. Rep.]	1,172	11,600	Belgium/Luxembourg	1,219	3,848
France	936	11,551	France	907	7,094	France	1,043	7,347
Italy	438	8,919	Italy	550	4,337	Italy	598	5,192
Netherlands	381	6,420	Netherlands	440	4,834	Netherlands	512	4,676
Irish Republic	278	11,864	Irish Republic	341	12,837	Irish Republic	413	10,007
Spain	204	3,578	Spain	276	6,676	Spain	346	8,773
Denmark	109	1,435	Denmark	131	1,607	Denmark	150	1,379
Greece	77	2,030	Portugal	87	2,139	Portugal	109	2,660
Portugal	53	1,350	Greece	72	2,369	Greece	89	2,713
All EC countries	5,171	63,103	All EC countries	5,203	56,982	All EC countries	5,863	60,541

1 c.i.f (carriage insurance and freight)

2 f.o.b (free on board)

3 Includes East Germany (weight = 6 tonnes, value = £8 million)

4 Includes East Germany (weight = 41 tonnes, value = £6 million)

Source: Customs & Excise



## United Kingdom airtrade by country group

### Import tonnage

Table 2.3a shows imported airtrade by weight from different parts of the world. The total weight imported nearly doubled between 1980 and 1990, but the growth rates differed from area to area. The biggest increase between 1987 and 1990 was with Eastern Europe, after a decline since 1980. In 1988, 1989 and 1990 imports from Eastern Europe totalled 1,952, 3,549, and 6,605 tonnes respectively, a fifteen-fold increase (of 6,000 tonnes) between 1987 and 1990.

Airfreight imports from the Far East, South America, and Australasia all more than tripled between 1980 and 1990. While these countries had a large increase in their share of imports, the largest share remained with North and Central America, 38 per cent in 1990.

Imports by air have become increasingly dominated by long-haul countries. In 1980, 73 per cent of imports by air came from outside Europe. This percentage rose to 82 per cent in 1990. But for the rise of Eastern European imports, this percentage would have been still higher.

Developments in the road haulage market and improved motorway communications have eroded the time advantage airfreight offered between the UK and much of the rest of Western Europe. As a result, there has been a loss of traffic to international road haulage. The airlines themselves have reacted to the competition from road haulage by establishing extensive scheduled trucking operations of their own. The tendency to lose traffic to road haulage has been limited to the shorter routes of under one thousand miles, hence airfreight imports from the Mediterranean outside Europe have kept up with the general trend.

Fig 2.9 compares the weight imported and exported by air in 1990. Imports from many parts of the world are higher than exports.

## 2.3 Airtrade by country group

### (a) Imports

Tonnes (net)

	1980		1987		1990	
	Weight	Index	Weight	Index	Weight	Index
EC <sup>1</sup>	48,529	100	46,503	96	54,228	112
Rest of Western Europe	19,236	100	15,132	79	24,119	125
Eastern Europe <sup>2</sup>	588	100	408	69	6,605	1,123
Mediterranean outside Europe	10,104	100	16,067	159	15,500	153
Arab Gulf & Red Sea	4,567	100	4,581	100	6,078	133
Rest of Africa	20,829	100	24,720	119	28,248	136
Indian Sub-continent	16,586	100	19,069	115	29,347	177
Far East	25,916	100	70,113	271	105,487	407
Australasia	1,558	100	3,994	256	4,858	312
North and Central America	102,719	100	121,693	118	176,900	172
South America	5,669	100	12,766	225	18,064	319
Total all countries	256,300	100	335,046	131	469,435	183

1 Includes East Germany for 1990 (6 tonnes)

2 Excludes East Germany for 1990

Source: Customs & Excise

Airtrade by weight by country group 1990

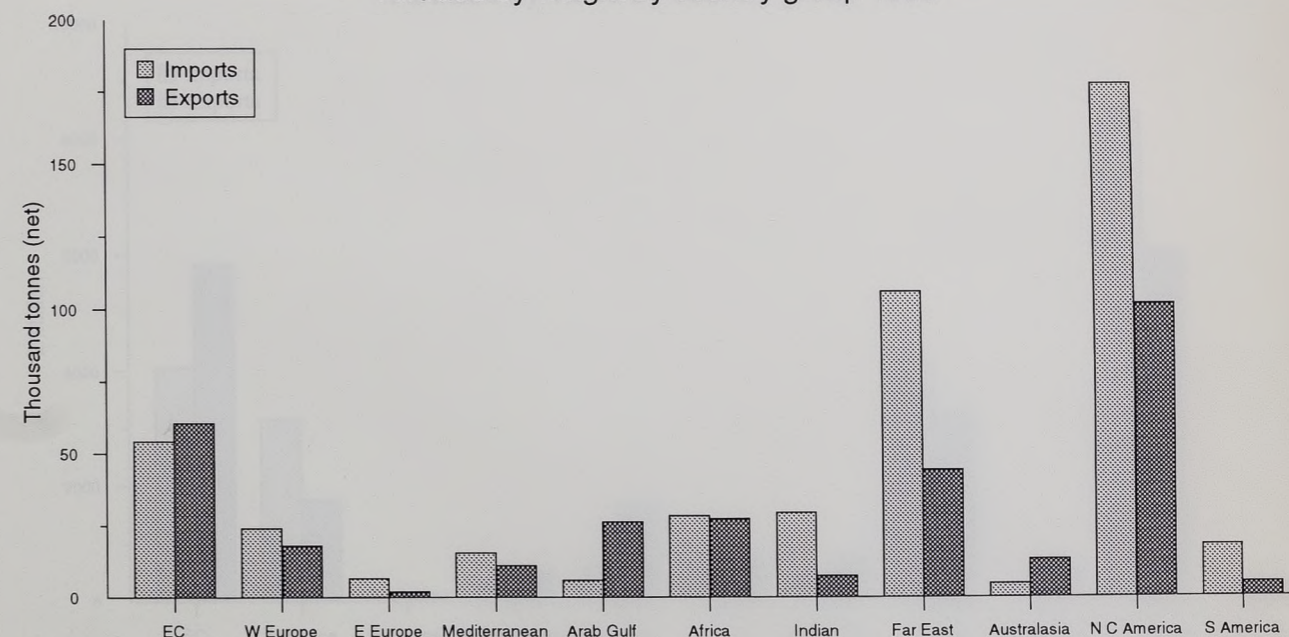


Fig 2.9





## United Kingdom airtrade by country group (continued)

### Import value

For regions where imports by value have not increased as fast as imports by weight, value per tonne has been falling in real terms. Because of the variation in product mix and value per tonne, high imports from each region do not necessarily imply high value.

Despite the fall in real value for some regions, the overall trade value has shown an increase over the years. Fig 2.10 shows the difference in value between exports and imports for each region.

## 2.3 Airtrade by country group (continued)

### (b) Imports (c.i.f)

Value: £ million at 1990 constant prices

	1980		1987		1990	
	£M	Index	£M	Index	£M	Index
EC <sup>1</sup>	4,270	100	3,580	84	4,072	95
Rest of Western Europe	4,244	100	2,780	66	3,160	74
Eastern Europe <sup>2</sup>	616	100	64	10	74	12
Mediterranean outside Europe	241	100	227	94	258	107
Arab Gulf & Red Sea	844	100	522	62	573	68
Rest of Africa	1,376	100	314	23	586	43
Indian Sub-continent	324	100	308	95	434	134
Far East	1,267	100	3,066	242	4,141	327
Australasia	118	100	144	123	228	194
North and Central American	6,208	100	6,814	110	8,449	136
South America	123	100	161	131	180	146
Total all countries	19,642	100	17,981	92	22,157	113

1 Includes East Germany for 1990 (£8 million)

2 Excludes East Germany for 1990

Source: Customs & Excise

Airtrade by value by country group 1990

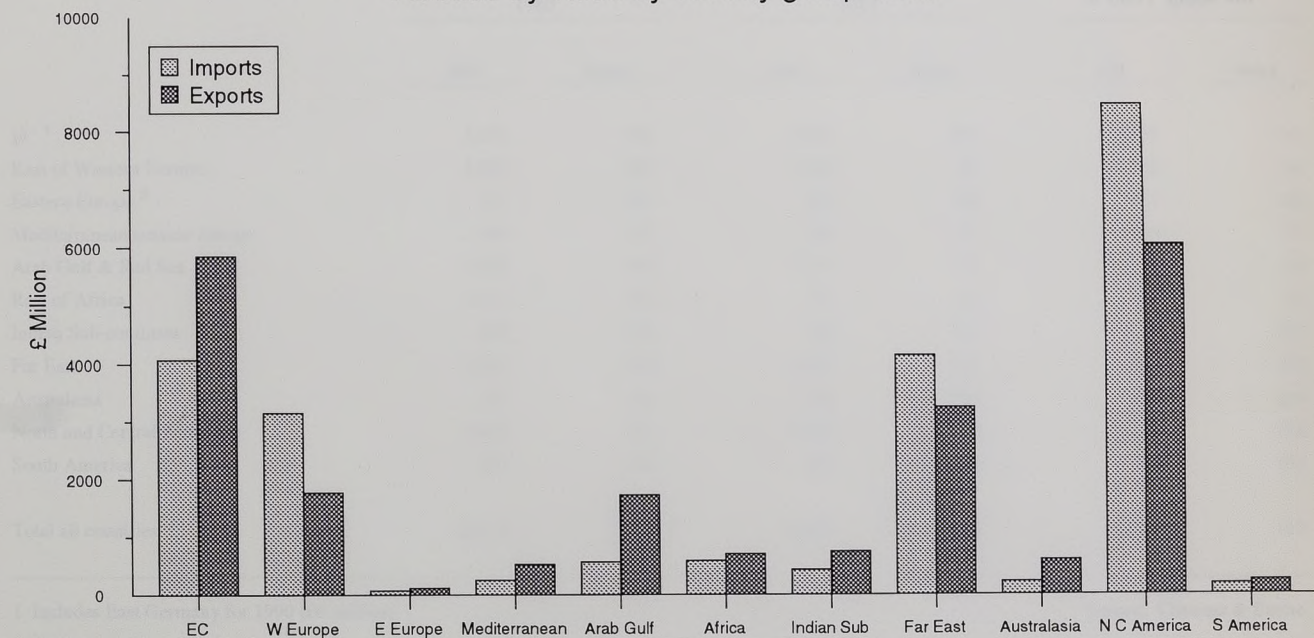


Fig 2.10





## United Kingdom airtrade by country group (continued)

### Export tonnage

While airtrade imports (Table 2.3a) increased rapidly, especially from the areas outside Europe, exports (Table 2.3c) from United Kingdom airports have declined in many regions. The overall weight exported increased by 18 per cent between 1980 and 1990, but this was much less than the percentage increase in imports over the same period, 83 per cent.

As with imports (Table 2.3a), exports have shown a concentration on non-European destinations. However, Europe's share of exports in 1990 was 25 per cent compared to 18 per cent for imports. Exports to non-European destinations accounted for 75 per cent in 1990 compared to 69 per cent in 1980, while exports to Europe fell from 31 per cent in 1980 to 25 per cent in 1990.

Exports to certain areas outside Europe did not expand. Those to the Arab Gulf & Red Sea, which accounted for 13 per cent of the total in 1980, fell to 8 per cent in 1990. This appears to have been caused by a major shift in the mix of goods exported since in terms of value there was an increase despite falling oil prices. Exports to the Rest of Africa fell even more sharply, reflecting economic conditions in the area.

### Export value

The value, at constant prices, of exports increased by a similar percentage to weight exported indicating that the goods over the period have remained broadly the same in value in relation to their weight. For imports, value increased faster than weight. The regions differed in this relationship, with increases in value exceeding those in weight for the EC, Mediterranean outside Europe, Arab Gulf and Red Sea, Indian subcontinent, and North and Central America.

The Far East had the fastest rate of increase reflecting the fast growing rate of tonnages exported to this region since the early 1980's.

## 2.3 Airtrade by country group (continued)

### (c) Exports

Tonnes (net)

	1980		1987		1990	
	Weight	Index	Weight	Index	Weight	Index
EC <sup>1</sup>	63,103	100	56,982	90	60,541	96
Rest of Western Europe	18,680	100	16,051	86	18,049	97
Eastern Europe <sup>2</sup>	1,378	100	1,378	100	1,916	139
Mediterranean outside Europe	16,952	100	11,525	68	11,129	66
Arab Gulf & Red Sea	34,827	100	27,065	78	26,165	75
Rest of Africa	43,548	100	29,400	68	27,196	62
Indian Sub-continent	11,581	100	8,017	69	7,535	65
Far East	12,379	100	32,054	259	43,939	355
Australasia	4,582	100	10,366	226	13,088	286
North and Central American	55,880	100	105,442	189	101,306	181
South America	4,173	100	5,805	139	5,003	120
Total all countries	267,081	100	304,085	114	315,867	118

1 Includes East Germany for 1990 (41 tonnes)

Source: Customs & Excise

2 Excludes East Germany for 1990

## 2.3 Airtrade by country group (continued)

### (d) Exports (f.o.b)

Value: £ million at 1990 constant prices

	1980		1987		1990	
	£M	Index	£M	Index	£M	Index
EC <sup>1</sup>	5,171	100	5,203	101	5,863	113
Rest of Western Europe	4,590	100	1,664	36	1,765	38
Eastern Europe <sup>2</sup>	107	100	101	94	113	106
Mediterranean outside Europe	680	100	541	79	525	77
Arab Gulf & Red Sea	1,278	100	1,733	136	1,733	136
Rest of Africa	1,111	100	731	66	704	63
Indian Sub-continent	614	100	783	127	754	123
Far East	1,011	100	2,437	241	3,245	321
Australasia	272	100	505	186	599	220
North and Central American	3,402	100	5,719	168	6,039	178
South America	237	100	261	110	240	101
Total all countries	18,476	100	19,677	106	21,580	117

1 Includes East Germany for 1990 (£6 million)

Source: Customs & Excise

2 Excludes East Germany for 1990



## Commodities by major airports

### Imports

Table 2.4 shows the top 20 commodities imported by air through the United Kingdom airports in 1990. Between 1980 and 1990, total commodity imports by air rose by 213,000 tonnes (83 per cent) with the rise in the London airports being 150,000 tonnes (80 per cent). Food products and preparations account for 78,400 tonnes (17 per cent) of all airtrade imports in 1990. The reason for this large share of airtrade for food products, especially fruit and vegetables, was their time sensitivity.

Imports of clothing have become important for Manchester accounting for 19 per cent of the airtrade in 1990. Airtrade at Manchester has tripled over the period, and at London airports nearly doubled.

Major import commodities - all airports 1990

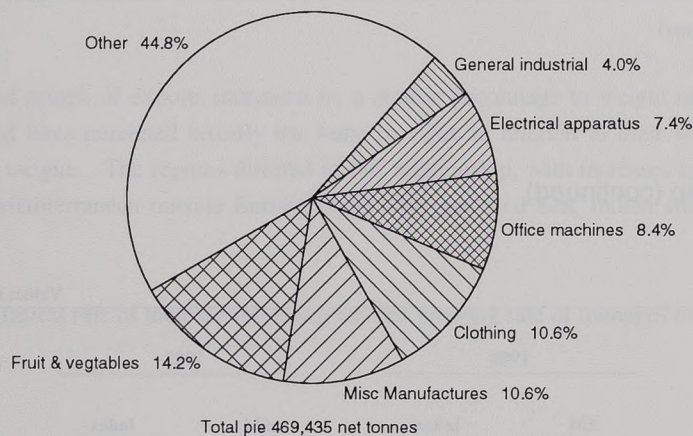


Fig 2.11



## 2.4 Airtrade by commodity group<sup>1</sup>: major airports

	Tonnes (net)											
	Heathrow and Gatwick			Manchester			All other			All		
	1980	1987	1990	1980	1987	1990	1980	1987	1990	1980	1987	1990
Fish products (03)	1,550	2,643	5,452	129	199	221	128	240	483	1,807	3,082	6,156
Fruit and vegetables (05)	34,178	55,571	62,742	121	566	565	935	2,110	3,343	35,234	58,247	66,650
Crude animal and vegetable matter (29)	5,909	10,747	14,117	118	576	526	438	1,255	505	6,465	12,578	15,148
Paper products (64)	1,824	2,210	3,035	232	180	337	360	635	681	2,416	3,025	4,053
Textiles and fabrics (65)	6,980	8,995	10,822	923	1,436	3,103	1,598	1,283	3,286	9,501	11,714	17,211
Mineral manufacture (66)	1,370	1,579	2,063	197	477	514	458	635	1,237	2,025	2,691	3,814
Metal manufactures (69)	4,956	4,717	6,124	591	973	1,680	1,603	1,945	4,852	7,150	7,635	12,656
Power generating machinery (71)	5,107	5,782	7,310	504	676	1,013	1,839	3,627	5,206	7,450	10,085	13,529
Specialist machinery (72)	3,708	4,176	5,087	871	1,155	1,902	1,993	1,980	2,601	6,572	7,311	9,590
General industrial machinery (74)	7,372	8,046	10,393	1,519	2,203	3,317	2,581	3,531	5,236	11,472	13,780	18,946
Office machines (75)	15,430	29,435	28,082	555	932	1,530	3,295	5,561	9,745	19,280	35,928	39,357
Telecommunications (76)	6,123	11,885	15,448	289	345	569	361	750	1,191	6,773	12,980	17,208
Electrical apparatus (77)	9,501	17,013	24,873	967	2,023	2,601	3,720	5,258	7,405	14,188	24,294	34,879
Road vehicles and parts (78)	2,755	3,859	5,505	592	626	1,121	1,659	3,496	8,677	5,006	7,981	15,303
Ships, rail and aircraft equipment <sup>2</sup> (79)	1,397	1,840	3,221	94	179	564	565	471	1,122	2,056	2,490	4,907
Clothing (84)	16,200	26,285	39,667	792	4,674	6,981	1,350	1,127	3,081	18,342	32,086	49,729
Footwear (85)	3,390	2,293	5,698	112	201	804	205	209	235	3,707	2,703	6,737
Scientific & professional instruments (87)	5,347	6,975	8,596	511	846	1,246	1,250	1,714	2,297	7,108	9,535	12,139
Photographic and optical (88)	4,486	5,760	6,339	244	469	525	825	907	1,315	5,555	7,136	8,179
Miscellaneous manufactured goods (89)	16,827	28,154	40,001	748	1,661	2,815	1,990	3,480	6,913	19,565	33,295	49,729
All other	32,716	27,261	32,821	2,466	3,239	5,477	29,446	5,970	25,217	64,628	36,470	63,515
Total all commodities	187,126	265,226	337,396	12,575	23,636	37,411	56,599	46,184	94,628	256,300	335,046	469,435

1 SITC division number - in brackets following description

2 Excluding airtrade in complete aircraft (8024 tonnes in 1990)

Source: Customs & Excise



## Commodities by major airports (continued)

### Exports

Most commodities in Table 2.4(b) showed a substantial increase in exports between 1980 and 1990, in particular were: electrical apparatus with an increase of 90 per cent (with a 70 per cent rise at London airports), office machines with an increase of 85 per cent, and miscellaneous manufactured goods with an increase of 57 per cent. Commodities that showed a decline include specialist machinery (by 18 per cent), and medicinal and pharmaceutical products (by 4 per cent).

The overall increase in exports by air between 1980 and 1990 was only 18 per cent. Exports from Heathrow and Gatwick increased by 24 per cent. As with imports, exports at Manchester showed a large increase, doubling between 1980 and 1990.

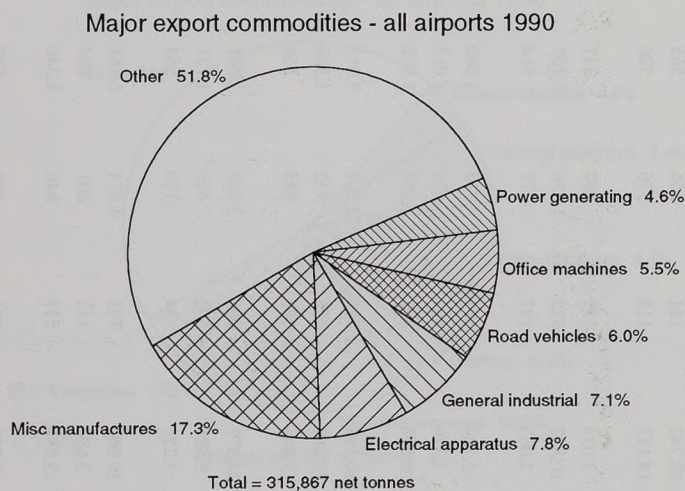


Fig 2.12



## 2.4 Airtrade by commodity group<sup>1</sup>: major airports (continued)

(b) Exports

Tonnes (net)

	Heathrow and Gatwick			Manchester			All other			All		
	1980	1987	1990	1980	1987	1990	1980	1987	1990	1980	1987	1990
Beverages (11)	3,508	3,551	4,368	122	254	83	247	285	765	3,877	4,090	5,216
Medicinal and pharmaceutical (54)	7,184	6,865	6,592	188	643	414	426	822	521	7,798	8,330	7,527
Essential oils, perfume materials (55)	2,332	3,419	4,182	57	126	183	32	160	246	2,421	3,705	4,611
Other chemical products (59)	2,866	3,786	3,433	105	178	347	229	366	541	3,200	4,330	4,321
Paper products (64)	3,279	3,425	4,391	119	131	244	273	310	475	3,671	3,866	5,110
Textiles and fabrics (65)	7,799	12,602	11,131	771	1,359	1,892	2,143	1,280	1,313	10,713	15,241	14,336
Mineral manufactures (66)	4,297	5,280	4,251	303	553	759	176	420	369	4,776	6,253	5,379
Metal manufactures (69)	8,471	8,247	8,837	378	1,084	875	1,146	2,122	1,942	9,995	11,453	11,654
Power generating machinery (71)	10,097	10,454	10,001	676	691	1,596	1,519	1,519	2,962	12,292	12,664	14,559
Specialist machinery (72)	14,521	13,208	10,094	796	2,584	1,524	1,093	1,066	1,834	16,410	16,858	13,452
General industrial machinery (74)	14,037	15,394	18,348	884	1,261	2,221	1,237	1,439	1,759	16,158	18,094	22,328
Office machines (75)	7,749	14,043	13,880	124	775	592	1,499	1,742	2,867	9,372	16,560	17,339
Telecommunications (76)	4,492	5,289	6,270	28	83	306	323	433	544	4,843	5,805	7,120
Electrical apparatus (77)	11,352	16,878	19,306	422	926	1,619	1,171	2,378	3,611	12,945	20,182	24,536
Road vehicles and parts (78)	11,452	12,852	11,637	527	1,514	1,075	974	2,940	6,151	12,953	17,306	18,863
Ships, rail and aircraft equipment <sup>2</sup> (79)	4,109	4,728	4,639	556	442	987	567	1,399	1,905	5,232	6,569	7,531
Clothing (84)	7,550	8,595	6,998	243	474	515	728	808	1,330	8,521	9,877	8,843
Scientific & professional instruments (87)	8,299	12,148	12,092	315	684	1,131	678	1,217	1,149	9,292	14,049	14,372
Photographic and optical (88)	3,393	5,528	5,408	39	147	127	345	418	331	3,777	6,093	5,866
Miscellaneous manufactured goods (89)	25,301	44,039	43,955	1,826	6,596	2,831	7,623	6,913	7,779	34,750	57,548	54,565
All other	38,580	36,880	38,082	2,332	2,233	3,575	33,173	6,099	6,682	74,085	45,212	48,339
Total all commodities	200,668	247,211	247,895	10,811	22,738	22,896	55,602	34,136	45,076	267,081	304,085	315,867

1 SITC division number - in brackets following description

2 Excluding airtrade in complete aircraft (4457 tonnes in 1990)

Source: Customs & Excise







## 2.5 Airtrade by commodity group<sup>1</sup>: major countries 1990

Tonnes (net)

(a) Imports

	USA	Japan	Hong Kong	India	Germany <sup>2</sup>	Israel	Singapore	Kenya	Taiwan	Spain <sup>3</sup>
Fish products (03)	1,375	118	49	78	23	302	567	20	0	4
Fruit and vegetables (05)	12,907	9	78	756	27	5,977	1	9,878	6	2,948
Crude animal and vegetable matter (29)	907	12	3	55	16	2,175	118	813	1	1,443
Paper products (64)	2,488	327	123	44	136	35	28	2	96	29
Textiles and fabrics (65)	6,021	1,302	183	1,139	379	531	11	3	292	98
Mineral manufacture (66)	2,152	235	35	36	252	101	9	20	97	7
Metal manufactures (69)	6,271	799	377	240	1,033	122	145	4	450	140
Power generating machinery (71)	5,033	1,928	149	114	1,365	7	71	8	58	1,563
Specialist machinery (72)	5,131	1,157	43	23	859	37	38	0	74	13
General industrial machinery (74)	11,753	1,313	104	58	1,201	102	120	1	224	121
Office machines (75)	20,040	7,435	797	9	804	90	1,945	2	2,918	167
Telecommunications (76)	3,342	5,607	1,460	47	339	50	748	9	854	51
Electrical apparatus (77)	14,249	6,387	1,944	58	1,904	79	978	1	1,389	142
Road vehicles and parts (78)	4,216	3,032	9	32	3,228	10	117	11	104	1,765
Ships, rails and aircraft equipment (79)	2,444	19	52	41	318	27	20	5	2	105
Clothing (84)	1,457	95	8,974	10,134	286	2,748	851	89	643	29
Footwear (85)	365	11	111	1,374	26	2	22	0	328	76
Scientific & professional instruments (86)	7,257	837	226	31	664	102	184	3	121	55
Photographic and optical (88)	2,947	1,637	1,442	7	276	22	96	8	496	16
Miscellaneous manufactured goods (89)	25,104	3,228	3,146	2,449	1,591	230	778	26	1,778	396
All other	26,081	2,631	1,410	2,019	2,579	365	5,653	192	430	269
Total all commodities	161,540	38,119	20,715	18,744	17,306	13,114	12,500	11,095	10,361	9,437

1 SITC division number - in brackets following description

2 Includes East Germany (total all commodities = 6 tonnes)

3 Includes Canary Islands, Ceuta and Melilla

Source: Customs & Excise



Commodities by country (continued)

Exports

The rank order of commodities for each country roughly follows the ranking of export commodities in Table 2.4. Thus the United Kingdom exports approximately the same type and range of products by air to all countries.

Noticeable values in Table 2.5b include exports to Japan of textiles and fabrics, Germany of road vehicles and parts, Saudi Arabia of metal manufactures, and the Irish Republic of miscellaneous manufactured goods - mainly newspapers and other publications.

Commodity	USA	UK	FR	DE	IT	JP	IN	SA	IR	Other
Value of exports	10,300	18,344	31,367	13,114	13,500					
Wt. (kg)	30,081	7,016	7,126	104	1,532					
Percentage composition by wt. (kg)	52.18	3.96	1.93	0.73	1.13					
Value of exports	2,946	1,742	1,148	32	60					
Percentage of composition by value	28.5	9.5	3.6	0.2	0.4					
Number of items	368	111	78	7	22					
Value of exports	1,742	1,041	335	228	62					
Percentage of composition by value	59.1	60.0	29.2	10.0	10.0					
Value of exports	4,250	1,000	2,728	18	112					
Percentage of composition by value	143.4	57.3	93.4	0.6	3.9					
Value of exports	2,745	1,000	1,000	20	100					
Percentage of composition by value	93.2	58.4	33.8	0.7	3.3					
Value of exports	2,000	1,000	1,000	20	100					
Percentage of composition by value	67.7	58.4	33.8	0.7	3.3					
Value of exports	1,000	1,000	1,000	20	100					
Percentage of composition by value	33.3	58.4	33.8	0.7	3.3					
Value of exports	1,000	1,000	1,000	20	100					
Percentage of composition by value	33.3	58.4	33.8	0.7	3.3					
Value of exports	1,000	1,000	1,000	20	100					
Percentage of composition by value	33.3	58.4	33.8	0.7	3.3					
Value of exports	1,000	1,000	1,000	20	100					
Percentage of composition by value	33.3	58.4	33.8	0.7	3.3					



## 2.5 Airtrade by commodity group<sup>1</sup>: major countries 1990 (continued)

	Tonnes (net)									
	USA	Japan	Germany <sup>2</sup>	Canada	Australia	Irish Republic	Spain	Hong Kong	Saudi Arabia	France
Beverages (11)	1,117	282	103	371	29	389	125	118	0	130
Medicinal and pharmaceutical (54)	1,122	374	134	341	272	172	109	98	449	103
Essential oils, perfume materials (55)	465	929	31	226	263	48	31	81	156	52
Other chemical materials (59)	959	187	106	121	151	47	102	61	121	108
Paper products (64)	1,277	226	122	171	86	177	54	138	83	22
Textiles and fabrics (65)	4,190	1,499	203	685	523	164	148	952	131	136
Mineral manufactures (66)	1,917	680	89	248	150	73	61	137	208	46
Metal manufactures (69)	3,538	462	348	398	362	201	141	344	953	177
Power generating machinery (71)	4,792	368	874	809	370	125	837	258	190	231
Specialist machinery (72)	4,443	399	410	443	461	335	169	157	169	165
General industrial machinery (74)	7,675	1,103	467	791	792	231	274	384	482	295
Office machines (75)	5,250	427	756	218	816	513	452	453	128	543
Telecommunications (76)	916	312	371	217	261	122	154	252	148	195
Electrical apparatus (77)	6,317	1,429	2,058	602	919	701	497	779	415	823
Road vehicles and parts (78)	4,916	984	2,540	444	354	388	1,906	195	135	101
Ship, rail and Aircraft equipment (79)	1,805	97	802	269	148	94	169	86	566	1,145
Clothing (84)	2,272	958	212	531	98	174	282	346	474	108
Scientific & professional instruments (86)	4,047	798	690	435	479	228	221	268	277	489
Photographic and optical (88)	2,076	390	144	150	192	128	173	95	59	146
Miscellaneous manufactured goods (89)	13,939	3,058	2,394	1,642	2,470	4,154	2,219	1,085	1,016	1,492
All other	11,738	3,277	1,092	1,910	1,363	1,543	649	1,635	1,093	840
<b>Total all commodities</b>	<b>84,771</b>	<b>18,239</b>	<b>13,946</b>	<b>11,022</b>	<b>10,559</b>	<b>10,007</b>	<b>8,773</b>	<b>7,922</b>	<b>7,253</b>	<b>7,347</b>

1 SITC division number - in brackets following description

2 Includes East Germany (total all commodities = 41 tonnes)

Source: Customs & Excise



## NOTES AND DEFINITIONS

(Section 2)

Imports are valued including cost, insurance and freight (c.i.f). Exports are valued free on board (f.o.b). Weight is net tonnage, excluding all but innermost packaging. Where indicated, values have been adjusted to 1990 constant prices using the GDP deflator.

All Tables exclude postal packets which accounted for £156 million by value in 1990.

### Notes

a Table 2.1. The top 10 countries by imports and by exports separately have been selected for inclusion in this table. See (c) for country classifications.

b Table 2.2. See (c) for country classifications.

c Table 2.3. Country classifications are as follows:

#### EC:

Belgium/Luxembourg, Denmark, France (includes Andorra), Germany (Federal Rep.) (includes East Germany in 1990), Greece, Irish Republic, Italy (includes Vatican City), Netherlands, Portugal (includes Madeira and the Azores), and Spain (includes the Canary Islands, Ceuta and Melilla).

#### Rest of Western Europe:

Austria, Cyprus, Faroe Islands, Finland, Gibraltar, Iceland, Malta, Norway, Sweden, Switzerland, Turkey, and Yugoslavia.

#### Eastern Europe:

Albania, Bulgaria, Czechoslovakia, Germany [Democratic Rep.] (included in EC from 1990), Hungary, Poland, Romania, and the former USSR.

#### Mediterranean outside Europe:

Algeria, Egypt, Israel, Lebanon, Libya, Morocco, Syria, and Tunisia.

#### Rest of Africa:

Angola, Benin, Botswana, Br. Ind. Oc. Terr., Burkina Faso, Burundi, Cameroon, Cape Verde, Cent. African Rep., Chad, Comoros, Congo, Djibouti, Equat. Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mayotte, Mozambique, Namibia, Niger, Nigeria, Reunion, Rwanda, Sao Tome-Princ, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, St. Helena, Sudan, Swaziland, Tanzania, Togo, Uganda, Zaire, Zambia, and Zimbabwe.

#### Arab Gulf and Red Sea:

Abu Dhabi, Bahrain, Dubai, Iran, Iraq, Jordan, Kuwait, North and South Yemen, Oman, Qatar, Saudi Arabia and Sharjah.

#### Indian Sub-continent

Afghanistan, Bangladesh, Bhutan, Burma, India, Nepal, Pakistan, and Sri Lanka.

#### Far East:

Brunei, China, Hong Kong, Indonesia, Japan, Kampuchea, Laos, Macao, Malaysia, Maldives, Mongolia, North and South Korea, Philippines, Singapore, Taiwan, Thailand and Vietnam.

#### Australasia:

Australia, Australia Cook Islands, Fiji, French Polynesia, Kiribati, Nauru, New Zealand, New Caledonia, Niue & Tokelau, Papua New Guinea Samoa, Pitcairn, Solomon Islands, Tonga, Tuvalu, U.S. Oceania, Vanuatu, Wallis & Futuna, and Western Oceania.

#### North and Central America:

Anguilla, Antigua & Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, British Virgin Isles, Canada includes Greenland and St Pierre-Mique, Cayman Islands, Costa Rica, Cuba, Curacao, Dominica, Dominican Rep., El Salvador, Grenada, Guadeloupe, Guatemala, Haiti, Honduras, Jamaica, Martinique, Mexico, Montserrat, Nicaragua, Panama, Puerto Rico, St. Kitts & Nevis, St. Vincent, St. Lucia, Trinidad & Tobago, Turks & Caicos, U.S. Virgin Isles, and USA.

#### South America:

Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, French Guiana, Guyana, Paraguay, Peru, Surinam, Uruguay, Venezuela, the Falkland Islands and the polar regions.

d Table 2.4. Customs & Excise regard Heathrow and Gatwick as one unit and goods that may have travelled through one airport may be cleared by customs at the other.

Commodities chosen for this table are the top twenty commodities for imports plus exports by their total for all airports. The commodity classification is the Standard International Trade Classification division code.

e Table 2.5. The top ten countries by weight for imports and exports separately have been selected for inclusion in this table, as for Table 2.1a. The commodities chosen for imports or exports are those included in Table 2.4. Miscellaneous manufactured goods include trade in military hardware which is not separated in Customs & Excise sources.



### SECTION 3 - UNITED KINGDOM AIRLINES <sup>3</sup>

#### Tonne kilometres flown: international and domestic

Table 3.1 shows the cargo tonne-kilometres flown by United Kingdom airlines on international and domestic flights. Both international and domestic traffic declined between 1980 and 1982. Subsequently, both sectors quickly regained the level of activity achieved before 1980.

BA/BCal's share of international traffic was 72 per cent in 1980 and grew to a peak of 91 per cent in 1986, before declining to 82 per cent in 1990. The increase since 1980 reflects the increased use of scheduled passenger services, where BA/BCal have a dominant market position, for airfreight.

In contrast, BA/BCal's share of domestic traffic fell sharply in 1981 and has declined slightly since then. Domestic traffic represents under 1 per cent of tonne-kilometres flown, and has shown no consistent trend over the period (Fig 3.2).

#### 3.1 International and domestic cargo tonne-kilometres flown by UK airlines

	Million tonne-kilometres									
	International					Domestic				
	BA/Bcal	%	Others	%	All	BA/Bcal	%	Others	%	All
1980	1,228	72	481	28	1,709	4.2	27	11.0	73	15.1
1981	1,247	76	385	24	1,632	3.2	22	11.1	78	14.3
1982	1,066	78	298	22	1,364	2.7	20	10.7	80	13.5
1983	1,182	75	399	25	1,581	2.8	20	11.4	80	14.2
1984	1,436	78	410	22	1,846	3.2	19	13.5	81	16.7
1985	1,471	88	209	12	1,680	3.1	18	13.8	82	16.9
1986	1,612	91	151	9	1,763	3.0	21	11.0	79	14.0
1987	1,770	90	195	10	1,965	3.1	20	12.3	80	15.3
1988	1,933	89	238	11	2,171	3.1	18	14.4	82	17.5
1989	2,012	85	360	15	2,372	2.8	19	12.2	81	15.0
1990	2,116	82	461	18	2,577	2.8	19	12.0	81	14.8

Source: Civil Aviation Authority: UK Airlines annual returns

Table 1.5.2: International scheduled services & Table 1.6.2: International non-scheduled services

Table 1.5.3: Domestic scheduled services & Table 1.6.3: Domestic non-scheduled services

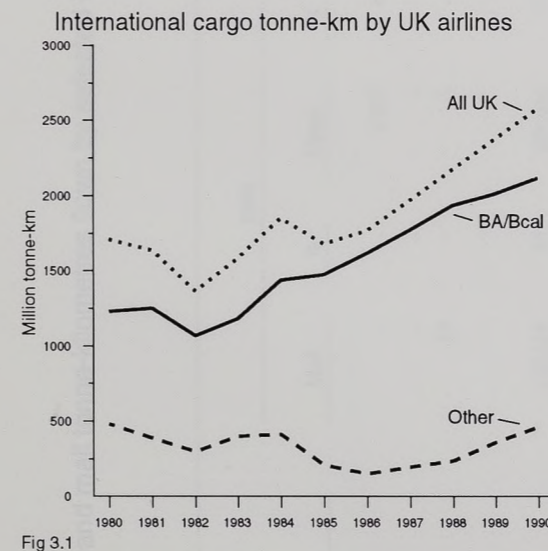


Fig 3.1

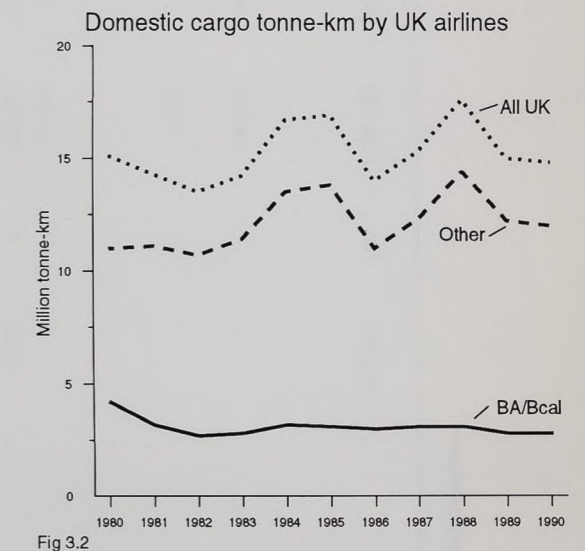


Fig 3.2

<sup>3</sup> See notes and definitions at end of Section



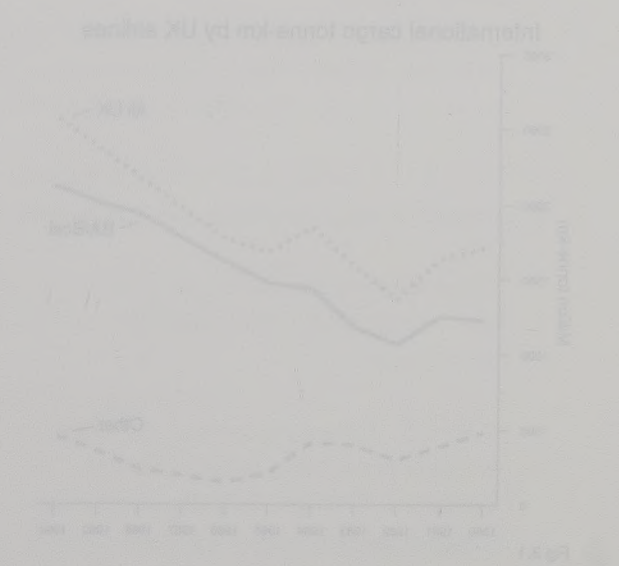
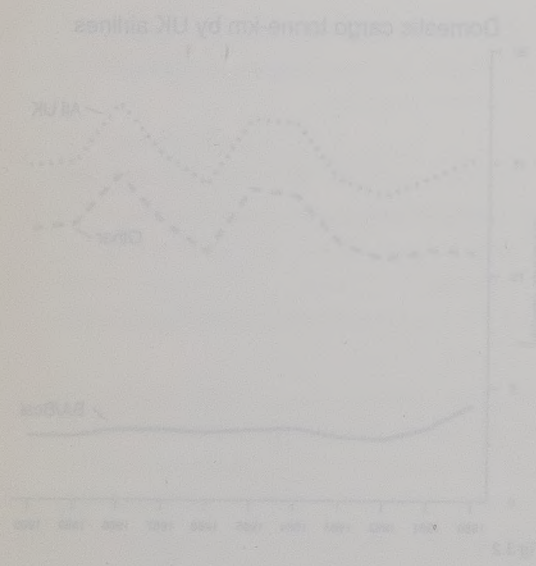
## International tonne kilometres flown by selected UK airlines

British Airways carried the most tonne-kilometres of all airlines, with a noticeable increase in cargo tonne-kilometres. All other airlines (except BCal, prior to its 1987 merger with BA) remain small by comparison, both for cargo and mail.

The cargo tonne-kilometres flown between 1980 and 1990 increased by over half, reflecting the increasing tonnage of airfreight picked up and set down (Section 1). For mail, the tonne-kilometres flown fluctuated with no consistent pattern.

Year	BA	BOA	BEA	Other	Total
1980	1,183	72	1,183	72	2,438
1981	1,400	78	1,400	78	2,956
1982	1,500	85	1,500	85	3,170
1983	1,600	90	1,600	90	3,380
1984	1,700	95	1,700	95	3,590
1985	1,800	100	1,800	100	3,800
1986	1,900	105	1,900	105	4,010
1987	2,000	110	2,000	110	4,220
1988	2,100	115	2,100	115	4,430
1989	2,200	120	2,200	120	4,640
1990	2,300	125	2,300	125	4,850

Table 1.2.2 International scheduled services & Table 1.2.1 Domestic scheduled services





### 3.2 International cargo and mail tonne-kilometres flown by selected UK airlines in operation

Thousand tonne-kilometres/percent

	1980				1987				1990			
	Mail	%	Cargo	%	Mail	%	Cargo	%	Mail	%	Cargo	%
Air Bridge Carriers	-	-	8,339	1	-	-	16,802	1	-	-	16,449	1
Anglo Cargo	..	..	..	..	-	-	37,450	2	-	-	82,469	3
Air Europe	10	-	3	-	31	-	1,362	-	282	-	4,793	-
Air Foyle	..	..	..	..	-	-	3,177	-	-	-	11,205	-
British Airways <sup>1</sup>	165,315	95	981,466	57	161,040	82	1,358,367	69	160,204	99	2,168,334	84
British Air Ferries	-	-	641	-	36	-	2,557	-	-	-	5,744	-
British Caledonian	7,753	4	248,451	15	34,976	18	413,166	21	..	..	..	..
British Midland Airways	2	-	52,269	3	23	-	1,099	-	9	-	2,279	-
Channel Express	..	..	..	..	5	-	408	-	-	-	4,512	-
Heavylift Cargo	-	-	6,756	-	-	-	17,948	1	-	-	46,161	2
Tradewinds Airways	-	-	168,332	10	-	-	29,639	2	-	-	21,470	1
Virgin Atlantic Airways	..	..	..	..	-	-	73,948	4	-	-	203,433	8
All airlines	173,261	100	1,709,160	100	196,696	100	1,965,900	100	161,063	100	2,576,539	100

1 1990 figure follows merger with British Caledonian

Source: Civil Aviation Authority: UK Airlines annual returns

Table 1.5.2: International scheduled services & Table 1.6.2: International non-scheduled services



## UK airline revenue

Table 3.3 shows the three main sources of income for United Kingdom airline. Freight revenue as a percentage of operating revenue fell slowly over the period. Both freight and passenger income increased in real terms, but the increase in freight revenue was less marked. Scheduled passenger revenue as a percentage of operating revenue increased towards the end of the decade, with a corresponding fall in the percentage revenue from non-scheduled services.

Total operating revenue rose by £3.3 billion (125 per cent) between 1980 and 1989.

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total operating revenue	1,112,301	1,240,100	1,368,100	1,496,100	1,624,100	1,752,100	1,880,100	2,008,100	2,136,100	2,264,100
Passenger revenue	780,000	850,000	920,000	990,000	1,060,000	1,130,000	1,200,000	1,270,000	1,340,000	1,410,000
Freight revenue	150,000	160,000	170,000	180,000	190,000	200,000	210,000	220,000	230,000	240,000
Other revenue	182,301	230,100	278,100	326,100	374,100	422,100	470,100	518,100	566,100	614,100
Passenger revenue as % of total	70.1	68.5	66.5	66.2	66.3	64.5	64.3	63.7	62.7	62.3
Freight revenue as % of total	13.5	12.9	12.4	12.1	12.0	11.3	11.2	11.0	10.7	10.6
Other revenue as % of total	16.4	18.6	21.1	21.7	21.7	24.2	25.1	25.3	26.6	27.1



### 3.3 United Kingdom airline revenue

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Per cent
Mail and freight	9.4	8.6	7.6	7.7	8.2	8.4	7.9	7.3	7.1	7.2	..	
Scheduled passenger	72.1	71.3	71.3	71.1	70.9	72.2	71.4	71.7	74.9	76.5	..	
Non-scheduled flights	18.5	20.1	21.1	21.2	20.8	19.4	20.4	21.0	18.1	16.3	..	
Total operating revenue (£000)	100 = 2,617	100 = 2,756	100 = 3,071	100 = 3,352	100 = 3,953	100 = 4,266	100 = 4,353	100 = 4,985	100 = 5,241	100 = 5,886	..	

Source: Civil Aviation Authority: UK Airlines  
Table 2.3: Major United Kingdom airlines - profit & loss account summary



## European airlines revenue

Table 3.4 gives an overview of different European 'flag carrier' airlines' worldwide revenue for 1990. The airlines form three groups on the basis of the percentage of tonne-kilometres operated by them which can be attributed to freight. Air France, Sabena/Luxair, KLM, Lufthansa and Alitalia are all in the 40 to 50 per cent range, and the other airlines are intermediate, in the 20 to 30 per cent range, with the exception of Olympic, which has a low percentage. In terms of percentage revenue derived from freight, Lufthansa and KLM stand out, with British Airways having the lowest percentage.

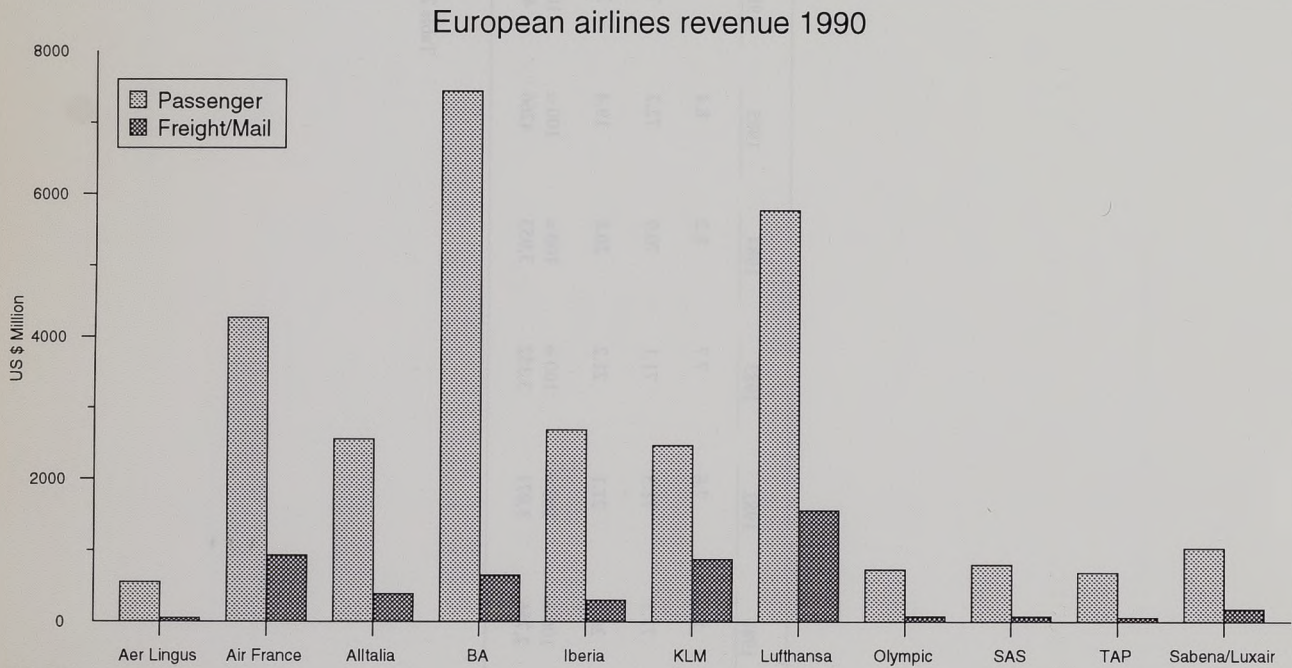


Fig 3.3



### 3.4 European airlines worldwide revenue from scheduled traffic financial year ending 1990

	Million tonne-km/\$ Million/Per cent										
	Aer Lingus (Ireland)	Air France (France)	Al Italia (Italy)	BA (UK)	Iberia (Spain)	KLM (Neth'lands)	Lufthansa (Germany)	Olympic (Greece)	SAS (Denmark) <sup>1</sup>	TAP (Portugal)	Sabena/Luxair (Bel/Lux)
Revenue freight tonne kms	127.9	3422.6	1158.9	2290.7	752.9	2124.6	4026.4	112.7	126.4	170.5	663.1
Revenue mail tonne kms	2.9	133.8	29.0	166.3	34.0	81.0	149.5	10.1	16.7	12.6	26.7
Total revenue tonne kms	496.2	6850.5	2909.2	8468.5	2777.1	4617.3	8217.5	821.7	569.9	798.3	1394.0
Passenger revenue (US\$)	552.5	4268.9	2561.0	7449.2	2698.3	2477.3	5785.2	729.3	800.5	687.3	1031.3
Freight revenue (US\$)	52.0	861.7	373.7	574.4	284.8	835.0	1432.5	70.8	69.0	57.9	165.6
Mail revenue (US\$)	2.3	66.7	19.5	79.1	20.1	45.0	121.4	6.4	10.4	6.7	13.8
Total revenue	606.7	5197.3	2954.3	8102.6	3003.2	3357.3	7339.1	806.6	879.9	751.9	1210.5
Revenue freight tonne km as a percentage of total revenue tonne kms	25.8	50.0	39.8	27.0	27.1	46.0	49.0	13.7	22.2	21.4	47.6
Freight revenue as percentage of total revenue	8.6	16.6	12.7	7.1	9.5	24.9	19.5	8.8	7.8	7.7	13.7

<sup>1</sup> 28.6 percent of total SAS revenues.

Source: Association of European Airlines  
Statistical Appendices to Yearbook: Page 56-61



## British Airways aircraft type utilisation

British Airways did not possess any pure freighter aircraft at the end of 1990. Very occasionally some of its planes are used to carry cargo only. The combined use for passenger and freight traffic is classified as passenger use in CAA statistics. The only passenger planes used for cargo only services to any significant extent were BAE (HS) 748's, and Boeing 747s and 757s.

## 3.5 Aircraft type utilisation by British Airways 1990

	Aircraft-Km		Stage flights		Aircraft hours		Aircraft in service year ending Dec 1989
	Passenger (000)	Cargo (000)	Passenger	Cargo	Passenger	Cargo	
Airbus A320-100/200	9,644	1	11,784	1	19,041	2	10
BAC/Aerospatiale Concorde	10,579	-	2,187	-	7,563	-	7
BAE (HS) 748	3,396	105	14,042	406	12,754	399	9
BAE (BAC) 1-11-300/400/475	11	-	24	-	28	-	-
BAE (BAC) 1-11-500 series	24,831	-	39,748	-	53,327	-	34
Boeing 737-200	51,957	2	65,006	1	104,372	3	43
Boeing 737-300	5,037	-	9,285	-	11,155	-	4
Boeing 747-200B Combi	16,265	10	2,958	1	20,808	12	3
Boeing 747-100/100F	49,657	66	10,008	13	64,795	92	16
Boeing 747-200	55,993	32	10,585	7	71,765	45	15
Boeing 747-400	39,619	22	7,831	2	52,066	27	16
Boeing 757-200	46,449	269	56,919	506	89,855	547	35
Boeing 767-300	3,809	-	6,763	-	9,123	-	5
Boeing 767-300ER	2,431	5	776	1	3,621	6	4
British Aerospace ATP	5,048	-	15,034	-	16,596	-	8
Lockheed L-1011-1/100 Tristar	15,362	6	5,530	1	21,547	8	8
Lockheed L-1011-200 Tristar	20,931	5	5,350	1	28,469	6	8
McDonnell-Douglas DC10-30	27,694	15	5,115	2	35,335	17	8
<b>Total</b>	<b>388,713</b>	<b>538</b>	<b>268,945</b>	<b>942</b>	<b>622,220</b>	<b>1,164</b>	<b>233</b>

Source: Civil Aviation Authority: UK Airlines  
Table 1.13.2: Aircraft type & utilisation: individual airlines



## NOTES AND DEFINITIONS

(Section 3)

Tables in this section have been compiled from the CAA publication 'United Kingdom Airlines, annual operating, traffic and financial statistics', except for Table 3.4, which was compiled from statistical appendices to the yearbooks produced by the Association of European Airlines.

### Notes

- a Table 3.1 and 3.2. In constructing these tables from CAA sources, figures for sub-charter operations performed on behalf of United Kingdom airlines have been included as part of United Kingdom airlines operations. Such traffic is thus double-counted, once by the chartering and once by the operating airline. In total, such traffic amounted, in 1990, to 53 million tonne-kilometres for international freight and 33,000 for domestic. The breakdown between airlines was not available. Figures for British Airtours, formerly a wholly owned subsidiary of BA, are not included in the BA/BCal totals. The cargo and mail tonne-kilometre figures include cargo and mail uplifted and set-down between foreign countries (fifth freedom traffic). This is a marginal quantity.
- b Table 3.3. Only those airlines currently in operation have been selected. Included in the earlier British Airways figures is revenue earned by British Airtours, formerly a wholly owned subsidiary of BA.
- c Table 3.4. Airlines in this table were taken from Statistical Appendices to Yearbook, May 1991, pages 56 - 61, Association of European Airlines.

## APPENDIX

(Statistical Sources)

The two principal sources of routine statistics relating to United Kingdom airfreight are customs entries and Civil Aviation Authority returns. Neither of these is ideal and it is necessary to make use of both sources, using one to provide information not available from the other. There are however areas which are not covered adequately by either source; these are transshipment at United Kingdom airports, transshipment at Continental airports, express and courier parcels traffic, and the trucking of airfreight between the UK and continental airports. These are major weaknesses in the statistics since both transshipment traffic and express/courier parcels are expanding areas within airfreight and seem likely to continue to be so during the 1990's.

### Customs entries

- a Customs entries relate only to the international trade of the United Kingdom (ie United Kingdom imports, exports and re-exports). Goods transhipped at United Kingdom air or seaports are excluded provided that they remain under bond. (Such consignments are neither United Kingdom imports, exports or re-exports.) If the transshipment takes place out of bond the goods will be counted as both imports and as re-exports, and included in the customs data. Low value consignments, currently with a value below £600 (but £475 before January 1988) are excluded from the customs database provided that their weight is less than 1000 kilograms. When the United Kingdom trade statistics are compiled estimates are included for low value items which represent a very small percentage of total trade in value terms. Thus, a substantial proportion of parcels traffic is excluded from the customs database. Customs data suggests that about four fifths of low value consignments are carried by air, or, more precisely, are cleared at airports.
- b As customs entries are primarily concerned with trade rather than transport, the weight collected is the net weight of the goods, excluding all but the inner most packaging, rather than the tonnage picked-up or set-down by the transport operator. The items relevant to transport collected for each consignment comprise:
  - 1 net weight
  - 2 value (For imports this is inclusive of insurance and freight from the country of consignment; exports are valued "free on board" excluding insurance and freight from the United Kingdom)
  - 3 commodity code
  - 4 means of transport used
  - 5 whether containerised (This includes use of ISO containers and also smaller re-usable containers with an internal volume of at least 1 cubic metre)
  - 6 United Kingdom airport or seaport
  - 7 country of consignment/destination.



Customs entries are the only source of information for items 2,3, and 7. Before 1988 various sea modes of transport were coded (road vehicle, rail wagon etc), but trade by air was identified only by the fact that it was cleared at an airport. From 1 January 1988 following the introduction of the Single Administrative Document (SAD), item (4) has been identified directly, although approved operators may continue to use a simplified clearance procedure, which has not changed.

The percentage of consignments by air that are containerised as given by item (5) above is extremely low although containers are used very extensively in airfreight. The explanation could be that relatively few airfreight consignments are containerised from door to door. Most airfreight consignments are packed into containers, and later unpacked, by a freight forwarder or by an airline, and the shipper or his agent may not know that their consignment will-be/has-been containerised.

- c Express and courier parcels traffic included in the database (ie above the low value threshold) is not identified. Express and courier parcels services are high quality door to door services which usually guarantee delivery within a specified period and provide the customer with proof of delivery. In the case of courier services faster customs clearance is achieved by sending a courier with the sacks of parcels so that they are treated as baggage rather than freight. Consignments which are transhipped overseas cannot be identified from customs data so that statistics of transhipment at Continental airports cannot be compiled from this source.
- d Defining airtrade to be those customs entries made at United Kingdom airports (as was the case until 1988, see paragraph (b) above) overstates airtrade since a significant proportion of the consignments cleared at Heathrow are trucked to/from the continent using roll-on roll-off ferry services. This includes not only consignments which are transhipped at Continental airports (see below), but also consignments being exported/imported to/from the Continent which use the regular airline truck services (see paragraph 2 of the introduction) to provide international road haulage. In 1985 HM Customs estimated that about 18 per cent of export entries at Heathrow were for consignments which left the airport by truck rather than by plane. It seems reasonable to assume that a similar proportion of import consignments were trucked from the Continent.
- e Transhipment traffic at United Kingdom airports, which is excluded from the customs database, is believed to account for a substantial proportion of freight loaded and unloaded at Heathrow and Gatwick. The transhipment is either "air to air" or "air to/from truck". In air to air transhipment a consignment might arrive at Heathrow on a flight from, say, New York, be held in bond for a few hours, and then loaded on to a flight to, say, Kenya. In many cases the same carrier provides both the inward and outward flights and thus provides a service via the United Kingdom between two overseas countries, (this traffic is often referred to as "sixth freedom" traffic). In other cases a different carrier is used for the inward and outward flights, (this is more likely if the movement is controlled by a freight forwarder). Air to air transhipment traffic is not tied to a particular airport or country and is therefore the subject of fierce competition between the major European carriers and freight forwarders. The major European airports actively seek to attract such traffic.
- f "Air to/from truck" transhipment traffic is also the focus of international competition. In this case a consignment destined for a Continental country is flown from its country of origin to a United Kingdom airport (normally Heathrow) and then trucked to the destination country using one of the roll-on roll-off ferry services across the Channel or North Sea. Similarly, a consignment exported from a Continental country would be trucked to Heathrow and loaded on to an appropriate flight. BA have organised a network of regular truck services to carry transhipment traffic of this kind to/from its "hub" at Heathrow. Just as "air to/from truck" transhipment of consignments with a Continental origin or destination takes

place at Heathrow, "air to/from truck" transhipment of consignments with a United Kingdom origin or destination takes place at major Continental airports such as Frankfurt, Paris and Amsterdam. Major Continental airlines have their own regular truck services to link the United Kingdom with their hub airports. Consignments with a United Kingdom origin or destination that are transhipped at Continental airports are included in the customs database, but are not identified as such.

### Civil Aviation Authority Returns

- g Civil Aviation Authority returns are the second source of routine statistics on United Kingdom airfreight. There are two types of return, those made by airports and those made by airlines. The airport returns (Stats 322, 323 and monthly summary Stats 311A) are completed by each airport on the basis of information supplied by their handling agents, and cover both domestic and international flights. The information collected on freight is limited to the weight of freight set-down/picked-up by the flight to which the return relates. The basis on which this weight is to be determined is not specified in the guidance notes but it is understood that this will normally be the gross weight, excluding the weight of containers. Transhipment traffic, including express, but not courier or postal traffic, is included but is not identified. The CAA returns do not collect information on value, commodity or country of origin/destination. Where flights make intermediate stops between the United Kingdom airport and the overseas airport of origin/destination the tonnage loaded/unloaded at these intermediate airports is not recorded so that freight traffic passenger traffic be cannot be broken down into airport to airport flows. The airport returns do, however, contain useful information concerning the flights used for airfreight which is not collected elsewhere. These are:
  - 1 the airline
  - 2 the flight type (scheduled or charter)
  - 3 whether freight only (if not the flight is classified as "passenger")
  - 4 the United Kingdom airport (this is important in distinguishing Gatwick traffic from Heathrow traffic. The customs entries tend to classify as Heathrow a substantial proportion of the consignments handled at Gatwick. The CAA gross tonnage statistics for individual airports are the generally accepted figures within the aviation industry)
  - 5 the aircraft type.
- h The airline returns are completed by United Kingdom airlines, who account for some 35 per cent of United Kingdom international airfreight. There are 3 detailed monthly returns (Stats 200, 201, 202) which collect information on the tonnage of cargo carried by sector and point to point. The geographical detail allows the calculation of tonne kilometres performed by United Kingdom airlines as well as tonnes uplifted. The tonnage is understood to be gross tonnage as in the case of the airport returns. Information collected concerning the flights used is similar to that on the airport returns and includes the aircraft origin/destination.





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