1993

SURVEY OF INTERNATIONAL AIR TRANSPORT FARES AND RATES

September 1991

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TERMS OF REFERENCE, OBJECTIVES AND SCOPE OF THE SURVEY

1. This survey has been prepared pursuant to ICAO Assembly Resolution A21-26 Clause 1 a) by which the Assembly directed the Council to issue annually a survey of international air transport fares and rates. This report concerns data for September 1991 and is the eighteenth in the series, the previous report being Circular 231 for September 1990.

2. In addition to these surveys of published fares and rates for scheduled transport of passengers and freight, the Organization publishes analytical studies of regional differences in the level of scheduled passenger fares and corresponding airline costs. The latter studies are carried out pursuant to Assembly Resolution A21-26 Clauses 1 b) and 1 d).

3. The purpose of the present report is to provide an overview of international fares and rates which are published in the multilateral airline tariff guides and are available to the general public, so as to permit comparisons of the levels of these fares and rates in different geographical areas.

4. As a basis the survey shows, for 17 different groups of international air routes, representative relationships between economy class normal passenger fares and general cargo rates for small shipments on the one hand and transport distances on the other hand for the sample month of September 1991. These relationships are compared amongst route groups and with world averages. A comparison is also made with September 1990 fares and rates levels. A sample survey is also presented, for each route group, of the relative availability and level of other types of fares and rates in September 1990.

5. In view of the increasing number of taxes and/or charges which are being levied on air passengers on top of the published air fare, the present survey also incorporates (in Chapter 3) an analysis of the over-all price of air travel including all the additional taxes and/or charges for the 17 international route groups.

DATA SOURCES

6. The main sources of data for this survey were the *ABC World Airways Guide* and the *ABC Air Cargo Guide.* The following basic data were obtained from magnetic tape provided by the publishers from the September 1991 issue of these guides for all international city-pairs with direct through-plane service:

a) country and route group for each city-pair;

b) economy class normal passenger fares available; and

c) general cargo rates available for shipments up to 45 kg.

7. The basic data concerning the economy class normal passenger fares and general cargo rates were prepared and analysed with a view to providing information on three specific points:

a) how fares and rates vary according to distance from one route group to another;

b) how fares and rates changed compared with the previous year;

c) how city-pairs are distributed by distance within each route group to show the relative importance of short-, medium- and long-haul routes.

8. These analyses involved the use of standard statistical techniques to establish the relationship between fares and rates on the one hand and distances on the other. This relationship was computed by means of least squares regression analysis. Fares and rates selected for each year were analysed as a function of distance for each of the 17 route groups and for the world. Basic statistical details concerning these equations for each route group are shown in Appendix 3.

SELECTION OF CITY-PAIRS AND ROUTE GROUPS

9. Economy class normal fares were analysed for a total of 9 592 city-pairs for which adequate data were available. General cargo rates for 7 645 city-pairs were also analysed. A city-pair was defined, for the purposes of this survey, on a directional basis. For example, Paris-Frankfurt was counted as one city-pair, while Frankfurt-Paris was counted as another.

10. Fares and rates were obtained for all those city-pairs listed in the *ABC World Airways Guide* and *ABC Air Cargo Guide* that met two criteria: firstly that each city be located in a different country; and secondly, that through-plane service, necessitating no connexion, be scheduled for September 1991. City-pairs for which only cabotage fares (domestic or between territories of the same State) were quoted were not listed. As far as cargo rates are concerned, the survey reflects the ABC Air Cargo Guide listings which include only those city-pairs between which there were all-cargo aircraft services or combination aircraft services operating with wide-body aircraft in September 1991.

11. Fares and rates between international city-pairs which met the above criteria were grouped on the basis of major route groups to permit regional analysis. These route groups, covering geographic areas described precisely in Appendix 1, are as follows:

— Route group 1: between North America and Central America/Caribbean
— Route group 2: between and within Central America and the Caribbean
— Route group 3: between Canada, Mexico and the United States
— Route group 4: between North America/Central America/Caribbean and South America
— Route group 5: local South America
— Route group 6: local Europe
— Route group 7: local Middle East

— Route group 15: between Europe/Middle East/Africa and Asia/Pacific
— Route group 16: North and Mid Pacific
— Route group 17: South Pacific.

CITY-PAIR DISTANCES USED FOR ANALYSIS

12. The distances between pairs of cities selected for this survey are those defined by the shortest airline-operated routing. Where two points are linked by a non-stop airline service, the distance is termed the non-stop stage distance. This is in many cases synonymous with the "great circle" distance. However, this is not the case where the route flown departs from the most direct route due to the existence of restricted or prohibited areas, to navigational considerations or to other practical factors. Where two points are not linked by a non-stop airline service, the distance is determined by the non-stop stage distances of the sectors comprising the shortest airline operated route. These distances were computed within ICAO from the flight stage distances and flight itineraries provided by the publishers of the *ABC World Airways Guide*. All distances referred to in this survey are in kilometres.

SELECTION OF FARES AND RATES

13. The criteria used in selecting the passenger fares and the cargo rates for this survey were that they should be representative, available to the general public, and allow comparison on a world-wide basis. Furthermore, the fares and rates selected should be generally indicative of the level of international fares and rates as officially applied by the international scheduled airlines of the world.

14. There are two main categories of passenger fares on scheduled services, referred to as "normal" (unrestricted) fares and "special" fares. "Normal" (unrestricted) fares are those (in first, intermediate, or other class) which are available to members of the general public without limitations as to their purchase or use. In the past, "special" fares encompassed mostly promotional fares, i.e. fares lower than normal fares which are generally designed to generate revenue by attracting passengers who would not travel at the higher fares. These fares have conditions attached to them which limit their use in some instances (for example, requirements for advance purchase/reservations and/or limits on the period of stay).

15. In recent years, however, a new type of "special" fare has been created through the development of so-called "restricted" normal fares. These fares retain most of the characteristics historically associated with the normal fares, but they have restrictions on the availability or number of stopovers and, in some cases, on the ability to interline. On some routes, notably on the North Atlantic, these may be the only "normal" fares available in the economy class. Thus passengers who wish to retain all of the facilities traditionally associated with normal fares have to travel using the intermediate or first class fares. In most cases special fares are available for economy class round-trips only. Normal fares can, and special fares generally do, vary on a given route according to season.

rather than one-way fares have been selected in order that they may be compared with special fares, most of which are available only on a round-trip basis; where return fares are available at less than twice the single fare, the former have been selected.

17. Special fares, even of a particular type, do not have the commonality of definition concomitant with normal fares. In addition to the economy class "restricted" fares discussed above, there are many other types of special fares, for example excursion fares (including advance purchase excursion fares); standby fares; budget fares; incentive, affinity and non-affinity group fares; individual and group inclusive tour fares; youth, family, military, pilgrim, local resident, student and teacher fares; etc. The most widely available of the special fares are excursion fares, which are generally restricted with respect to their validity in time. However, there is considerable variation from region to region in the combination of minimum and maximum travel duration and, in some cases, in the right to make intermediate stops at no extra cost.

18. In order to give an overview of the availability of different fare types among route groups on a comparative basis, fares have been classified into seven major groupings including first class normal, intermediate class normal and economy class normal fares as well as special fares in the case of economy class. The fares concerned are shown for a sample of 10 city-pairs in each route group. These samples show the different availability of the various fare groups and their level relative to the highest economy class normal fares. The 10 city-pairs selected from those used in the analysis of fare levels against distance are representative of each route group in terms of distances, traffic volumes, countries of origin and destination, and directionality of traffic.

19. It should be noted that in a few cases the tables of special fares may be incomplete, since there were seen to be some instances in 1991 of individual airlines offering special fares which were not quoted in any of the major multilateral airline guides. Also there are a number of fares which are not listed in the multilateral tariff manuals under the city-pairs concerned but are listed under the general rules sections of the manuals. These fares are sometimes agreed within IATA in the form of a resolution, established through single carrier filings, agreed on a bilateral basis or instituted through government orders. They generally apply to specific categories of people such as seamen, emigrants, students, etc. The level of these fares is usually specified as a percentage of normal fares. The applicability can range from a world-wide basis down to a city-pair. These fares are not shown in the tables of the sample city-pairs but a summary of their availability is given in Chapter 2. It should also be noted that while, in many instances, either discounts or special fares are available for children, these fares have not been included in this survey.

20. A similar distinction between "normal" and "special" categories can be made with respect to cargo rates, the main categories being general cargo rates and specific commodity rates. The general cargo rates are set at different levels according to the weight of the shipment, but regardless of the nature or value of the commodity being shipped. These rates generally vary according to the direction of shipment. Specific commodity rates are promotional rates, lower than general cargo rates at comparable weights, but involving restrictions (in terms of the nature of the commodity and minimum shipment sizes) designed to minimize dilution of revenue from general cargo rates. They are often very limited in terms of geographical application since they are introduced on a market by market basis where potential traffic is seen to exist.

22. Since April 1988 a revised cargo tariff structure replacing the minimum charges, the general cargo rates and the specific commodity rates has been used between some European countries and from these countries to other European countries. This pricing system consists of a basic charge per consignment plus a rate per kg applicable to each kilogram in the consignment. For the purposes of this study, the cargo rate for the relevant city-pair was computed for a consignment of 45 kg.

23. The availability and level of certain other general cargo rates, and also specific commodity rates (as a group), are presented in comparative tables for a sample of 10 city-pairs in each route group. The criteria for selecting the 10 city-pairs were similar to those used in the case of passenger fares. The actual city-pairs selected may differ from those used for fares, however, as the basic selection of the city-pairs used in the analysis of rate levels against distance excluded those city-pairs served only by narrow-body combination aircraft (see paragraph 10 above). Cargo rates such as bulk unitization (or freight-all-kinds) rates and discount rates for unit load devices are not presented separately since, where available, they bear a close relationship with one or other of the rate types presented. However, the text indicates route groups on which these rates are available.

24. It is important to note that the fares and rates used, while excluding any local taxes which are normally not included in the fares and rates as published in the multilateral tariff manuals (except as indicated in Chapter 3), represent an indication of the price paid by passengers and shippers and should not be confused with the actual revenue yield to the airline which is the weighted average of all the revenue received by the carrier (after any proration) from all normal and special fares and rates.

CURRENCIES

25. Since 1 October 1984 for rates and 1 July 1989 for fares, the IATA member airlines have established a world-wide system to negotiate and specify fares and rates in the local currency of the country of origin or in U.S. dollars (the latter usually for those countries where exchange rates suffer large fluctuations). Bankers' rates of exchange are used whenever currency conversion is required, such as when payment for air travel or for the shipment of merchandise by air is made in a country other than the one from where the travel or shipment commences. The currency adopted for comparative purposes throughout the survey is the United States dollar. The exchange rates used are the "IATA Clearing House Five Day Monthly Rate" for the month of August shown in Appendix 2.

SELECTION OF SURVEY PERIOD

26. The month of September was chosen as being one of the four sample months formerly covered by ICAO statistics on passenger traffic flow and is considered to be the most representative of year-round average fares and rates.

groups involving travel between two or more world regions, an analysis of fares and rates by direction. Appendix 1 gives a description of the specific geographic areas covered by each of the 17 international route groups used in this survey, and Appendices 2 and 3 cover the currency conversion rates and the regression equations, respectively, for September 1991.

INTRODUCTORY REMARKS

1. The objective of this chapter is to provide a world-wide perspective of international passenger fares, to compare them among route groups and the estimated world averages, and to compare the situation in September 1991 with that in September 1990. The findings are factual and descriptive in nature. By virtue of the scope of the survey the comparisons made are general, and relate only to the estimated values of fares as determined by the analyses. Within each route group, individual city-pairs will differ more or less from the general situation for the group as a whole, and no attempt has been made in this survey to weigh city-pairs according to the volume of traffic. In consequence, city-pairs which are relatively insignificant from the standpoint of traffic have been accorded as much importance as those between which large volumes of passenger traffic flow. This does not detract from the value of assessing the level of international airline fares from a regional and global point of view.

DISTRIBUTION OF INTERNATIONAL CITY-PAIRS BY ROUTE GROUP

2. An indication of the complexity of the international scheduled fares system is provided by the number of city-pairs with through-plane service for which economy class normal fares were obtained — a total of 9 592. In addition there were a limited number of city-pairs with through-plane service for which pertinent information on fares was missing in the multilateral airline guides, so that the number of the city-pairs above is less than the actual numbers with through-plane service. When it is considered that there may be in excess of fifty different passenger fares between two cities, a measure is obtained of the magnitude of the work involved in establishing fares on a global basis.

3. It may be seen from Table 2-1 that 2 848 city-pairs, about 30 per cent of the total analysed, were located in the route group "local Europe". Four route groups out of the seventeen accounted for just over 55 per cent of the total. In addition to "local Europe", these were "local Asia/Pacific", "between Europe/Middle East/Africa and Asia/Pacific" and "between Europe/Middle East and Africa". The three transatlantic route groups, "North Atlantic", "Mid Atlantic" and "South Atlantic" together accounted for about 8 per cent of the total number of international city-pairs, while the two transpacific route groups accounted for some 2 per cent of the total number of international city-pairs.

4. The reduction in the number of city-pairs used in this survey (9 592) compared with the 10 281 city-pairs which were used in the survey for September 1990 may in part be attributed to the restructuring of the airlines' networks following the events in the Middle East at the end of 1990 and beginning of 1991.

Local Europe	2848	29.7	29.7
Local Asia/Pacific	894	9.3	39.0
Between Europe/Middle East/Africa and Asia/Pacific	809	8.4	47.4
Europe Europe/Middle East and Africa	692	7.2	54.6
Local Africa	565	5.9	60.5
Between Europe and Middle East	546	5.7	66.2
Between Canada, Mexico and the United States	540	5.6	71.8
North Atlantic	495	5.2	77.0
Between North America and Central America/Caribbean	399	4.2	81.2
Between and within Central America and the Caribbean	385	4.0	85.2
Between North America/Central America/Caribbean and South America	340	3.5	88.7
Local Middle East	324	3.4	92.1
Local South America	207	2.2	94.3
Mid Atlantic	196	2.0	96.3
North and Mid Pacific	191	2.0	98.3
South Atlantic	112	1.2	99.5
South Pacific	49	0.5	100.0

DISTRIBUTION OF INTERNATIONAL CITY-PAIRS BY DISTANCE

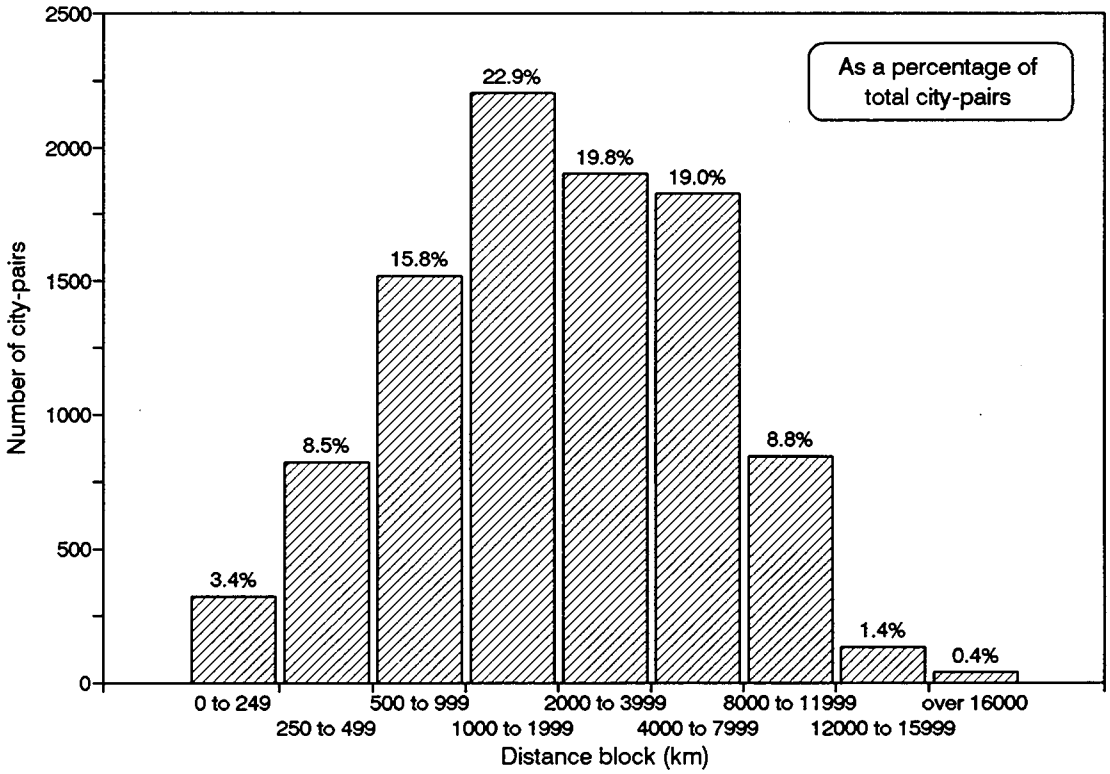
5. The average distance separating the 9 592 international city-pairs for which economy class normal fares were obtained was 3 260 km. This distance may be compared with an estimated average international passenger trip length in 1991 of 3 280 km. In comparing these two figures, it is important to bear in mind that the latter one is not only dependent on the volume of traffic travelling on different routes but also on the statistical base for counting airline passenger traffic. Thus a passenger who purchases a ticket between London and Tokyo, for example, may also decide to interrupt his journey at one or more cities en route. Although on a true ticket origin and destination basis this may be considered as one trip, in practice the passenger is considered as commencing a new journey after each stopover. The flight coupon surrendered to the airline at each new boarding therefore constitutes the statistical base for the airline passenger count rather than the ticket itself. When comparing fare and revenue yield data over time it should also be noted that the average city-pair distance has been falling steadily with the increasing introduction of non-stop and limited-stop services (it was 3 770 km in 1975, 3 446 km in 1980, 3 364 km in 1985 and 3 242 km in 1990), while the average passenger trip length has been on a generally rising trend (it was 2 510 km in 1975, 2 860 km in 1980, 3 040 km in 1985 and 3 250 km in 1990).

6. Graph 2-I portrays the number and percentage distribution of city-pairs by distance block for the world sample of 9 592 city-pairs for which economy class normal fares were obtained in September 1991. Less than 4 per cent of the above city-pairs are separated by distances of less than 250 km, about 8 per cent fall in the distance block of 250-499 km, and almost 16 per cent in the block 500-999 km. Thus, over one-

7. The average regional inter-city distance is shortest in the route group "between and within Central America and the Caribbean" at 685 km and in "local Europe" at 1 134 km, while the route groups with the longest average city-pair distance are the "North and Mid Pacific" at 10 618 km and the "South Atlantic" at 9 881 km. Table 2-2 compares the number of city-pairs in each route group that fall in the nine distance blocks selected for the purpose of this chapter.

RELATIONSHIP BETWEEN ESTIMATED ECONOMY CLASS NORMAL FARES AND DISTANCE

8. As indicated in Chapter 1, there are two basic categories of passenger fares on scheduled services: normal and special fares. For the purposes of this survey, economy class normal fares have been defined as economy class fares which are available to members of the general public without limitations as to their purchase and use. However, for those few city-pairs where there is no economy class normal fare available, the highest economy class restricted fare has been used. The fares presented are return fares in order that they may be compared with special fares, most of which are available only on a round-trip basis.



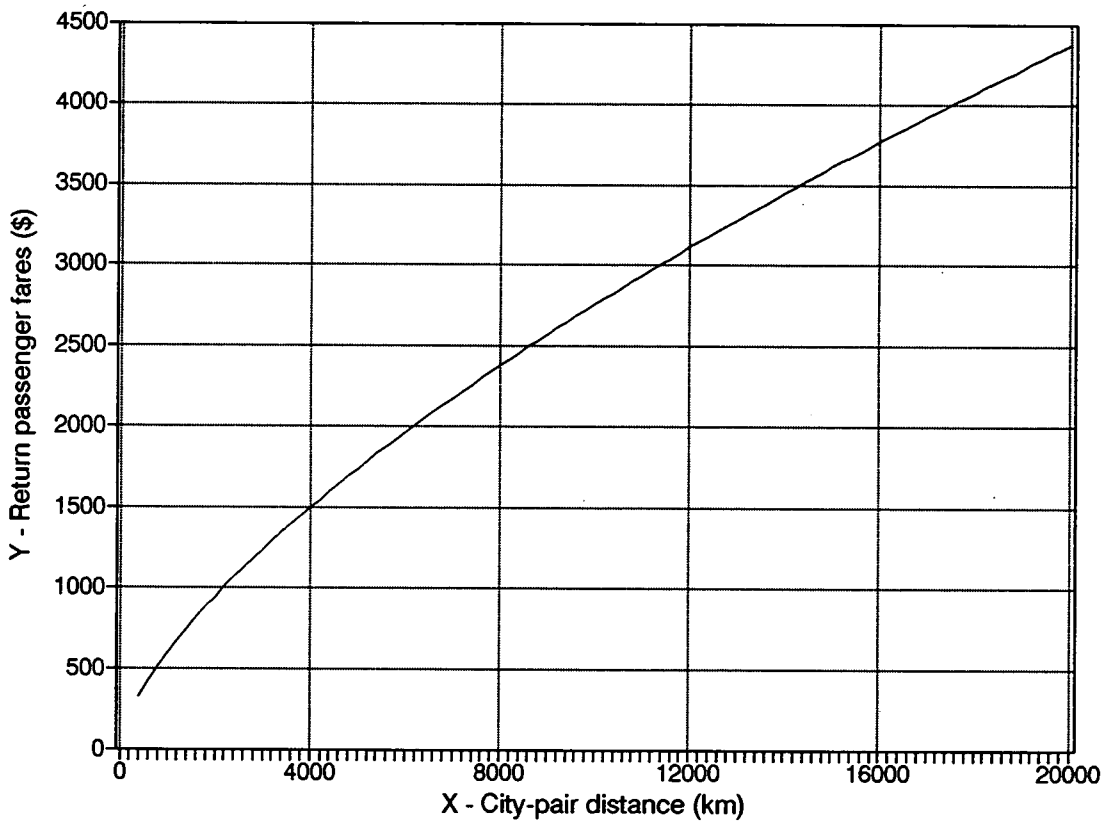
Graph 2-1. distributrion by distance block of city-pairs for which economy class normal fares were obtained (September 1991)

Table 2-2. Distribution by distance block of city-pairs for which economy class normal fares were obtained (September 1991)

Route group	Number of city-pairs by distance (km)								
	0 to 249	250 to 499	500 to 999	1 000 to 1 999	2 000 to 3 999	4 000 to 7 999	8 000 to 11 999	12 000 to 15 999	over 16 000
International total – WORLD	323	819	1 513	2 201	1 900	1 825	842	132	37
Between North America and Central America/Caribbean	14	40	16	123	178	28	–	–	–
Between and within Central America and the Caribbean	107	89	99	69	21	–	–	–	–
Between Canada, Mexico and the United States	22	69	92	151	186	20	–	–	–
Between North America/Central America/Caribbean and South America	4	15	38	46	85	106	46	–	–
Local South America	4	17	27	79	50	30	–	–	–
Local Europe	92	439	897	1 097	323	–	–	–	–
Local Middle East	18	51	49	124	82	–	–	–	–
Local Africa	37	48	143	163	137	37	–	–	–
Between Europe and Middle East	–	–	15	61	310	160	–	–	–
Between Europe/Middle East and Africa	2	8	15	67	134	392	74	–	–
North Atlantic	–	–	–	–	6	378	105	6	–
Mid Atlantic	–	–	–	–	–	100	94	2	–
South Atlantic	–	–	–	–	–	20	79	13	–
Local Asia/Pacific	23	41	119	181	271	224	35	–	–
Between Europe/Middle East/Africa and Asia/Pacific	–	2	3	40	117	280	279	56	32
North and Mid Pacific	–	–	–	–	–	29	112	45	5
South Pacific	–	–	–	–	–	21	18	10	–

NORMAL FARES BY ROUTE GROUP

10. In September 1991, the lowest estimated average economy class normal fares for short distances were found on scheduled international routes on the "local South America" and "local Asia/Pacific" route groups (see Table 2-3). Fares on the "local South America" routes were also among the lowest at the middle range of distances, along with fares for routes between North America and Central America/ Caribbean ("North-Central America" in short form), between and within Central America and the Caribbean ("Central America"), between Canada, Mexico and the United States ("North America"), and between Europe/Middle East/Africa and Asia/ Pacific ("Europe-Asia/Pacific"). At long distances, the lowest fares were found on routes across the "North-Mid Pacific". The lowest average fare at the average distance in any route group was 11.0 cents per passenger-kilometre (at 10 600 km) on North-Mid Pacific routes.



Graph 2-2. Relationship between estimated average economy class normal fares and distance (September 1991)

	(1990)	(45.1)	(33.5)	(26.0)	(22.1)	(17.4)	(16.7)	(11.5)	(10.5)
1. North-Central America	1991	54.5	37.5	25.8	17.8	12.2	–	–	–
	(1990)	(46.3)	(32.2)	(22.5)	(15.6)	(10.9)	–	–	–
2. Central America	1991	39.0	28.7	21.2	15.6	–	–	–	–
	(1990)	(34.5)	(25.3)	(18.6)	(13.6)	–	–	–	–
3. North America	1991	47.1	33.1	23.3	16.4	11.6	–	–	–
	(1990)	(39.7)	(27.9)	(19.6)	(13.8)	(9.7)	–	–	–
4. North-South America	1991	–	24.6	21.3	18.4	15.9	13.7	–	–
	(1990)	–	(21.2)	(18.4)	(16.0)	(13.9)	(12.1)	–	–
5. South America	1991	27.2	23.0	19.5	16.5	14.0	–	–	–
	(1990)	(22.9)	(19.6)	(16.8)	(14.4)	(12.3)	–	–	–
6. Europe	1991	71.7	53.2	39.5	29.3	21.7	–	–	–
	(1990)	(70.0)	(51.8)	(38.4)	(28.4)	(21.0)	–	–	–
7. Middle East	1991	37.8	29.6	23.2	18.2	–	–	–	–
	(1990)	(33.2)	(26.4)	(21.9)	(16.7)	(15.4)	–	–	–
8. Africa	1991	30.1	25.7	22.0	18.9	16.1	–	–	–
	(1990)	(31.1)	(26.1)	(21.9)	(18.4)	(15.4)	–	–	–
9. Europe-Middle East	1991	–	32.6	28.8	25.4	22.4	–	–	–
	(1990)	–	(27.3)	(25.0)	(22.8)	(20.9)	–	–	–
10. Europe-Africa	1991	–	27.7	24.8	22.3	20.0	17.9	–	–
	(1990)	–	(26.2)	(23.6)	(21.3)	(19.2)	(17.3)	–	–
11. North Atlantic[1]	1991	–	–	–	–	22.4	17.0	14.4	–
	(1990)	–	–	–	–	–	–	–	–
12. Mid Atlantic[2]	1991	–	–	–	–	–	–	–	–
	(1990)	–	–	–	–	(20.7)	(15.4)	(13.0)	–
13. South Atlantic	1991	–	–	–	–	15.0	16.5	17.5	–
	(1990)	–	–	–	–	(14.5)	(15.4)	(15.9)	–
14. Asia/Pacific	1991	24.3	22.0	19.9	18.0	16.3	14.8	13.9	–
	(1990)	(20.8)	(19.1)	(17.5)	(16.1)	(14.7)	(13.5)	(12.9)	–
15. Europe-Asia/Pacific	1991	–	–	15.0	15.1	15.2	15.4	15.4	15.5
	(1990)	–	–	(13.7)	(13.9)	(14.0)	(14.2)	(14.3)	(14.4)
16. North-Mid Pacific	1991	–	–	–	–	–	12.4	10.4	9.2
	(1990)	–	–	–	–	–	(11.2)	(9.3)	(8.2)
17. South Pacific	1991	–	–	–	–	19.4	18.0	17.3	16.8
	(1990)	–	–	–	–	(15.7)	(15.5)	(15.3)	(15.2)

1. In September 1990, fare levels across the North Atlantic were found to be more dependent on factors other than distance; hence no figures are shown for this route group for that year.
2. In September 1991, fare levels across the Mid Atlantic were found to be more dependent on factors other than distance; hence no figures are shown for this route group.

the Mid Atlantic for September 1991 as these fares were found to be more dependent on other factors than distance.

CHANGES IN LEVEL OF ECONOMY CLASS NORMAL FARES BETWEEN 1990 AND 1991

13. Fares in this survey are generally expressed as the United States dollar equivalents, at the applicable exchange rates, of local selling fares (see Chapter 1). Hence the year-to-year changes in estimated fares include the effects of changes in the strength of the U.S. dollar relative to other currencies. Between September 1990 and September 1991, the U.S. dollar strengthened against many other world currencies. The local selling currency used in each country as well as the exchange rates to the U.S. dollar for each of the national currencies involved may be seen in Appendix 2. Where estimated fares are expressed in a currency against which the U.S. dollar had strengthened, the year-to-year increases in that currency are larger than those recorded when expressed in U.S. dollars. On the other hand, if estimated fares are expressed in a currency against which the U.S. dollar had weakened, the year-to-year increases in that currency are smaller than those recorded when expressed in U.S. dollars. The year-to-year changes in the survey therefore show a significant variation depending on the currency mix present in the individual route groups and the amount each currency has changed against the U.S. dollar during that same period.

14. As shown in Table 2-4, between September 1990 and September 1991 the estimated world average economy class normal fares expressed in U.S. dollars show increases ranging from almost 6 per cent at 250 km to about 9 per cent at 16 000 km, whereas the same fares expressed in local selling currencies show increases between 19 per cent at the shorter distances and 18 per cent at the longer distances. The percentage changes between 1990 and 1991 shown for some individual route groups also vary considerably when fares are expressed in U.S. dollars or in the local selling currencies. It should be noted that in countries where the exchange rate of the national currency is volatile, air fares for international journeys are generally quoted in U.S. dollars. Hence, in those areas where the local currencies are linked to the U.S. dollar, or where the fares themselves are expressed in U.S. dollars, such as in most of the Americas (route groups 1 to 5), the U.S. dollar changes shown in the table tend to reflect the changes as expressed in selling currencies. For routes involving the Caribbean and/or South America the small difference shown between increases in fares expressed in U.S. dollars and those expressed in local selling currencies is due to the depreciation of the French Franc (used in the French Overseas Departments and Territories) against the U.S. dollar between September 1990 and September 1991.

15. Within Europe (route group 6) and within Africa (route group 8) the differences in the changes in fare levels when expressed in local selling currencies compared with those expressed in U.S. dollars reflect the relative appreciation of the latter against all the European and African currencies between September 1990 and September 1991. Over the same period, changes in fares on routes to, from and within the Middle East were affected by the increase in the value of the U.S. dollar against the national currencies of a few countries.

in U.S.$	5.9	6.4	7.0	7.5	8.1	8.6	8.9	9.1
(in selling currencies)	(18.7)	(18.6)	(18.4)	(18.3)	(18.1)	(17.9)	(17.8)	(17.8)
1. North-Central America								
in U.S.$	17.7	16.4	15.0	13.7	12.5	–	–	–
(in selling currencies)	(17.6)	(16.3)	(15.1)	(13.8)	(12.5)	–	–	–
2. Central America								
in U.S.$	12.9	13.4	13.9	14.4	–	–	–	–
(in selling currencies)	(13.2)	(13.6)	(14.1)	(14.6)	–	–	–	–
3. North America								
in U.S.$	18.5	18.6	18.8	18.9	19.0	–	–	–
(in selling currencies)	(18.5)	(18.6)	(18.7)	(18.8)	(19.0)	–	–	–
4. North-South America								
in U.S.$	–	16.3	15.6	14.9	14.1	13.4	–	–
(in selling currencies)	–	(17.0)	(16.1)	(15.3)	(14.4)	(13.6)	–	–
5. South America								
in U.S.$	18.6	17.2	15.9	14.6	13.2	–	–	–
(in selling currencies)	(19.4)	(17.9)	(16.4)	(14.9)	(13.4)	–	–	–
6. Europe								
in U.S.$	2.5	2.7	3.0	3.2	3.4	–	–	–
(in selling currencies)	(17.6)	(18.6)	(19.7)	(20.7)	(21.8)	–	–	–
7. Middle East								
in U.S.$	14.0	12.3	10.6	9.0	–	–	–	–
(in selling currencies)	(38.7)	(34.8)	(31.1)	(27.4)	–	–	–	–
8. Africa								
in U.S.$	–3.2	–1.3	0.6	2.6	4.6	–	–	–
(in selling currencies)	(14.7)	(15.5)	(16.3)	(17.2)	(18.0)	–	–	–
9. Europe-Middle East								
in U.S.$	–	19.2	15.1	11.2	7.4	–	–	–
(in selling currencies)	–	(42.9)	(37.0)	(31.3)	(25.8)	–	–	–
10. Europe-Africa								
in U.S.$	–	5.6	5.2	4.7	4.3	3.9	–	–
(in selling currencies)	–	(15.6)	(16.5)	(17.5)	(18.5)	(19.4)	–	–
11. North Atlantic[1]								
in U.S.$	–	–	–	–	–	–	–	–
(in selling currencies)	–	–	–	–	–	–	–	–
12. Mid Atlantic[2]								
in U.S.$	–	–	–	–	–	–	–	–
(in selling currencies)	–	–	–	–	–	–	–	–
13. South Atlantic								
in U.S.$	–	–	–	–	3.2	7.4	10.0	–
(in selling currencies)	–	–	–	–	(19.4)	(17.1)	(15.8)	–
14. Asia/Pacific								
in U.S.$	16.9	15.3	13.8	12.2	10.7	9.2	8.3	–
(in selling currencies)	(21.0)	(19.3)	(17.7)	(16.0)	(14.4)	(12.8)	(11.9)	–
15. Europe-Asia/Pacific								
in U.S.$	–	–	9.2	8.9	8.5	8.2	8.0	7.9
(in selling currencies)	–	–	(41.8)	(34.0)	(26.7)	(19.7)	(15.8)	(13.1)
16. North-Mid Pacific								
in U.S.$	–	–	–	–	–	12.8	12.2	11.9
(in selling currencies)	–	–	–	–	–	(9.5)	(11.7)	(13.2)
17. South Pacific								
in U.S.$	–	–	–	–	23.6	16.7	12.8	10.2
(in selling currencies)	–	–	–	–	(30.1)	(20.4)	(15.1)	(11.4)

1. In September 1990, fare levels across the North Atlantic were found to be more dependent on factors other than distance; hence no figures are shown for this route group.
2. In September 1991, fare levels across the Mid Atlantic were found to be more dependent on factors other than distance; hence no figures are shown for this route group.

cent), in terms of Japanese Yen the average increase between September 1990 and September 1991 was about 3 per cent.

17. On routes involving the South Pacific (route group 17) the differences in the changes in fares when these are expressed in U.S. dollars compared with the same fares expressed in local selling currencies reflect the general appreciation of the U.S. dollar against the currencies of countries in the South Pacific between September 1990 and September 1991.

18. Changes in the value of the U.S. dollar against the other world currencies are in part responsible for altering the relationship between fare levels for routes where fares are predominantly in U.S. dollars and those which are usually quoted in other local selling currencies. Table 2-5 demonstrates this effect by comparing at different periods in time the estimated average fare at 250 km of a route group with one of the highest fare levels (Europe) with that of a route group showing some of the lowest average fares (North America).

OTHER NORMAL FARES

19. Apart from the economy class normal fare, the other type of fare most widely available on a world-wide basis is the first class normal fare which, in September 1991, remained available for about 97 per cent of the international city-pairs analysed. As in the previous year, these fares were on average some 55 per cent higher than the applicable economy class normal fares. However, they were substantially higher (on average between some 95 and 120 per cent higher) on routes across the North Atlantic and the Pacific. In general on these routes intermediate class normal fares are widely available. Across the Pacific first class or intermediate class restricted fares were also generally available in September 1991 but these fare types were fairly rare on routes across the North Atlantic.

Table 2-5. Effect of changes in the value of the U.S. dollar on the relative level of fares

Year	Estimated average fare at 250 km (U.S. cents per km)		Ratio local Europe/ North America	U.S. dollar relative to European currencies
	Local Europe	North America		
1980	38.1	15.7	2.4	
				Strengthened
1985	36.3	25.3	1.4	
				Weakened
1987	54.0	26.4	2.1	
				Strengthened
1991	71.7	47.1	1.5	

available, on routes other than within Europe, in September 1991 intermediate class normal fares were on average some 15 per cent higher than the applicable economy class normal fare, though they were on average some 30 to 35 per cent higher across the North Atlantic and the South Pacific.

ECONOMY CLASS SPECIAL FARES

21. "Restricted" normal fares, that is fares which would otherwise be classified as normal fares but which have restrictions on the availability or number of stopovers and, in some cases, on the ability to interline, have made inroads in certain route groups. Although restricted fares exist for all three classes of travel, the economy class restricted fares are those most widely available. As in the previous year, in September 1991 they were available for about 15 per cent of the international city-pairs analysed. However, their availability varied widely from route group to route group. These fares were commonly available on routes to/from North America (except within North America) and a few were available on routes between and within Central America and the Caribbean, between Europe and the Middle East, between Europe/Middle East and Africa, on routes across the Mid Atlantic and between Europe/Middle East/Africa and Asia/Pacific. However, in September 1991, economy class restricted fares were generally absent on the other route groups. Where available these fares were on average at a level some 20 per cent below that of the applicable normal fare.

22. The most widely offered type of special fare on scheduled international air services was, as in previous years, the excursion fare. The conditions attached to this fare type are generally minimal and characteristically pertain to the minimum/maximum stay requirements. Some stopovers are generally allowed at no extra cost and in some specific areas there are provisions for additional stopovers at a specified charge. The relative availability of excursion fares varies widely from route group to route group. This is due to a number of factors, such as the level of economy class normal fares, the relative importance of personal and tourist travel, the volume of traffic, and competitive considerations. In September 1991 excursion fares were available for about 85 per cent of international city-pairs. Where available, these excursion fares were, as in previous years, on average some 30 per cent lower than the economy class normal fares although they were substantially lower than the normal fares on routes across the South Pacific (some 60 per cent lower).

23. The existence of a wide range of other economy class special fares, in addition to those discussed above, was noted in Chapter 1. Such fares were, and in most instances still are, intended by the airlines to develop or promote travel by specific segments of the travel market. On some routes, however, the number of passengers travelling on such promotional fares currently represents a relatively high proportion of the traffic. Since promotional fares are lower than the normal fares, it follows that the lower unit revenues generated by promotional fare traffic must, in the long run, be either compensated for by higher average annual load factors or alternatively by revenues derived from normal fare-paying passengers, or some combination of both, to adequately cover the fully allocated costs involved.

24. The range of deep discount special fare types available and conditions applicable is wide and varies among geographical regions, nevertheless these may be broadly grouped into three major categories: advance purchase excursion fares ("Apex"), special excursion fares ("Pex") and "Budget" fares. The main condition attached to the Apex-type fares, as their name suggests, is that reservation and payment must be

above. The major difference is that in general Budget-type fares do not have a minimum/maximum stay requirement and only the outbound journey needs to be booked at the time of payment.

25. A study of city-pair samples selected from each route group suggests that in September 1991 Apex and Pex-type fares, including Budget-type fares, existed in about 55 per cent of the cases; they predominate on routes in North America, across the North and South Atlantic and across the Pacific, and they have also existed for some years on several other route groups. On average these fares were about 45 per cent lower than economy class normal fares. In September 1991, group fares existed in some 15 per cent of the cases at an average level some 45 per cent lower than the economy class normal fares.

26. From the study of city-pair samples, it can be concluded that relative to September 1990 there were no major significant developments in September 1991 with regard to the availability or level of special fares. On some route groups the levels of some special fares moved either up or down relative to those of economy class normal fares, but no route groups exhibited a consistent trend between September 1990 and September 1991.

PREFERENTIAL FARES

27. Preferential fares are those which are available only to passengers who meet certain requirements in terms of age, occupation, family relationship or affiliation to certain enterprises or associations. Listed below are some of the major types of preferential fares together with their area of application and level of discount offered. Other preferential fares not listed below may also have been available in September 1991. Because of their nature and the way in which they are established, preferential fares are discussed here in some detail and not generally covered in the individual route group analyses of Chapter 5.

28. Apart from the discounts for children which have a world-wide application, the fares with the widest area of application are those for seamen. IATA resolutions establish *individual fares for ships' crews* at a level 25 per cent below that of the applicable economy class normal fare. In September 1991 these fares were available on all international routes. *Group fares for ships' crews* also adopted through IATA have a smaller coverage. They were only applicable in the Europe/Middle East/Africa area (except within Middle East), between Europe/Middle East/Africa and Asia, and within Asia. Where available, these fares were some 25 to 50 per cent lower than the applicable economy class normal fare.

29. Other fares have been established through government orders to accommodate *seamen* (and in some cases their spouses and/or children) working on board vessels registered in Belgium, Denmark, Fiji, Finland, France, Germany, Greece, Ireland, Israel, Italy, Liberia, Malaysia, Morocco, Kingdom of the Netherlands, New Zealand, Norway, Panama, Republic of Korea, Singapore, Sweden, Switzerland, United Kingdom and the United States. With a few exceptions, these fares have world-wide application, however the actual area covered in practice is limited to the route network of the participating carriers. Where available, these fares were also some 25 to 45 per cent below the applicable economy class normal fare.

economy class normal fare. There were also a few student fares not covered by IATA agreements which were available for travel between certain countries in the Americas as well as for some routes across the Pacific.

31. The lack of student fares across the North Atlantic is in part offset by the availability of *youth fares* for travel between the United States and certain countries in Europe. In September 1991, other youth fares were also available, with some exceptions, for travel between the United States/Canada and Africa/Middle East, Mexico and the Middle East, within Europe, within the Middle East, between Europe and the Middle East, between points in Europe and Ethiopia/South Africa, as well as from Japan to points in Europe, Asia and the South Pacific, and from the Philippines to points in South East Asia. Where available, these fares were at levels between 25 and 55 per cent lower than the applicable economy class fare. Depending on the area of application, youth fares had also some reservation restrictions (in some cases reservations could only be made less than 72 or 24 hours before departure in either direction) and, minimum and maximum stay requirements.

32. Preferential fare types with a more limited area of application are those for spouses and families. In September 1991, *spouse fares* were commonly available within Europe, on routes between Europe and Western Africa and on routes from Japan to Europe, Asia/Pacific and the Americas. *Family fares* were applicable, with a few exceptions, between Europe and the Middle East, within Africa, within the Middle East, between the Middle East and Eastern Africa/Zambia, from Japan to Canada, the United States and the South Pacific, and from Scandinavian countries and Finland to a number of countries in Europe. The general principle applying to these fares is that provided the head of the family pays the full amount of the first, intermediate or economy class normal fare, the spouse and/or other members of the family are generally allowed to travel at a fare level 50 per cent below the applicable normal fare.

33. In September 1991, *emigrant fares*, generally at levels between 20 to 50 per cent lower than the applicable economy class normal fares, were mainly found for travel from countries in Latin America and in the Asia/Pacific region to Canada and the United States, from a few European countries to Canada and countries in South America, and from countries in South America to those in the South Pacific. *Senior citizen fares* were mainly to be found on routes within the Middle East, between a few specified countries within Europe and from the United States to points in Europe and in Central America and the Caribbean, at levels some 10 to 50 per cent lower than the applicable normal fare.

34. Other preferential fares exist for *migrant workers* wishing to visit their home countries (mainly within Europe and between the Middle East and Asia), teachers (within the Middle East), *pilgrims* (from points in the Middle East, from Europe to Jeddah, and from Africa and the South Asian Subcontinent to Jeddah/Medina) and *clergymen* (mainly from the United States to the Caribbean). Preferential fares have also been established for United States citizens who are members of the *military* or who are *government officials*, and their families, for travel between the United States and points in Europe, in Central America and the Caribbean, and in Asia/Pacific. Most of these fares were at levels some 20 to 50 per cent below the applicable economy class normal fare in September 1991.

INTRODUCTORY REMARKS

1. As already indicated, the fares used in this survey are those available to the general public and published in the multilateral tariff manuals. These published fares generally encompass some local taxes and service or airport charges applied on the passenger. However, in many States supplementary taxes and/or charges are levied on top of the published fare. In view of the increasing proliferation of taxes and charges and the need to maintain consistency in comparisons of the price of international air travel among different route groups, this Chapter contains an analysis comparing the price of air travel taking into account all those taxes and charges which a passenger has to pay in order to complete his/her journey.

2. The findings of this chapter are factual and descriptive in nature. No attempt was made to discuss the merits of the supplementary charges or taxes nor whether they should or should not be included in the published air fare (for more information on this subject, see Doc 8632 — *ICAO's Policies on Taxation in the Field of International Air Transport* and Doc 9082 — *Statements by the Council to Contracting States on Charges for Airports and Air Navigation Services*).

3. In keeping with the previous chapter, the comparisons made are general and relate only to the estimated values of fares and supplementary taxes and charges as determined by the analysis. Within each route group individual city-pairs will differ more or less from the general situation for the group as a whole. In particular there are differences between and within route groups on the number of city-pairs where supplementary taxes and charges apply and where these are included in the published air fare. Nevertheless the analysis does provide an over-all regional and global assessment of the impact of these supplementary taxes and charges on the over-all price level of an air journey.

TAXES AND CHARGES APPLICABLE TO INTERNATIONAL PASSENGER AIR TRANSPORT

4. The taxes or charges which passengers are required to pay in addition to the published air fare are generally established either as fixed amounts or as a percentage of the published fare. However some States use a variation of both these basic systems by establishing minimum and/or maximum limits to the tax expressed in percentage terms beyond which it becomes a fixed amount.

5. In September 1991, 143 States (or their overseas territories and dependencies) required passengers travelling on international scheduled air transport services to pay some form of additional tax or charge. In 140 of these States, passengers were required to pay some form of sales tax, airport service charge, embarkation tax and/or user fee (e.g. for security services, and customs and immigration services) based on fixed amounts. In 108 of the 140 States these additional taxes or charges were collected at the point

journey is commenced.

7. Although in most States taxes or charges applied equally to all air passengers, in others the amounts to be paid differed between residents and non-residents or between citizens and aliens (for the purpose of this survey, if the State making this distinction was the originating State, then the taxes or charges applicable to residents or citizens were used; if on the other hand it was the State of turnaround, then the non-resident or alien taxes or charges were applied). Taxes or charges also varied on the basis of the route(s) flown, for example in a few States different levels of taxation or charges were applied for regional and for intercontinental routes.

8. A special situation prevails for fares for flights within and from Europe. As is still the case for most States in other regions of the world, airport authorities or national civil aviation administrations in Europe used to collect a passenger service charge at the point of embarkation. However, following recommendations by the Council of Europe in 1967 and the ICAO Facilitation Division in 1968, in 1970 the European Civil Aviation Conference (ECAC) adopted Recommendation ECAC/7-1 which recommended that, in order to reduce inconvenience to passengers and airport congestion, passenger service charges should be collected directly from the air carrier performing the air service. As shown in the ICAO *Manual of Airport and Air Navigation Facility Tariffs* (Doc 7100) passenger service charges do exist in Europe but are considered part of the normal cost of operation of an air carrier (such as landing and other airport charges) and are therefore taken into consideration by airlines and local civil aviation authorities when establishing the fare levels for flights originating in Europe.

9. Although for most States in Europe passenger service charges are included in the air fare, other supplementary taxes and charges may apply such as, for example, a security charge which in a few European countries is collected at the point of sale. However, in general, for a large number of international flights within and from Europe, the passenger would have to pay no more than the published fare. A similar principle operates in some of the Francophone States in Western Africa.

DISTRIBUTION OF CITY-PAIRS WHERE SUPPLEMENTARY TAXES AND CHARGES ARE LEVIED

10. The data cover the same 9 592 city-pairs used in the analysis of the level of the economy class normal fare shown in Chapter 2. In September 1991 supplementary taxes and/or charges were applicable to either the outbound or inbound portion of the journey, or on both, for 8 441 city-pairs (88 per cent of the total world-wide). On a route group basis supplementary taxes and/or charges were applicable on all routes within the Americas (route groups 1 to 5), across the Atlantic (route groups 11 to 13), within Asia/Pacific (route group 14), and across the Pacific (route groups 16 and 17). Routes within Europe were the ones with the least number of city-pairs where supplementary taxes and/or charges apply (68 per cent of the total in that route group), followed routes between Europe and the Middle East (81 per cent), within Africa (85 per cent), between Europe/Middle East and Africa (93 per cent), within the Middle East (96 per cent), and between Europe/Middle East/Africa and Asia/Pacific (98 per cent).

Table 3-1. Comparison of average return economy class normal fares, as published and with supplementary taxes and/or charges, by route group at average city-pair distances

Route group	Average city-pair distance (km)	Average return economy class normal fare — September 1991: As published (U.S.$)	Average return economy class normal fare — September 1991: Plus taxes and or charges (U.S.$)	Taxes and charges additional to the published fare[1]: (U.S.$)	Taxes and charges additional to the published fare[1]: (% of published fare)
I. International average — **WORLD**	3 300	1 322	1 365	43	3
II. International route groups:					
1. Between North America and Central America/Caribbean	2 200	743	795	52	7
2. Between and within Central America and the Caribbean	700	347	389	42	12
3. Between Canada, Mexico and the United States	1 700	606	651	45	7
4. Between North America/Central America/Caribbean and South America	4 100	1 296	1 383	87	7
5. Local South America	2 100	685	758	73	11
6. Local Europe	1 100	834	841	7	1
7. Local Middle East	1 400	577	614	37	6
8. Local Africa	1 700	665	720	55	8
9. Between Europe and Middle East	3 300	1 530	1 566	36	2
10. Between Europe/Middle East and Africa	4 900	1 898	1 974	76	4
11. North Atlantic	7 100	2 526	2 551	25	1
12. Mid Atlantic	8 300	2 763	2 851	88	3
13. South Atlantic	9 900	3 376	3 443	67	2
14. Local Asia/Pacific	3 000	1 021	1 055	34	3
15. Between Europe/Middle East/Africa and Asia/Pacific	7 700	2 365	2 399	34	1
16. North and Mid Pacific	10 600	2 330	2 370	40	2
17. South Pacific	8 800	3 144	3 187	41	1

1. There are also taxes or charges *included* in the published fare which will vary according to route group (for example, taxes and charges are generally included in the published fare for most routes from Europe by inter-governmental agreement but such provisions are by no means universal).

above) to a high of U.S.$88 for routes across the Mid Atlantic. In percentage terms the highest additional taxes and/or charges were found on routes between and within Central America and the Caribbean (12 per cent on the published fare) and within South America (11 per cent on the published fare).

13. Table 3-2 shows the variation with distance for the estimated average air fare, as published and plus taxes and/or charges expressed in terms of US cents per passenger-kilometre, by route group and Table 3-3 shows the increase in the price of an air journey which these additional taxes and/or charges represent. The supplementary taxes and/or charges are seen to have a significant impact on the relative differences in fare levels amongst the various route groups, although fares in Europe remain the highest at the short and medium range with or without the additions.

14. On a world-wide basis the increase in price ranges from some 7 per cent at 250 kilometres to about 1 per cent at 16 000 kilometres. On a route group basis there are not only significant differences on the average level of supplementary taxes and/or charges but also a significant variation according to distance within individual route groups. Table 3-3 shows that in September 1991 supplementary taxes and/or charges added a substantial amount to the average published air fare for short/medium haul flights in the Americas (route groups 1 to 5), in Africa (route group 8) and in Asia/Pacific (route group 14).

15. In September 1991 the majority of the additional taxes and/or charges were established as fixed amounts rather than as a percentage of the published fare and hence they had a higher impact on those city-pairs with shorter distances. However the distribution and mixture of city-pairs by distance were also factors.

EFFECT OF SUPPLEMENTARY TAXES AND CHARGES ON SPECIAL FARES

16. Because of comparability on a world-wide basis and amongst route groups, the basic air fare used in this analysis was the economy class normal fare. As described in Chapter 2, other fare types were available on most route groups in September 1991. For example, excursion fares were generally widely available on all route groups, on average, at a level some 30 per cent below that of the applicable economy class normal fare. The impact of the additional taxes and/or charges where these are expressed as discrete amounts would therefore have represented a somewhat higher amount, in percentage terms, than the average figure suggested by the tables.

17. In September 1991, deep discount Advanced purchase excursion (Apex) and similar types of fares were predominant on routes between North America and Central America/Caribbean, within North America, within Europe and across the Atlantic and the Pacific. The impact of additional taxes and/or charges and fees expressed as discrete amounts would have been particularly significant on these fares on routes between North America and Central America/Caribbean and within North America where a mixture of taxes based on percentages of revenue and fixed amounts were used and where the distances between city-pairs are much shorter than for the trans-Atlantic and trans-Pacific routes.

		plus taxes	51.2	40.1	31.5	24.7	19.3	15.2	13.1	11.9
II. International route groups:										
1.	Between North America and Central America/Caribbean	as published	54.5	37.5	25.8	17.8	12.2			
		plus taxes	60.4	41.1	28.0	19.1	13.0			
2.	Between and within Central America and the Caribbean	as published	39.0	28.7	21.2	15.6				
		plus taxes	44.6	32.4	23.6	17.1				
3.	Between Canada, Mexico and the United States	as published	47.1	33.1	23.3	16.4	11.6			
		plus taxes	54.3	37.3	25.6	17.5	12.0			
4.	Between North America/ Central America/Caribbean and South America	as published		24.6	21.3	18.4	15.9	13.7		
		plus taxes		29.0	24.3	20.3	17.0	14.2		
5.	Local South America	as published	27.2	23.0	19.5	16.5	14.0			
		plus taxes	32.3	26.7	22.1	18.3	15.1			
6.	Local Europe	as published	71.7	53.2	39.5	29.3	21.7			
		plus taxes	72.4	53.7	39.8	29.5	21.9			
7.	Local Middle East	as published	37.8	29.6	23.2	18.2				
		plus taxes	40.6	31.7	24.7	19.3				
8.	Local Africa	as published	30.1	25.7	22.0	18.9	16.1			
		plus taxes	35.2	29.3	24.4	20.3	16.9			
9.	Between Europe and Middle East	as published		32.6	28.8	25.4	22.4			
		plus taxes		34.4	30.0	26.2	22.8			
10.	Between Europe/Middle East and Africa	as published		27.7	24.8	22.3	20.0	17.9		
		plus taxes		30.2	26.7	23.6	20.9	18.5		
11.	North Atlantic	as published					22.4	17.0	14.4	
		plus taxes					22.6	17.1	14.6	
12.	Mid Atlantic[2]	as published								
		plus taxes								
13.	South Atlantic	as published					15.0	16.5	17.5	
		plus taxes					16.9	17.3	17.5	
14.	Local Asia/Pacific	as published	24.3	22.0	19.9	18.0	16.3	14.8	13.9	
		plus taxes	27.5	24.3	21.4	18.9	16.7	14.8	13.9	
15.	Between Europe/Middle East/ Africa and Asia/Pacific	as published			15.0	15.1	15.2	15.4	15.4	15.5
		plus taxes			15.6	15.6	15.6	15.6	15.6	15.5
16.	North and Mid Pacific	as published						12.4	10.4	9.2
		plus taxes						12.6	10.6	9.4
17.	South Pacific	as published					19.4	18.0	17.3	16.8
		plus taxes					19.7	18.3	17.5	17.0

1. As Table 3-1.
2. In September 1991, fare levels across the Mid Atlantic were found to be more dependent on other factors than distance; hence no figures are shown for this route.

I. International average — **WORLD**	7.2	6.2	5.1	4.0	2.3	1.5	1.0	0.6
II. International route groups:								
1. Between North America and Central America/Caribbean	10.8	9.6	8.3	7.1	5.9			
2. Between and within Central America and the Caribbean	14.5	12.9	11.3	7.2	5.7			
3. Between Canada, Mexico and the United States	15.4	12.5	9.6	6.8	4.1			
4. Between North America/ Central America/Caribbean and South America		18.0	14.2	10.5	6.9	3.4		
5. Local South America	18.9	16.2	13.5	10.9	8.3			
6. Local Europe	0.9	0.8	0.8	0.8	0.8			
7. Local Middle East	7.2	6.8	6.5	6.2				
8. Local Africa	17.0	13.8	10.7	7.6	4.7			
9. Between Europe and Middle East		5.7	4.4	3.2	2.0			
10. Between Europe/Middle East and Africa		9.0	7.4	5.9	4.4	3.0		
11. North Atlantic					0.9	1.0	1.1	
12. Mid Atlantic								
13. South Atlantic					12.8	4.4	0.0	
14. Local Asia/Pacific	13.3	10.4	7.6	4.9	2.3	0.0	0.0	
15. Between Europe/Middle East/ Africa and Asia/Pacific			4.3	3.3	2.4	1.4	0.8	0.4
16. North and Mid Pacific						1.6	1.8	1.9
17. South Pacific					1.8	1.4	1.2	1.0

1. As Table 3-1.
2. As Table 3-2.

INTRODUCTORY REMARKS

1. The objective of this chapter is to provide a world-wide perspective of international cargo rates, to compare rates among route groups and the estimated world averages, and to compare the situation in September 1991 with that in September 1990. The findings are factual and descriptive in nature. By virtue of the scope of the survey the comparisons made are general, and relate only to the estimated values of rates as determined by the analyses. Within each route group, individual city-pairs will differ more or less from the general situation for the group as a whole, and no attempt has been made in this survey to weigh city-pairs according to the volume of traffic. In consequence, city-pairs which are relatively insignificant from the standpoint of traffic have been accorded as much importance as those between which large volumes of freight traffic flow. This does not detract from the value of assessing the level of international airline rates from a regional and global point of view.

DISTRIBUTION OF INTERNATIONAL CITY-PAIRS BY ROUTE GROUP

2. Under-45 kg general cargo rates were obtained for 7 645 city-pairs with international through-plane scheduled services operated with all-cargo aircraft or wide-body combination aircraft. In addition there were a limited number of city-pairs with through-plane service for which pertinent information on rates was missing in the multilateral airline guides, so that the number of the city-pairs above is less than the actual numbers which would meet the required selection criteria.

3. It may be seen from Table 4-1 that 1 954 city-pairs, just over one-quarter of the total analysed, were located in the route group "local Europe". Four route groups out of the seventeen accounted for about 55 per cent of the total. In addition to "local Europe", these were "between Europe/Middle East/Africa and Asia/Pacific", "local Asia/Pacific" and "between Europe/Middle East and Africa". The three transatlantic route groups, "North Atlantic", "Mid Atlantic" and "South Atlantic" together accounted for some 11 per cent of the total number of international city-pairs, while the two transpacific route groups accounted for almost 4 per cent of the total number of international city-pairs.

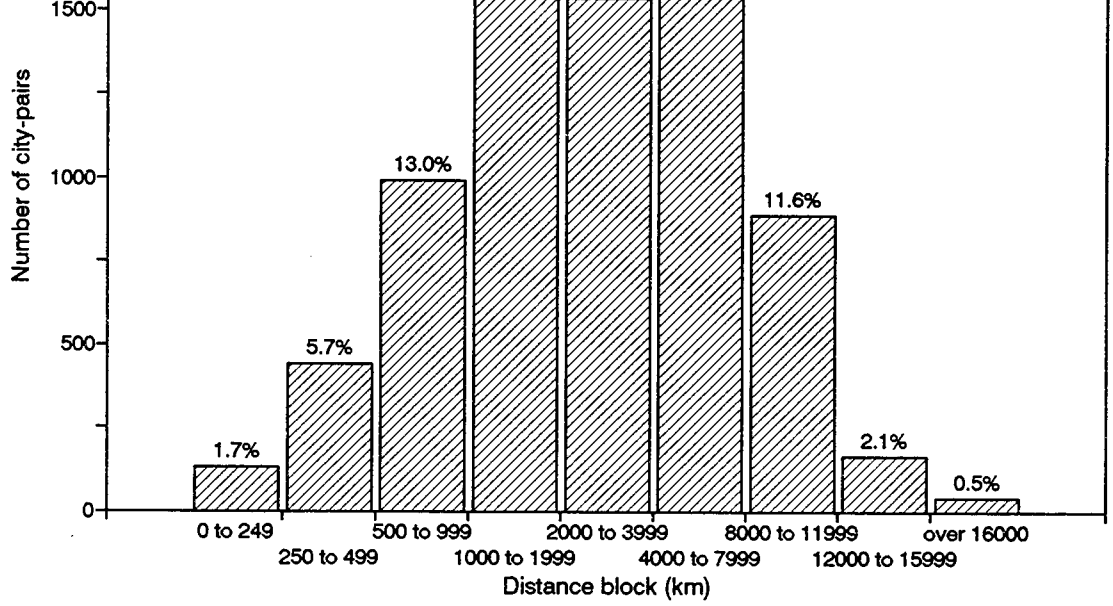
DISTRIBUTION OF INTERNATIONAL CITY-PAIRS BY DISTANCE

4. The average distance separating the 7 645 international city-pairs for which general cargo rates for shipments of less than 45 kg were obtained was 3 903 km. This distance may be compared with an estimated average international freight trip length in 1991 of 5 380 km. The difference between the two figures reflects the relatively higher volume of traffic travelling on long-haul routes as opposed to short-haul routes. When comparing rate and cargo revenue yield data over time, it should also be noted that the average city-

Local Europe	1954	25.6	25.6
Between Europe/Middle East/Africa and Asia/Pacific	820	10.7	36.3
Local Asia/Pacific	739	9.7	46.0
Europe Europe/Middle East and Africa	694	9.1	55.1
Between Europe and Middle East	534	7.0	62.1
North Atlantic	511	6.7	68.8
Local Africa	488	6.4	75.2
Between North America/Central America/Caribbean and South America	310	4.0	79.2
Local Middle East	299	3.9	83.1
North and Mid Pacific	227	3.0	86.1
Between and within Central America and the Caribbean	216	2.8	88.9
Mid Atlantic	187	2.4	91.3
Between Canada, Mexico and the United States	172	2.2	93.5
Between North America and Central America/Caribbean	170	2.2	95.7
Local South America	165	2.2	97.9
South Atlantic	112	1.5	99.4
South Pacific	47	0.6	100.0

pair distance had been falling steadily until recently with the increasing introduction of non-stop and limited-stop services (it was 4 048 km in 1975, 3 909 km in 1980 and 3 826 km in 1985), while the average freight trip length over the same 10-year period had been rising steadily at a rate of about 400 km every 5 years (it was 4 200 km in 1975, 4 600 km in 1980 and 5 000 km in 1985). The last five-year period ending in 1990 however saw an increase in the average city-pair distance (from 3 826 km in 1985 to 3 908 in 1990) in part due to the increase in long-haul all-cargo services such as on routes across the North Atlantic and across the Pacific. For example, for routes across the North-Mid Pacific, in September 1991 there were 227 city-pairs between which freight could be shipped directly (on combination or all-cargo scheduled flights) compared with 191 city-pairs for which passengers were offered direct services.

5. Graph 4-1 portrays the number and percentage distribution of city-pairs by distance block for the world sample of 7 645 city-pairs for which cargo rates were obtained in September 1991. Because one of the selection criteria for the city-pairs included in the analysis of cargo rates was that there should be a through-plane service operated with all-cargo aircraft or wide-body combination aircraft only, the distribution of city-pairs by distance tends to include a higher proportion of city-pairs at the longer distances. Hence in the case of cargo rates, some 58 per cent of the city-pairs surveyed are in distance ranges over 2 000 km compared with about 49 per cent for passenger fares.



Graph 4-1. Distribution by distance block of city-pairs for which general cargo rates (under 45 kg) were obtained (September 1991)

DISTRIBUTION OF INTERNATIONAL CITY-PAIRS BY ROUTE GROUP AND BY DISTANCE

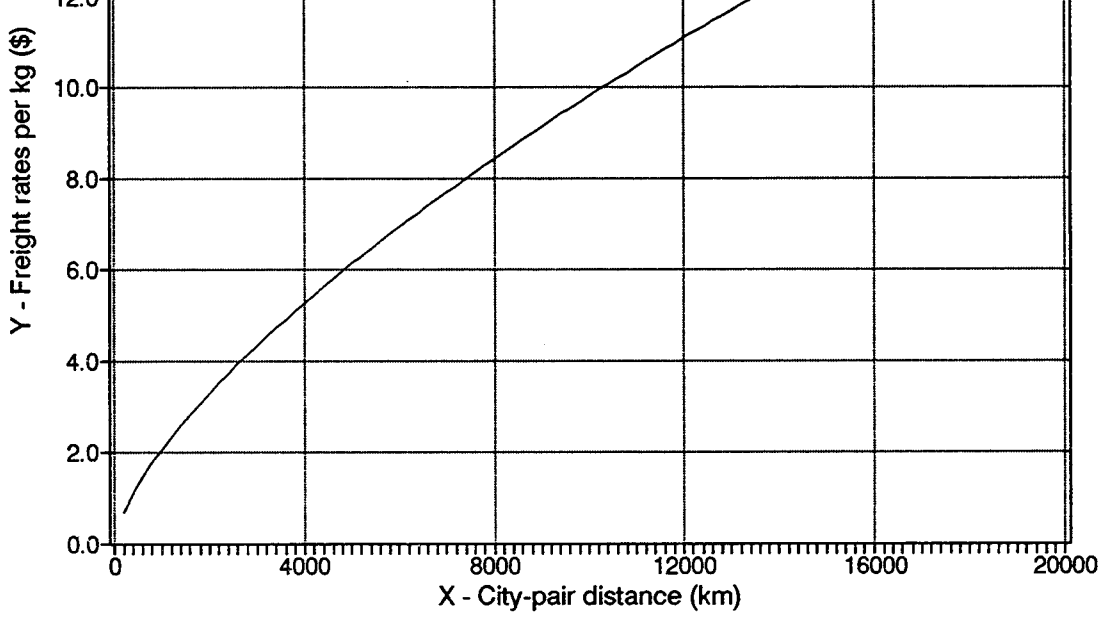
6. The average regional inter-city distance is shortest in the route group "between and within Central America and the Caribbean" at 813 km and in "local Europe" at 1 218 km, while the route groups with the longest average city-pair distance are the "North and Mid Pacific" at 10 991 km and the "South Atlantic" at 9 845 km. Table 4-2 compares the number of city-pairs in each route group that fall in the nine distance blocks selected for the purpose of this chapter.

RELATIONSHIP BETWEEN ESTIMATED GENERAL CARGO RATES FOR SMALL SHIPMENTS AND DISTANCE

7. The relationship between the estimated average international general cargo rates for shipments of less than 45 kg and distance in September 1991 may be seen in Graph 4-2. These are the rates paid per kilogram at various distances. The estimated averages shown in this graph are for the world as a whole and may be used as a basis for comparison with the rates shown in Chapter 5 by route group. The curves of this graph have been statistically computed so as to reflect best the relationship between the rates and the distance (see Appendix 3 for further details).

Table 4-2. Distribution by distance block of city-pairs for which general cargo rates (under 45 kg) were obtained (September 1991)

Route group	Number of city-pairs by distance (km)								
	0 to 249	250 to 499	500 to 999	1 000 to 1 999	2 000 to 3 999	4 000 to 7 999	8 000 to 11 999	12 000 to 15 999	over 16 000
International total — **WORLD**	129	439	991	1 646	1 533	1 815	888	163	41
Between North America and Central America/Caribbean	2	2	4	53	90	19	–	–	–
Between and within Central America and the Caribbean	37	49	61	55	14	–	–	–	–
Between Canada, Mexico and the United States	2	8	27	46	80	9	–	–	–
Between North America/Central America/ Caribbean and South America	1	5	35	39	70	111	49	–	–
Local South America	4	11	13	61	44	32	–	–	–
Local Europe	28	256	586	826	258	–	–	–	–
Local Middle East	18	49	45	115	72	–	–	–	–
Local Africa	22	30	108	155	135	38	–	–	–
Between Europe and Middle East	–	–	9	55	297	173	–	–	–
Between Europe/Middle East and Africa	2	7	15	67	132	390	81	–	–
North Atlantic	–	–	–	–	4	386	114	7	–
Mid Atlantic	–	–	–	–	–	96	89	2	–
South Atlantic	–	–	–	–	–	19	80	13	–
Local Asia/Pacific	13	22	85	136	235	211	37	–	–
Between Europe/Middle East/ Africa and Asia/Pacific	–	–	3	38	102	284	298	63	32
North and Mid Pacific	–	–	–	–	–	30	122	67	8
South Pacific	–	–	–	–	–	17	18	11	1



Graph 4-2. Relationship between the estimated average international general cargo rates for shipments of less than 45 kg and distance (September 1991)

COMPARATIVE LEVEL OF GENERAL CARGO RATES FOR SMALL SHIPMENTS BY ROUTE GROUP

8. In September 1991 estimated average general cargo rates for shipments of less than 45 kg, as shown in Table 4-3, were lowest on the route groups "South America" "Africa", "Europe-Middle East" and "Asia/Pacific" at short distances, on the route groups "North-Central America" and "North America" at medium distances, and on the route groups "North-South America" and "Asia/Pacific" at the longest distances. The lowest average rate at the average distance in any route group was 82 cents per tonne-kilometre (at 2 100 km) on international routes in "North America".

9. The highest estimated rate levels at the short distances were seen for routes in "Europe". Rate levels in "Europe", "Europe-Middle East" and "Europe-Africa" were among the highest at medium distances, and at the longest distances surveyed, rates on routes across the South Atlantic and in the route group "Europe-Asia/ Pacific" were among the highest. The highest average rate at the average distance in any route group was 230 cents per tonne-kilometre (at 1 200 km) on routes in "Europe".

		(1990)	(303)	(243)	(195)	(156)	(125)	(101)	(88)	(81)
1.	North-Central America	1991	306	230	174	131	99	–	–	–
		(1990)	(237)	(185)	(144)	(112)	(87)	–	–	–
2.	Central America	1991	368	269	196	143	–	–	–	–
		(1990)	(331)	(239)	(173)	(125)	–	–	–	–
3.	North America	1991	310	201	131	85	55	–	–	–
		(1990)	(297)	(191)	(122)	(78)	(50)	–	–	–
4.	North-South America	1991	–	229	182	145	115	91	–	–
		(1990)	–	(199)	(158)	(125)	(99)	(78)	–	–
5.	South America	1991	240	200	166	139	115	–	–	–
		(1990)	(219)	(181)	(149)	(123)	(102)	–	–	–
6.	Europe	1991	438	330	248	186	140	–	–	–
		(1990)	(449)	(328)	(240)	(176)	(128)	–	–	–
7.	Middle East	1991	276	215	168	131	–	–	–	–
		(1990)	(250)	(196)	(153)	(120)	–	–	–	–
8.	Africa	1991	216	185	158	135	115	–	–	–
		(1990)	(189)	(167)	(147)	(130)	(115)	–	–	–
9.	Europe-Middle East	1991	–	166	162	159	155	–	–	–
		(1990)	–	(139)	(142)	(144)	(147)	–	–	–
10.	Europe-Africa	1991	–	243	204	171	143	120	–	–
		(1990)	–	(221)	(190)	(163)	(140)	(120)	–	–
11.	North Atlantic[1]	1991	–	–	–	–	–	–	–	–
		(1990)	–	–	–	–	–	–	–	–
12.	Mid Atlantic[1]	1991	–	–	–	–	–	–	–	–
		(1990)	–	–	–	–	–	–	–	–
13.	South Atlantic[1]	1991	–	–	–	–	–	–	–	–
		(1990)	–	–	–	–	(135)	(135)	(135)	–
14.	Asia/Pacific	1991	238	198	165	137	114	95	85	–
		(1990)	(205)	(174)	(148)	(126)	(107)	(90)	(82)	–
15.	Europe-Asia/Pacific	1991	–	–	145	132	121	110	104	100
		(1990)	–	–	(140)	(128)	(117)	(107)	(101)	(98)
16.	North-Mid Pacific[1]	1991	–	–	–	–	–	–	–	–
		(1990)	–	–	–	–	–	–	–	–
17.	South Pacific	1991	–	–	–	–	142	112	98	88
		(1990)	–	–	–	–	(150)	(106)	(86)	(75)

1. In September 1991, rate levels across the three Atlantic routes (North, Mid and South) and the North-Mid Pacific were found to be more dependent on other factors than distance; hence no figures are shown for these route groups.

11. As for passenger fares, cargo rates in this survey are generally expressed as the United States dollar equivalents, at the applicable exchange rates, of local selling rates (see Chapter 1). Hence, the year-to-year changes in estimated rates include the effects of changes in the strength of the U.S. dollar relative to other currencies. Between September 1990 and September 1991, the U.S. dollar strengthened against many other world currencies. The local selling currency used in each country as well as the exchange rates to the U.S. dollar for each of the national currencies involved may be seen in Appendix 2.

12. As shown by Table 4-4, between September 1990 and September 1991 the estimated world average general cargo rates expressed in U.S. dollars for shipments of less than 45 kg showed increases by some 7 per cent at 250 km and by about 4 per cent at 16 000 km. In terms of local selling currencies, cargo rates showed increases of about 22 per cent at the shorter distances and of some 11 per cent at the longer distances.

13. For the individual route groups the degree of change shown in the general cargo rates expressed in U.S. dollars between 1990 and 1991 depends to a large extent on the change in the relationship of the selling currencies in the countries concerned and the U.S. dollar. Hence in those areas such as the Americas (route groups 1 to 5) where rates are generally expressed in U.S. dollars, the changes shown in the table tend to reflect the changes in selling rates. The effect of changes in exchange rates on individual routes for cargo rates is not necessarily the same as for passenger fares because of the different city-pair mix in each route group and because in a number of countries either the fares or the rates but not both are established in U.S. dollars (see Appendix 2).

14. Between September 1990 and September 1991, the U.S. dollar appreciated against most of the currencies of the other countries in the rest of the world. Hence, the changes in rates are higher when rates are expressed in local selling currencies than when expressed in U.S. dollars. (For a more detailed analysis on exchange rates see paragraphs 13 through 17 in Chapter 2.)

OTHER CARGO RATES

15. A study of city-pair samples selected from each route group suggests the following conclusions: for about 75 per cent of all international city-pairs, general cargo rates for shipments "over 45 kg" were available at some 25 per cent lower than the rates for smaller shipments. For about 40 per cent of the city-pairs there was at least one additional general cargo rate which could be used for very large shipments and which was on average almost 50 per cent lower than the "under-45 kg" rate. However, these rates for large shipments were predominant in particular route groups, and were uncommon in the route groups "South America", "Europe", "Middle East", "Africa", "Europe-Africa" and "Asia/Pacific". Specific commodity rates existed for about 65 per cent of city-pairs in the world-wide sample. Where available, in September 1991 there were on average about 6 different types of specific commodity rates for a city-pair, in most of the cases with more than one rate per commodity depending on the minimum weight, and these rates were on average about 60 per cent lower than the comparable "under-45 kg" general cargo rate. Bulk unitization rates for the carriage of freight in unit load devices (ULDs) remained in general only widely available for routes originating or terminating in North America and on routes across the Mid Atlantic.

in U.S.$	7.0	6.5	6.0	5.6	5.1	4.7	4.4	4.2
(in selling currencies)	(22.2)	(20.3)	(18.4)	(16.5)	(14.6)	(12.8)	(11.7)	(11.0)
1. North-Central America								
in U.S.$	28.7	24.8	21.0	17.3	13.7	–	–	–
(in selling currencies)	(28.6)	(24.8)	(21.1)	(17.5)	(14.1)	–	–	–
2. Central America								
in U.S.$	11.2	12.4	13.6	14.9	–	–	–	–
(in selling currencies)	(13.4)	(13.9)	(14.5)	(15.1)	–	–	–	–
3. North America								
in U.S.$	4.4	5.7	6.9	8.2	9.4	–	–	–
(in selling currencies)	(4.4)	(5.6)	(6.8)	(8.1)	(9.4)	–	–	–
4. North-South America								
in U.S.$	–	15.1	15.5	15.9	16.3	16.7	–	–
(in selling currencies)	–	(16.1)	16.3)	(16.5)	(16.6)	(16.8)	–	
5. South America								
in U.S.$	9.5	10.5	11.5	12.5	13.5	–	–	–
(in selling currencies)	(9.3)	(10.4)	(11.5)	(12.7)	(13.9)	–	–	–
6. Europe								
in U.S.$	–2.4	0.3	3.2	6.1	9.1	–	–	–
(in selling currencies)	(13.5)	(15.8)	(18.0)	(20.4)	(22.7)	–	–	–
7. Middle East								
in U.S.$	10.4	9.9	9.4	9.0	–	–	–	–
(in selling currencies)	(36.4)	(34.0)	(31.7)	(29.4)	–	–	–	–
8. Africa								
in U.S.$	14.6	10.8	7.1	3.6	0.2	–	–	–
(in selling currencies)	(34.5)	(28.7)	(23.2)	(17.9)	(12.8)	–	–	–
9. Europe-Middle East								
in U.S.$	–	19.5	14.6	10.0	5.5	–	–	–
(in selling currencies)	–	(31.9)	(28.8)	(25.7)	(22.8)	–	–	–
10. Europe-Africa								
in U.S.$	–	9.6	7.2	4.8	2.4	0.1	–	–
(in selling currencies)	–	(19.2)	(18.2)	(17.3)	(16.4)	(15.5)	–	–
11. North Atlantic[1]								
in U.S.$	–	–	–	–	–	–	–	–
(in selling currencies)	–	–	–	–	–	–	–	–
12. Mid Atlantic[1]								
in U.S.$	–	–	–	–	–	–	–	–
(in selling currencies)	–	–	–	–	–	–	–	–
13. South Atlantic[1]								
in U.S.$	–	–	–	–	–	–	–	–
(in selling currencies)	–	–	–	–	–	–	–	–
14. Asia/Pacific								
in U.S.$	16.0	13.7	11.4	9.1	6.9	4.8	3.5	–
(in selling currencies)	(20.1)	(17.7)	(15.3)	(13.0)	(10.7)	(8.5)	(7.2)	–
15. Europe-Asia/Pacific								
in U.S.$	–	–	3.8	3.5	3.3	3.1	3.0	2.9
(in selling currencies)	–	–	(37.2)	(28.8)	(20.8)	(13.4)	(9.3)	(6.4)
16. North-Mid Pacific[1]								
in U.S.$	–	–	–	–	–	–	–	–
(in selling currencies)	–	–	–	–	–	–	–	–
17. South Pacific								
in U.S.$	–	–	–	–	–5.2	5.9	13.0	18.3
(in selling currencies)	–	–	–	–	(0.0)	(9.3)	(15.1)	(19.5)

1. In September 1991, rate levels across the three Atlantic routes (North, Mid and South) and the North-Mid Pacific were found to be more dependent on other factors than distance; hence no figures are shown for these route groups.

This chapter presents the analyses for the 17 international route groups on a standardized basis to facilitate comparisons. Descriptions of the route groups are given in Appendix 1. Details of the statistical methods used for estimating average economy class normal passenger fares and general cargo rates for small shipments are given in Appendix 3.

ROUTE GROUP 1: BETWEEN NORTH AMERICA AND CENTRAL AMERICA/CARIBBEAN

Economy class normal passenger fares

1. The curves on Graph 5-1 have been statistically computed so as to reflect best the way in which the economy class normal passenger fares vary with distance for city-pairs within this route group.

2. Estimated economy class normal fare levels per passenger-kilometre are shown in the following table:

Estimated economy class normal fares per passenger-kilometre	Distance in km				
	250	500	1000	3000	5000
Fares in cents per pass-km, 1991					
Average	54.5	37.5	25.8	14.3	10.9
Northbound	57.7	38.8	26.2	14.0	10.5
Southbound	51.1	36.0	25.4	14.6	11.3
Percentage change (%), 1991/1990					
Average	17.7	16.4	15.0	13.0	12.0
Northbound	24.9	20.6	16.5	10.3	7.5
Southbound	10.0	11.6	13.3	15.9	17.2

3. Between September 1990 and September 1991 there was a significant increase in the directional imbalance in the level of the estimated economy class normal fares per passenger-kilometre expressed in U.S. dollars at the shorter distances.

Other passenger fares

4. Table 5-1 shows for September 1991 for a sample of 10 city-pairs in the route group the range of fares available as appearing in multilateral airline guides. As illustrated by the sample, first class normal fares were widely available in this route group. In September 1991 special fares for first class travel remained available for 4 out of the 10 city-pairs. The economy class excursion fare remained the special fare most widely available to the general public in September 1991. These fares were within a range 13 to 52 per cent lower than the related economy class normal fare. Economy class restricted fares were available on

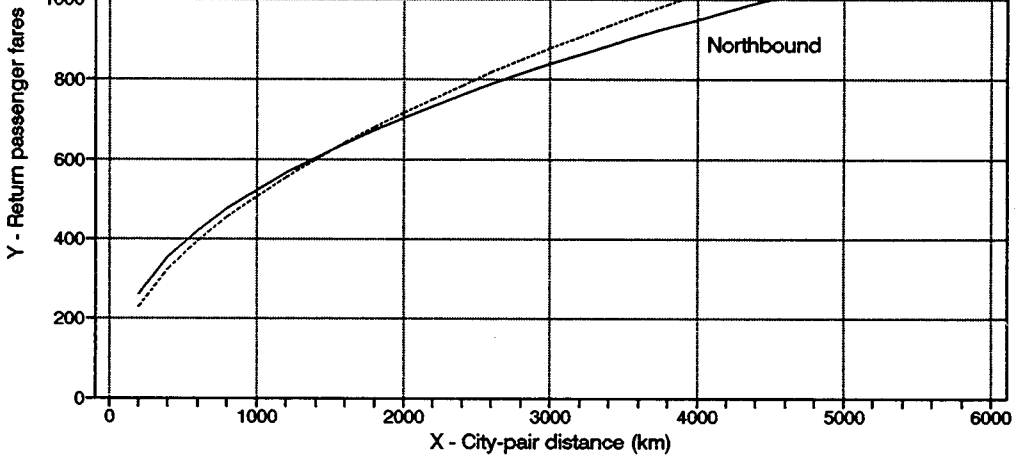
5. The curves on Graph 5-2 have been statistically computed so as to reflect best the average level of general cargo rates for shipments of less than 45 kg for this route group at different distances.

6. Estimated small shipment general cargo rate levels per tonne-kilometre are shown in the following table:

Estimated general cargo rates for shipments of less than 45 kg	Distance in km				
	250	500	1000	3000	5000
Rates in cents per tonne-km, 1991					
Average	306	230	174	111	90
Northbound	300	227	171	110	89
Southbound	311	234	176	112	91
Percentage change (%), 1991/1990					
Average	28.7	24.8	21.0	15.2	12.6
Northbound	28.1	23.5	19.1	12.4	9.5
Southbound	29.7	26.2	22.8	17.7	15.4

Other cargo rates

7. Table 5-2 shows for September 1991 for a sample of 10 city-pairs in the route group the range of cargo rates available as appearing in multilateral airline guides. Several general cargo rates for shipments of more than 45 kg exist (including breakpoints at 100 and 300 kg) giving discounts averaging about 45 per cent for large shipments (over 500 kg). Specific commodity rates were available for 8 out of 10 city-pairs in the sample. They were on average at a level of about 35 per cent of the general cargo rates for small shipments. Bulk unitization rates for freight carried in unit load devices (ULDs) were available for 3 out of 10 city-pairs in the sample.

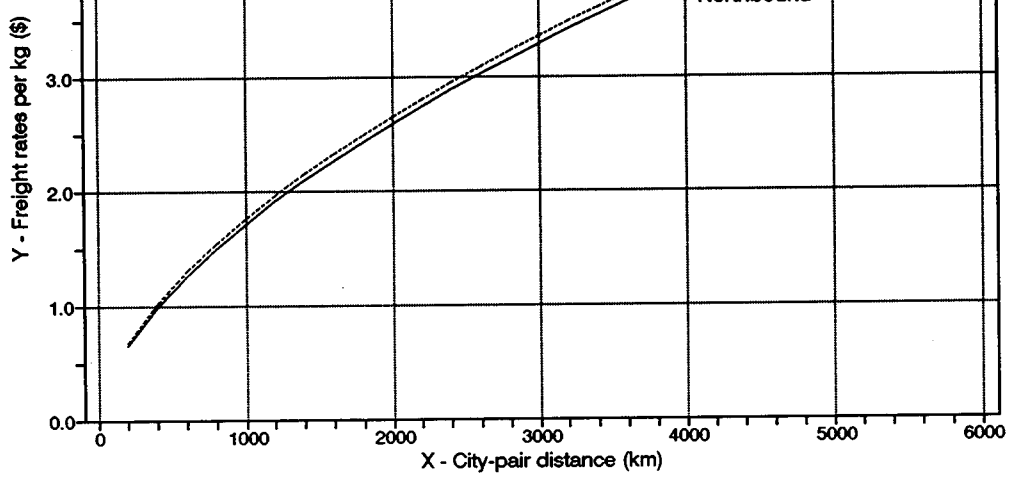


Graph 5-1. Economy class normal passenger fares (route group 1)

Table 5-1. Range of passenger fares available (route group 1)

City-pair (originating city first)	Flight distance (km)	Highest economy class normal (U.S.$)	INDIVIDUAL FARES[1] First class normal	Inter-mediate class normal	Economy class restricted	Economy class excursion	Economy class APEX	GROUP FARES Economy class
			(as a percentage of the highest economy class normal fare)					
Panama City — Los Angeles	4 840	1 346	197	–	–	73	63	–
Los Angeles — San José	4 410	874	–	–	93-100	62-79	58	–
Montreal — Fort de France	3 670	1 284	–	–	–	–	31-37	36
Aruba — New York	3 320	946	122[2]	106	70-82	49-54	43-48	–
Kingston — Toronto	2 870	994	145	120	87	62-71	31-43	36
New York — Santo Domingo	2 500	592	142[2]	–	68-79	64-82	64-73	–
San Salvador — Houston	1 990	848	122[3]	–	60-87	56-71	–	–
New Orleans — Guatemala	1 710	728	–	–	73	48-72	–	–
Port-au-Prince — Miami	1 150	484	128[2]	–	45-80	75	52-60	–
Fort Lauderdale — Nassau	290	224	126	–	–	57	48	–

1. Where applicable, only mid-week fare levels are shown; weekend fares are somewhat higher.
2. First class, restricted, excursion and/or Apex fares also available.
3. First class restricted fares also available.



Graph 5-2. General cargo rates for shipments of less than 45 kg (route group 1)

Table 5-2. Range of cargo rates available (route group 1)

City-pair (originating city first)	Flight distance (km)	GENERAL CARGO RATES: Minimum charge (U.S.$)	Under 45 kg (U.S.$/kg)	Over 45 kg (as a percentage of under-45 kg rate[1])	Over 500 kg (as a percentage of under-45 kg rate[1])	SPECIFIC COMMODITY RATES: Range (as a percentage of under-45 kg rate[1])	Number of commodities
Panama City — Los Angeles	4 840	50	5.29-5.86	68-71	51	19-30	7
Los Angeles — San José	4 410	45-50	3.27-5.10	64-70	44-55	–	–
Montreal — Fort de France	3 670	57	4.72	75	58	17-51	8
Aruba — New York	3 320	45	3.36	78	53	–	–
Kingston — Toronto	2 870	45	3.55	77	66	17-30	1
New York — Santo Domingo	2 500	45-50	1.89-2.27	70-84	61-70	50-71	4
San Salvador — Houston	1 990	45	3.71	74	54	15	2
New Orleans — Guatemala	1 710	45-50	1.74-3.55	49-72	25-54	24-33	3
Port-au-Prince — Miami	1 150	45-50	1.40-1.49	76-81	60-76	23-54	12
Miami — Nassau	300	35-45	1.02-1.82	43-67	39-57	26	1

1. Rates calculated as a percentage of the higher under-45 kg rate where applicable.

2. Estimated economy class normal fare levels per passenger-kilometre are shown in the following table:

Estimated economy class normal fares per passenger-kilometre	Distance in km				
	250	500	1000	2000	3000
Fares in cents per pass-km, 1991	39.0	28.7	21.2	15.6	13.0
Percentage change (%), 1991/1990	12.9	13.4	13.9	14.4	14.7

Other passenger fares

3. Table 5-3 shows for September 1991 for a sample of 10 city-pairs in the route group the range of fares available as appearing in multilateral airline guides. As illustrated by the sample, first class fares remained widely available in September 1991, while intermediate class fares were available for 2 city-pairs in the sample, two less than in September 1990. The economy class excursion fare remained the special fare most widely available to the general public, with a level between 20 and 66 per cent lower than that of the related economy class normal fare. A few special fares of other types were also available.

General cargo rates for small shipments

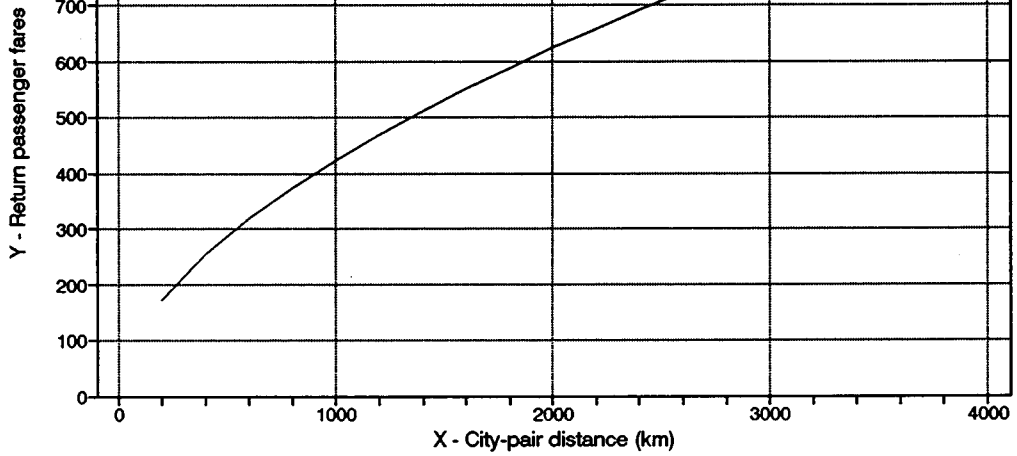
4. The curve on Graph 5-4 has been statistically computed so as to reflect best the average level of general cargo rates for shipments of less than 45 kg for this route group at different distances.

5. Estimated small shipment general cargo rate levels per tonne-kilometre are shown in the following table:

Estimated general cargo rates for shipments of less than 45 kg	Distance in km				
	250	500	1000	2000	3000
Rates in cents per tonne-km, 1991	368	269	196	143	119
Percentage change (%), 1991/1990	11.2	12.4	13.6	14.9	15.6

Other cargo rates

6. Table 5-4 shows for September 1991 for a sample of 10 city-pairs in the route group the range of cargo rates available as appearing in multilateral airline guides. Several cargo rates for shipments of more than 45 kg existed in each case (including breakpoints at 100 and 300 kg) giving, as for the previous years, a reduction of up to about 50 per cent for large shipments (over 500 kg). On the other hand, few specific commodity rates were available on this route group.

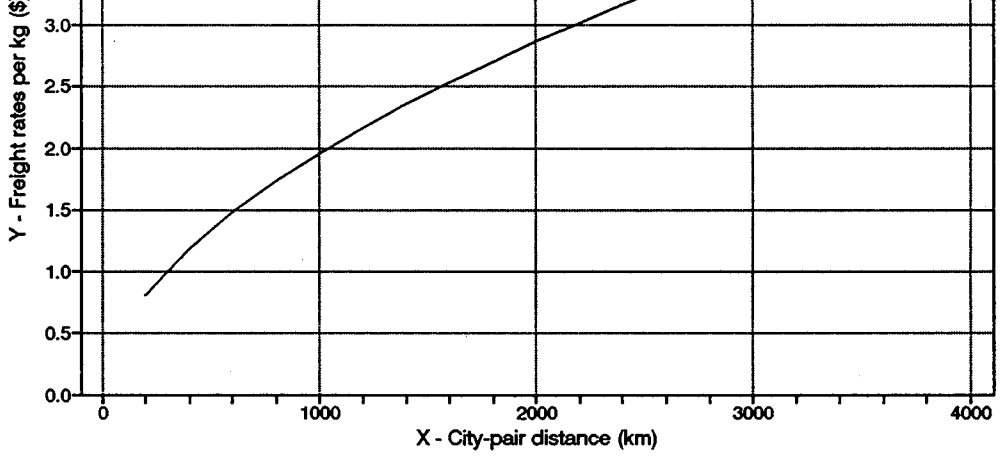


Graph 5-3. Economy class normal passenger fares (route group 2)

Table 5-3. Range of passenger fares available (route group 2)

City-pair (originating city first)	Flight distance (km)	INDIVIDUAL FARES[1] Highest economy class normal (U.S.$)	First class normal	Inter-mediate class normal	Economy class restricted	Economy class excursion	Economy class APEX	GROUP FARES Economy class
			(as a percentage of the highest economy class normal fare)					
San Juan — San José	2 170	892	138	–	82	42-49	37	41
Mexico — Havana	1 770	482	–	–	–	79	–	–
Fort de France — Port au Prince	1 370	625	136	–	–	–	–	–
San Salvador — Panama City	1 190	520	169	121	100	–	–	–
Port of Spain — Curaçao	850	488	130[2]	–	–	34-65	–	–
St. Kitts — Port of Spain	760	462	147	–	–	75	–	–
Port au Prince — Kingston	480	336	140[2]	–	–	64-72	–	–
Guatemala — Tegucigalpa	410	204	158	103	100	67-69	–	–
Belize — San Pedro Sula	240	170	–	–	–	53-76	–	–
Antigua — Point-à-Pitre	100	124	–	–	–	80	–	–

1. Where applicable,; only mid-week fare levels are shown; weekend fares are somewhat higher.
2. First class excursion fares also available.



Graph 5-4. General cargo rates for shipments of less than 45 kg (route group 2)

Table 5-4. Range of cargo rates available (route group 2)

		GENERAL CARGO RATES				SPECIFIC COMMODITY RATES	
City-pair (originating city first)	Flight distance (km)	Minimum charge (U.S.$)	Under 45 kg (U.S.$/kg)	Over 45 kg (as a percentage of under-45 kg rate)	Over 500 kg (as a percentage of under-45 kg rate)	Range (as a percentage of under-45 kg rate)	Number of commo-dities
San Juan — San José	2 170	45	3.95	77	57	–	–
Mexico — Havana	1 770	45	2.49	78	62	–	–
Fort-de-France — Port-au-Prince	1 370	56	4.68	78	49	–	–
San Salvador — Panama City	1 190	50	1.69	78	55	–	–
Port of Spain — Curaçao	850	50	2.31	75	52	42-51	5
St. Kitts — Port of Spain	760	50	2.26	77	58	–	–
Port au Prince — Kingston	480	45	1.62	80	57	–	–
Guatemala — Tegucigalpa	410	45	0.49	82	67	–	–
San Pedro Sula — Guatemala	290	45	0.45	62	62	–	–
Antigua — Point-à-Pitre	100	50	0.73	85	81	–	–

following table:

Estimated economy class normal fares per passenger-kilometre	Distance in km					
	250	500	1000	2000	4000	6000
Fares in cents per pass-km, 1991	47.1	33.1	23.3	16.4	11.6	9.4
Percentage change (%), 1991/1990	18.5	18.6	18.8	18.9	19.0	19.1

Other passenger fares

3. Table 5-5 shows for September 1991 for a sample of 10 city-pairs in the route group the range of fares available as appearing in multilateral airline guides. As illustrated by the sample, first class fares were widely available in September 1991. Intermediate class fares were available on 3 of the 10 city-pairs in the sample. Excursion and Apex fares were the special fares in economy class most widely available in this route group in 1991. The level of the excursion fares ranged between 16 and 54 per cent below that of the related economy class normal fares whereas that of Apex fares ranged between 21 and 73 per cent below. Economy class restricted fares, which in September 1990 were only available for 3 city-pairs in the sample, do not appear to have been available for any of the city-pairs in the sample in September 1991.

General cargo rates for small shipments

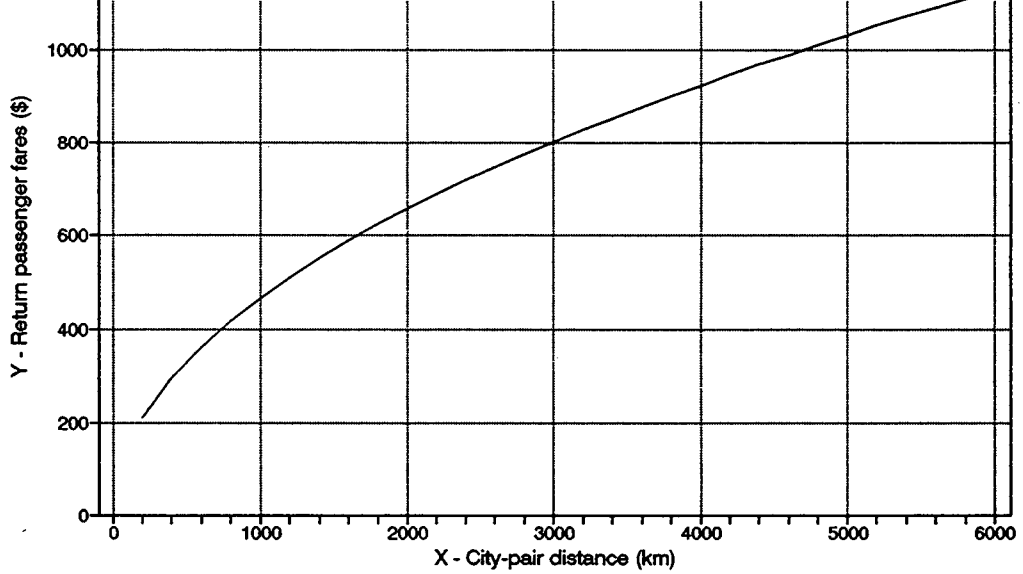
4. The curve on Graph 5-6 has been statistically computed so as to reflect best the average level of general cargo rates for shipments of less than 45 kg for this route group at different distances.

5. Estimated small shipment general cargo rate levels per tonne-kilometre are shown in the following table:

Estimated general cargo rates for shipments of less than 45 kg	Distance in km					
	250	500	1000	2000	4000	6000
Rates per tonne-km in cents, 1991	310	201	131	85	55	43
Percentage change (%), 1991/1990	4.4	5.7	6.9	8.2	9.4	10.2

Other cargo rates

6. Table 5-6 shows for September 1991 for a sample of 10 city-pairs in the route group the range of cargo rates available as appearing in multilateral airline guides. Several cargo rates for shipments of more than 45 kg were frequently available (including breakpoints below and above 500 kg). The average reduction for large shipments (over 500 kg) was about 35 per cent on the general cargo rate for small shipments, significantly less than the 45 per cent reduction available in September 1991. Specific commodity

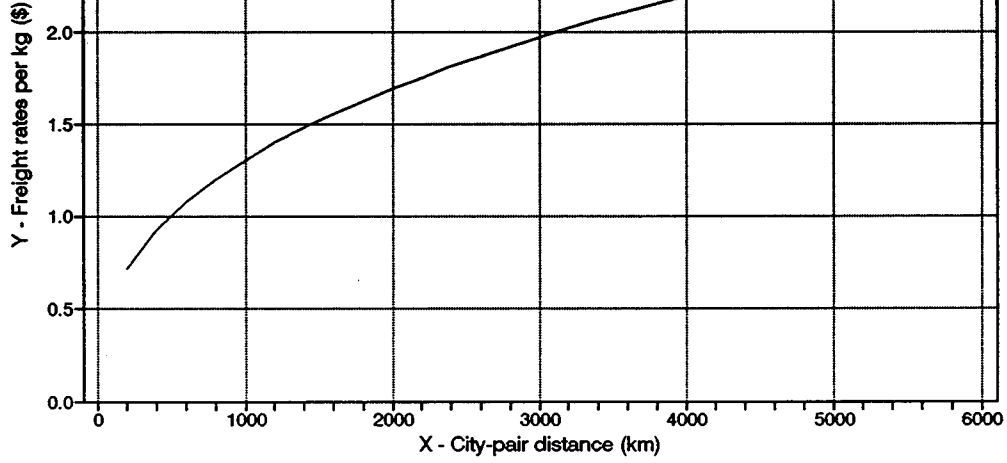


Graph 5-5. Economy class normal passenger fares (route group 3)

Table 5-5. Range of passenger fares available (route group 3)

City-pair (originating city first)	Flight distance (km)	INDIVIDUAL FARES[1] Highest economy class normal (U.S.$)	First class normal	Inter-mediate class normal	Economy class restricted	Economy class excursion	Economy class APEX	GROUP FARES Economy class
			(as a percentage of the highest economy class normal fare)					
Montreal — Los Angeles	3 950	1 324	165	110	–	–	46-48	–
Mexico — Vancouver	3 940	762	154	100	–	74	54	
New York — Calgary	3 280	1 054	149	–	–	–	–	–
Philadelphia — Mexico	3 214	716	177	–	–	66	59	–
Puerto Vallarta — San Francisco	2 500	632	128	–	–	58-70	58-70	–
Toronto — Tampa	1 770	612	165	110	–	84	34-43	–
Mexico — Dallas	1 510	438	156	–	–	46-70	57-61	–
Chicago — Montreal	1 180	478	189	–	–	–	27-79	–
Miami — Cozumel	900	288	–	–	–	70	–	–
Toronto — Washington	570	481	164	–	–	–	59-67	–

1. Where applicable, only mid-week fare levels are shown; weekend fares are somewhat higher.



Graph 5-6. General cargo rates for shipments of less than 45 kg (route group 3)

Table 5-6. Range of cargo rates available (route group 3)

City-pair (originating city first)	Flight distance (km)	GENERAL CARGO RATES: Minimum charge (U.S.$)	Under 45 kg (U.S.$/kg)	Over 45 kg (as a percentage of under-45 kg rate[1])	Over 500 kg (as a percentage of under-45 kg rate[1])	SPECIFIC COMMODITY RATES: Range (as a percentage of under-45 kg rate[1])	Number of commodities
Montreal — Los Angeles	3 950	29	2.05	76	68	38-48	1
Mexico — Vancouver	3 940	50	3.61	86	72	25-54	4
New York — Calgary	3 280	31	2.60	82	74	–	–
Chicago — Mexico	2 720	45-50	2.13	100	69	–	–
Puerto Vallarta — San Francisco	2 500	45	2.46	69	60	39-45	2
Toronto — Tampa	1 765	25	1.44	69	60	39-45	2
Mexico — Dallas	1 510	45-50	1.31-1.52	63-72	55-64	30-46	10
Chicago — Montreal	1 180	24	1.41	74	70	–	–
Miami — Cancun	860	45-50	1.03	85	67-85	–	–
Toronto — Washington	570	24-26	0.91-0.96	60-74	57	–	–

1. Rates calculated as a percentage of the higher under-45 kg rate.

2. Estimated economy class normal fare levels per passenger-kilometre are shown in the following table:

Estimated economy class normal fares per passenger-kilometre	Distance in km					
	500	1000	2000	4000	7000	10000
Fares in cents per pass-km, 1991						
Average	24.6	21.3	18.4	15.9	14.1	13.1
Northbound	24.1	20.8	17.9	15.5	13.8	12.8
Southbound	25.2	21.8	18.8	16.3	14.5	13.5
Percentage change (%), 1991/1990						
Average	16.3	15.6	14.9	14.1	13.6	13.2
Northbound	14.0	13.6	13.1	12.7	12.4	12.2
Southbound	18.7	17.6	16.6	15.5	14.7	14.2

Other passenger fares

3. Table 5-7 shows for September 1991 for a sample of 10 city-pairs in the route group the range of fares available as appearing in multilateral airline guides. As illustrated by the sample, first class fares were widely available in September 1991 in this route group. Intermediate class fares were available on 8 out of 10 city-pairs in the sample. The most widely available economy class special fare was, as in previous years, the excursion fare. Where available, these fares showed reductions from the related economy class normal fares generally ranging from 15 to 54 per cent. Economy class restricted, Pex and Apex type fares remained available for about half the city-pairs in the sample. "Circle fares" from Panama to points in South America were also available in September 1991. These are published fares which allow for travel by a continuous circuitous air route and include up to five or six free stopovers.

General cargo rates for small shipments

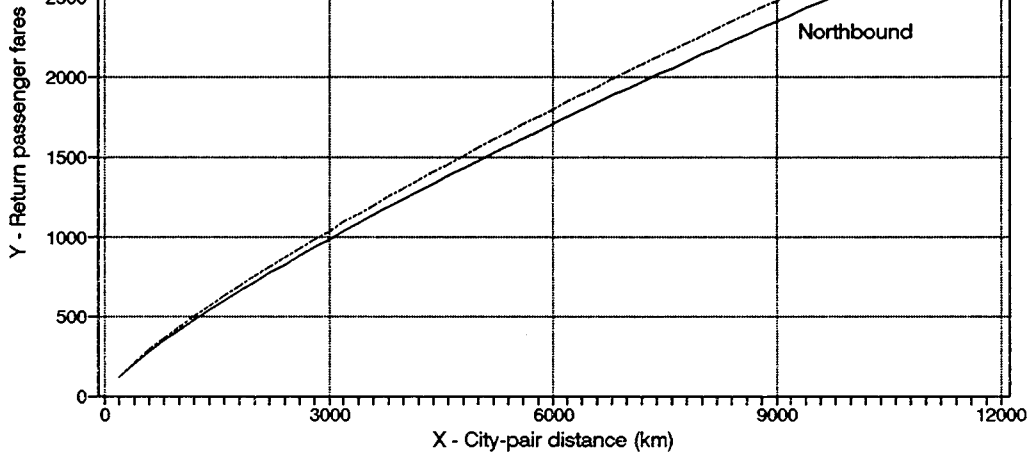
4. The curves on Graph 5-8 have been statistically computed so as to reflect best the average level of general cargo rates for shipments of less than 45 kg for this route group at different distances.

5. Estimated small shipment general cargo rate levels per tonne-kilometre are shown in the following table:

Northbound	234	179	136	104	83	73
Southbound	222	185	153	127	110	100
Percentage change (%), 1991/1990						
Average	15.1	15.5	15.9	16.3	16.6	16.8
Northbound	15.8	15.9	15.9	16.0	16.0	16.1
Southbound	14.0	14.8	15.6	16.5	17.2	17.6

Other cargo rates

6. Table 5-8 shows for September 1991 for a sample of 10 city-pairs in the route group the range of cargo rates available as appearing in multilateral airline guides. Several cargo rates for shipments of more than 45 kg existed in each case (including breakpoints at 100 and 300 kg) giving, as in the previous years, a reduction of about 50 per cent on average for large shipments (over 500 kg). Specific commodity rates were also available for a number of city-pairs. These specific commodity rates were, on average, some 60 per cent lower than the general cargo rates for small shipments. Bulk unitization rates for freight carried in unit load devices (ULDs) were available for two city-pairs in the sample.

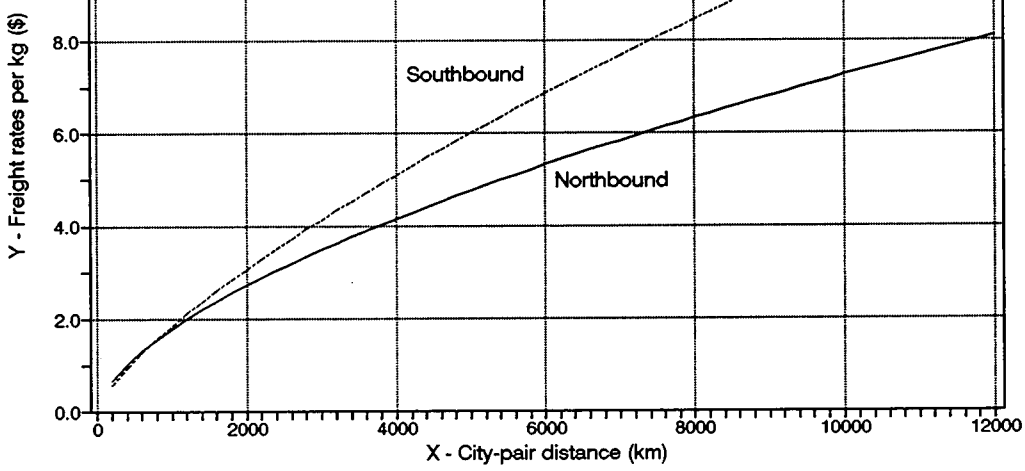


Graph 5-7. Economy class normal passenger fares (route group 4)

Table 5-7. Range of passenger fares available (route group 4)

City-pair (originating city first)	Flight distance (km)	Highest economy class normal (U.S.$)	INDIVIDUAL FARES: First class normal	Inter-mediate class normal	Economy class restricted	Economy class excursion	Economy class APEX, PEX	GROUP FARES: Economy class
			(as a percentage of the highest economy class normal fare)					
Montreal — Buenos Aires	10 110	3 159	177	113	76	–	28-54	–
Santiago de Chile — New York	8 410	2 466	183	120	77	55-72	45-47	56
Rio de Janeiro — San José	6 220	1 852	161	116	–	55	–	–
Los Angeles — Quito	4 620	1 348	167	110	82	64	61	57
Panama City — Asuncion	4 890	1 700	147	115	–	54	–	–
Miami — Manaus	3 880	1 742	185	116	70	–	45	–
Aruba — Lima	2 840	1 231	150	116	–	85	–	39
Caracas — Miami	2 190	790	123-145[1]	123	76	54-65	–	–
Bogota — Santo Domingo	1 690	726	140	–	–	46-67	–	–
Port of Spain — Georgetown	570	294	147[1]	–	–	49-59	–	–

1. First class excursion fares also available.



Graph 5-8. General cargo rates for shipments of less than 45 kg (route group 4)

Table 5-8. Range of cargo rates available (route group 4)

City-pair (originating city first)	Flight distance (km)	GENERAL CARGO RATES: Minimum charge (U.S.$)	Under 45 kg (U.S.$/kg)	Over 45 kg (as a percentage of under-45 kg rate[1])	Over 500 kg (as a percentage of under-45 kg rate[1])	SPECIFIC COMMODITY RATES: Range (as a percentage of under-45 kg rate[1])	Number of commodities
Montreal — Buenos Aires	10 110	57	10.97	76	50	38	1
Santiago de Chile — New York	8 410	50	5.25-5.55	71-77	48-49	27-43	11
Rio de Janeiro — San José	6 220	50	5.95	76	41	–	–
Los Angeles — Quito	5 620	50	6.89	73	54	–	–
Panama City — Asuncion[2]	4 890	50	5.02	–	–	61-101	5
Miami — Manaus	3 880	50	6.20	77	58	44	1
Aruba — Lima	2 840	50	4.97	76	52	–	–
Caracas — Miami	2 190	50	2.49	73	47	14-29	4
Bogota — Santo Domingo	1 690	50	2.23	79	54	–	–
Port-of-Spain — Georgetown	570	50	1.85	74	52	45-49	2

1. Rates calculated as a percentage of the higher under-45 kg rate.
2. First breakpoint for general cargo rates is 100 kg (not 45 kg).

2. Estimated economy class normal fare levels per passenger-kilometre are shown in the following table:

Estimated economy class normal fares per passenger-kilometre	Distance in km				
	250	500	1000	3000	5000
Fares in cents per pass-km, 1991	27.2	23.0	19.5	15.0	13.2
Percentage change (%), 1991/1990	18.6	17.2	15.9	13.8	12.8

Other passenger fares

3. Table 5-9 shows for September 1991 for a sample of 10 city-pairs in the route group the range of fares available as appearing in multilateral airline guides. As illustrated by the sample, first and intermediate class fares remained widely available in this route group in September 1991. Economy class excursion fares remained the only widely available special fares for individual travel in this route group. Their level was between 16 and 54 per cent lower than the related economy class normal fares. Also available in September 1991 were "circle fares" for travel within South America. These are published fares which allow for travel by a continuous circuitous air route and include up to four or five free stopovers.

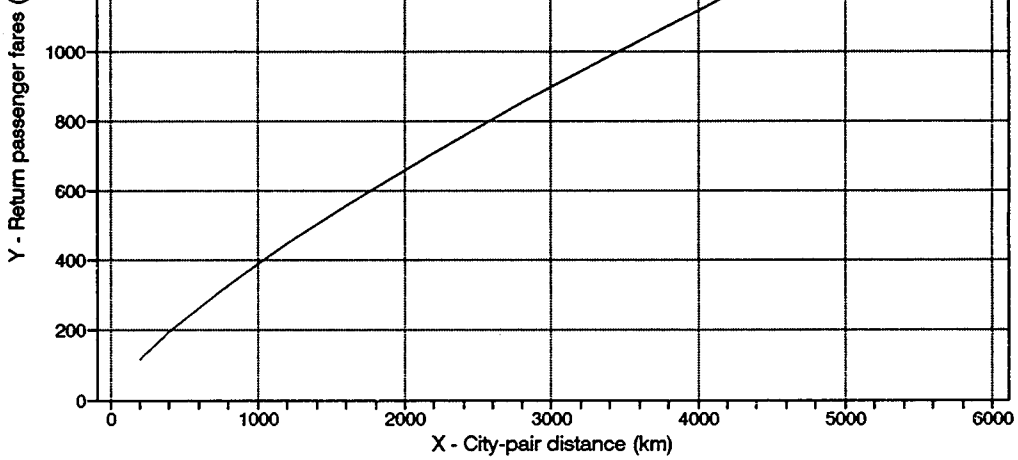
General cargo rates for small shipments

4. The curve on Graph 5-10 has been statistically computed so as to reflect best the average level of general cargo rates for shipments of less than 45 kg for this route group at different distances.

5. Estimated small shipment general cargo rate levels per tonne-kilometre are shown in the following table:

Estimated general cargo rates for shipments of less than 45 kg	Distance in km				
	250	500	1000	3000	5000
Rates in cents per tonne-km, 1991	240	200	166	125	109
Percentage change (%), 1991/1990	9.5	10.5	11.5	13.1	13.8

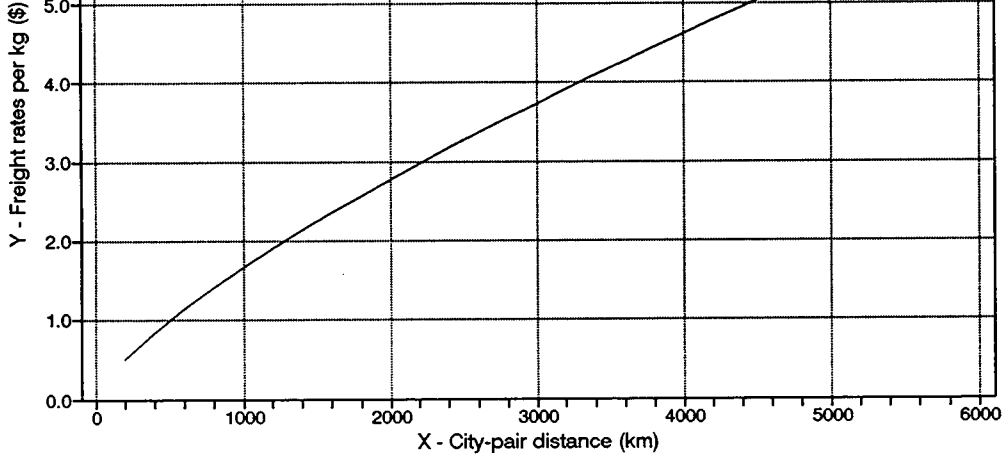
(except Venezuela) so as to reflect more realistically the rate levels which were offered in the market-place in those countries. Under the new tariff structure general cargo rates for small shipments have the first break-point at 100 kg (not 45 kg). As in previous years, breakpoints at 300 kg remained available for all city-pairs in the sample. In September 1991 reductions for large shipments (over 500 kg) remained available for the two of the city-pairs in the sample which continued to use the old tariff structure . The lack of availability of general cargo rates for large shipments for the other city-pairs should be viewed in the context of the new tariff structure. As for previous years, several specific commodity rates also remained available in this route group. With a few exceptions, the level of specific commodity rates expressed in U.S. dollars per kg remained virtually unchanged between September 1990 and September 1991.



Graph 5-9. Economy class normal passenger fares (route group 5)

Table 5-9. Range of passenger fares available (route group 5)

City-pair (originating city first)	Flight distance (km)	Highest economy class normal (U.S.$)	INDIVIDUAL FARES: First class normal	Inter-mediate class normal	Economy class restricted	Economy class excursion	Economy class PEX	GROUP FARES: Economy class
			(as a percentage of the highest economy class normal fare)					
Bogota — Buenos Aires	5 250	1 374	147	115	–	59-69	–	–
Rio de Janeiro — Caracas	4 526	1 594	146-160	106-111	–	47	–	–
Santiago de Chile — Quito	3 870	1 022	158	115	–	71-84	–	67-76
Caracas — Lima	2 750	984	146	110	–	51-80	51	–
La Paz — Sao Paulo	2 380	890	158	115	–	61	–	–
Montevideo — Rio de Janeiro	1 830	676	158-161	116	–	72	–	–
Manaus — Iquitos	1 480	612	148	115	–	73	–	–
Buenos Aires — Santiago de Chile	1 140	448	143	115	–	46-79	–	50
Belem — Cayenne	810	372	166	116	–	68	–	–
Quito — Cali	470	264	145	114	–	66	–	77



Graph 5-10. General cargo rates for shipments of less than 45 kg (route group 5)

Table 5-10. Range of cargo rates available (route group 5)

City-pair (originating city first)	Flight distance (km)	GENERAL CARGO RATES: Minimum charge (U.S.$)	Under 100 kg (U.S.$/kg)	Over 45 kg (as a percentage of under-45 kg rate)	Over 500 kg (as a percentage of under-45 kg rate)	SPECIFIC COMMODITY RATES: Range (as a percentage of under-100 kg rate)	Number of commodities
Bogota — Buenos Aires	5 250	50	5.71	–	–	38-49	2
Rio de Janeiro — Caracas	4 526	50	4.80[1]	77	40	31-35[2]	2
Santiago de Chile — Quito	3 870	50	4.16	–	–	27	1
Caracas — Lima	2 750	50	4.01[1]	75	52	22-23[2]	2
La Paz — Sao Paulo	2 380	35	3.15	–	–	–	–
Montevideo — Rio de Janeiro	1 830	35	1.83	–	–	34-48	3
Manaus — Iquitos	1 480	50	2.09	–	–	–	–
Buenos Aires — Santiago de Chile	1 140	35	0.49	–	–	108-210	3
Porto Alegre — Montevideo	700	35	1.01	–	–	34-63	2
Quito — Cali	470	50	1.21	–	–	–	–

1. First breakpoint for general cargo rates remains at 45 kg (not 100 kg).
2. As a percentage of the under-45 kg rate.

2. Estimated economy class normal fare levels per passenger-kilometre are shown in the following table:

Estimated economy class normal fares per passenger-kilometre	Distance in km					
	250	500	1000	2000	3000	4000
Fares in cents per pass-km, 1991	71.7	53.2	39.5	29.3	24.6	21.7
Percentage change (%), 1991/1990	2.5	2.7	3.0	3.2	3.3	3.4

Other passenger fares

3. Table 5-11 shows for September 1991 for a sample of 10 city-pairs in the route group the range of fares available as appearing in multilateral airline guides. As illustrated by the sample, in September 1991 first class fares remained widely available in this route group. In September 1991 economy class normal fares within Europe permitted travel in the intermediate class cabin and were shown as such in the multilateral airline tariff manuals, as illustrated by the city-pairs in the sample. However for some city-pairs not in the sample intermediate class fares were available in addition to the economy class normal fare. Economy class excursion fares remained widely available to the general public in this route group. Where available, they were on average some 30 per cent lower than the related economy class normal fares. Pex fare types were available for seven city-pairs in the sample, while Apex and "Eurobudget" fare types were available for four city-pairs. "Eurobudget" fare levels ranged between 10 and 25 per cent below the applicable economy class normal fare, Pex-type fare levels were between 35 to 60 per cent below the applicable economy class normal fare, while Apex and Super Pex fare levels were some 60 to 70 per cent below the economy class normal fare.

General cargo rates for small shipments

4. The curve on Graph 5-12 has been statistically computed so as to reflect best the average level of general cargo rates for shipments of less than 45 kg for this route group at different distances.

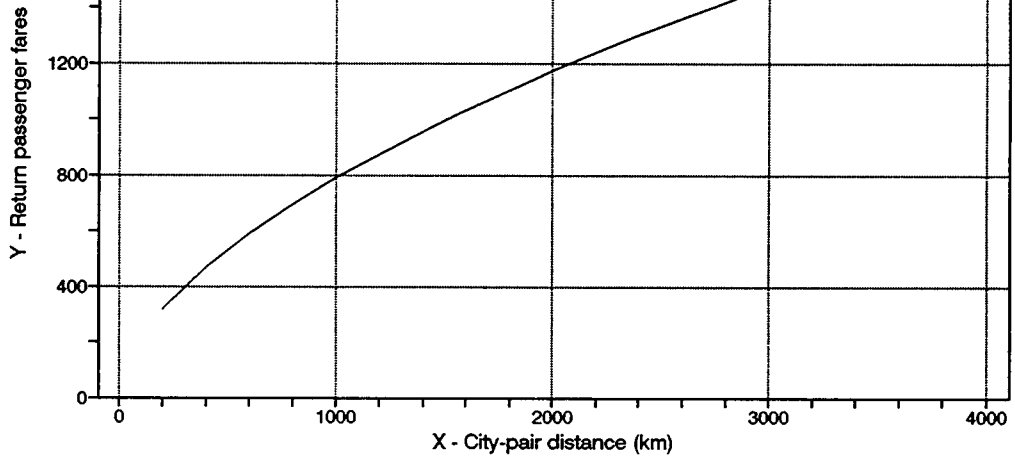
5. Estimated small shipment general cargo rate levels per tonne-kilometre are shown in the following table:

Estimated general cargo rates for shipments of less than 45 kg	Distance in km					
	250	500	1000	2000	3000	4000
Rates in cents per tonne-km, 1991	438	330	248	186	158	140
Percentage change (%), 1991/1990	–2.4	0.3	3.2	6.1	7.9	9.1

For countries from where the alternative cargo tariff structure introduced in April 1988 is being used, the rates were significantly higher at the shorter distances (some 50 per cent higher at 250 km) than the over-all average estimated rate level shown in the table above. However, at the longer distances (beyond 950 km) they were lower than the over-all average general cargo rate reaching some 30 per cent below at 3 000 km. The estimated average rate level for shipments from the rest of Europe, where the traditional cargo tariff structure applied, were similar to the over-all average at the shorter distances but some 20 per cent higher at the longer ones.

Other cargo rates

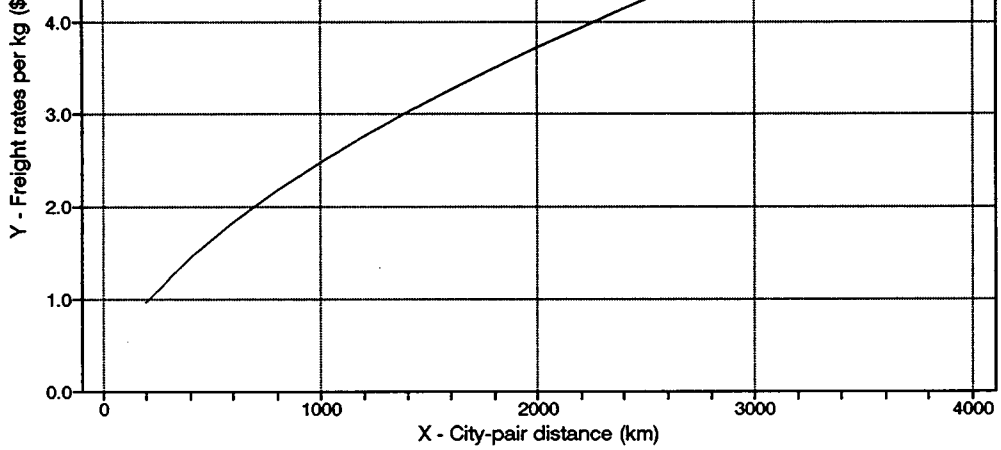
7. Table 5-12 shows for September 1991 for a sample of 10 city-pairs in the route group the range of cargo rates available as appearing in multilateral airline guides. There were generally few large shipment general cargo rates available for a given route with a breakpoint higher than 45 kg (except for routes from the United Kingdom where the "small shipment" breakpoint was 100 kg). Specific commodity rates were available on many city-pairs at an average reduction, as in previous years, of around 45 per cent on the general cargo rates for small shipments.



Graph 5-11. Economy class normal passenger fares (route group 6)

Table 5-11. Range of passenger fares available (route group 6)

City-pair (originating city first)	Flight distance (km)	INDIVIDUAL FARES: Highest economy class normal (U.S.$)	First class normal	Inter-mediate class normal	Economy class restricted	Economy class excursion	Economy class APEX, PEX	GROUP FARES: Economy class
			(as a percentage of the highest economy class normal fare)					
Paris — Gran Canaria	2 830	1 323	128	100	–	60	34-40	–
Oujda — Frankfurt	1 900	970	140	100	–	65	57	–
London — Seville	1 620	840	180	100	–	74	74	–
Zurich — Malta	1 380	987	139	100	–	71	54	–
Rome — Bucharest	1 160	983	149	100	–	68	52	–
Belgrade — Prague	740	534	136	100	–	68	–	–
Algiers — Tunis	620	62	132	100	–	–	–	–
Amsterdam — Birmingham	440	492	163	100	–	72	59-92	–
Brussels — Strasbourg	350	464	145	100	–	68	38-58	–
Copenhagen — Gothenburg	230	384	141	100	–	–	38-62	–



Graph 5-12. General cargo rates for shipments of less than 45 kg (route group 6)

Table 5-12. Range of cargo rates available (route group 6)

City-pair (originating city first)	Flight distance (km)	GENERAL CARGO RATES: Minimum charge (U.S.$)	Under 45 kg (U.S.$/kg)	Over 45 kg (as a percentage of under-45 kg rate)	Over 500 kg (as a percentage of under-45 kg rate)	SPECIFIC COMMODITY RATES: Range (as a percentage of under-45 kg rate)	Number of commodities
Paris — Gran Canaria	2 830	54	4.52	76	–	34-40	2
Casablanca — Frankfurt	2 280	64	2.44	76	69	35-63	15
London — Seville[1]	1 620	55	3.31	–	–	–	–
Zurich — Malta[2]	1 380	42	3.05	–	–	–	–
Rome — Bucharest	1 160	64	3.31	75	–	48	1
Belgrade — Prague	740	33	1.25	84	–	35-45	4
Algiers — Tunis	620	22	0.19	76	–	–	–
Amsterdam — Birmingham	440	63	1.89	76	–	51-100	8
Brussels — Strasbourg[2]	350	38	1.78	–	–	–	–
Copenhagen — Gothenberg[2]	230	39	1.75	–	–	–	–

1. The first breakpoint for general cargo rates out of the United Kingdom is 100 kg (not 45 kg). On the route shown, other breakpoints exist at 1 000 kg and 1 500 kg.
2. Cargo structure based on a basic charge per consignment plus a rate per kilogram applicable to each kilogram in the consignment. For comparative purposes the charge per consignment is shown in the "Minimum charge" column and the "under-45 kg" rate was computed for a consignment of 45 kg.

2. Estimated economy class normal fare levels per passenger-kilometre are shown in the following table:

Estimated economy class normal fares per passenger-kilometre	Distance in km				
	250	500	1000	2000	3000
Fares in cents per pass-km, 1991	37.8	29.6	23.2	18.2	15.8
Percentage change (%), 1991/1990	14.0	12.3	10.6	9.0	8.0

3. Between September 1990 and September 1991 there was a significant broadening of the spread in the level of the economy class normal fares above and below the estimated average fares. Hence in September 1991 fares on routes within the Middle East were less dependent on distance and more dependent on other factors than in September 1990.

Other passenger fares

4. Table 5-13 shows for September 1991 for a sample of 10 city-pairs in the route group the range of fares available as appearing in multilateral airline guides. As illustrated in the sample, first and intermediate class fares remained widely available in September 1991. The only special fares frequently available to the general public remained the economy class excursion fares. Where available, these fares were on average about one-third lower than the economy class normal fare. While there is a general lack of other economy class special fares available to the general public for travel within the Middle East, there are several preferential fares available for certain categories of passengers (youths, teachers, students, senior citizens, families, seamen and pilgrims). Where available these fares were some 20 to 50 per cent below the applicable economy class normal fare.

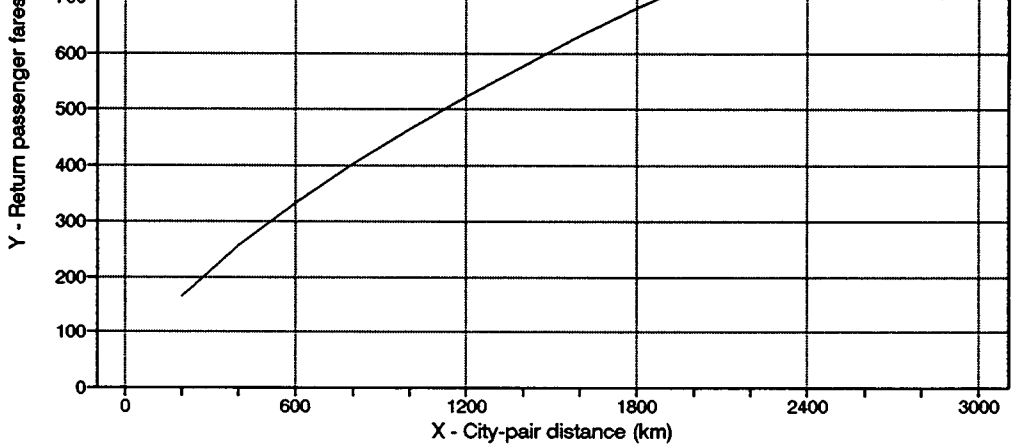
General cargo rates for small shipments

5. The curve on Graph 5-14 has been statistically computed so as to reflect best the average level of general cargo rates for shipments of less than 45 kg for this route group at different distances.

6. Estimated small shipment general cargo rate levels per tonne-kilometre are shown in the following table:

Estimated general cargo rates for shipments of less than 45 kg	Distance in km				
	250	500	1000	2000	3000
Rates in cents per tonne-km, 1991	276	215	168	131	113
Percentage change (%), 1991/1990	10.4	9.9	9.4	9.0	8.7

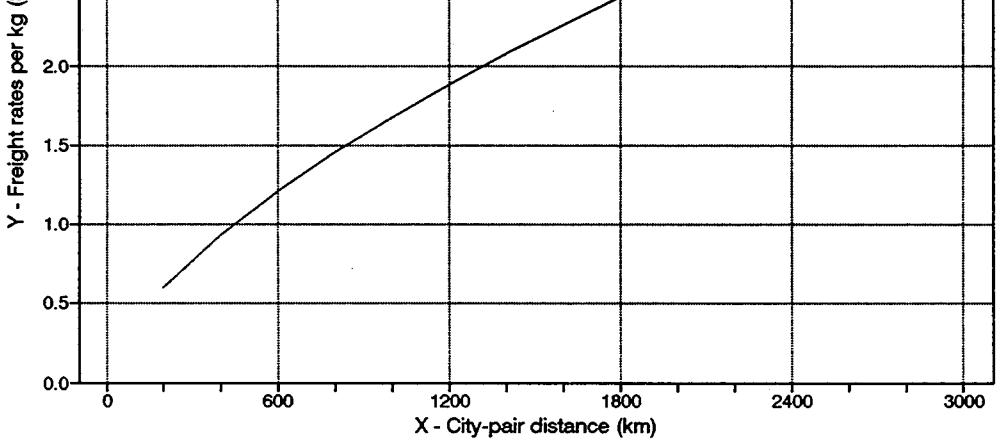
This general cargo rate for shipments of more than 45 kg was about 25 per cent lower than the rate for small shipments. A number of specific commodity rates continued to be available in this route group, giving an average reduction of around 65 per cent on the general cargo rates for small shipments.



Graph 5-13. Economy class normal passenger fares (route group 7)

Table 5-13. Range of passenger fares available (route group 7)

City-pair (originating city first)	Flight distance (km)	Highest economy class normal (U.S.$)	INDIVIDUAL FARES: First class normal	Inter-mediate class normal	Economy class restricted	Economy class excursion	Economy class APEX	GROUP FARES: Economy class
			(as a percentage of the highest economy class normal fare)					
Dhahran — Khartoum	2 180	718	140	110	–	75	–	–
Sanaa — Damascus	2 140	841	140	110	–	66	–	–
Bahrain — Larnaca	1 880	910	135-138	108-110	–	60-61	–	–
Cairo — Riyadh	1 610	670	138	110	–	66	–	–
Tehran — Sharjah	1 220	477	150	110	–	–	–	–
Jeddah — Aden	1 170	665	140	110	–	66	–	–
Kuwait — Dubai	850	326	139	110	–	70	–	–
Muscat — Doha	700	359	161	125	–	52-70	–	–
Shiraz — Abu Dhabi	600	359	150	110	–	–	–	–
Amman — Beirut	240	135	136	110	–	–	–	–



Graph 5-14. General cargo rates for shipments of less than 45 kg (route group 7)

Table 5-14. Range of cargo rates available (route group 7)

		GENERAL CARGO RATES				SPECIFIC COMMODITY RATES	
City-pair (originating city first)	Flight distance (km)	Minimum charge (U.S.$)	Under 45 kg (U.S.$/kg)	Over 45 kg (as a percentage of under-45 kg rate)	Over 500 kg (as a percentage of under-45 kg rate)	Range (as a percentage of under-45 kg rate)	Number of commo-dities
Dhahran — Khartoum	2 180	20	2.55	75	–	52-58	2
Sanaa — Damascus	2 140	10	2.02	75	–	29-55	4
Bahrain — Larnaca	1 880	21	3.05	75	–	30-51	4
Cairo — Riyadh	1 610	20	1.83	75	–	21-43	16
Tehran — Sharjah	1 220	21	2.09	75	–	20-56	13
Jeddah — Aden	1 170	20	2.28	75	–	–	–
Kuwait — Dubai	850	21	1.66	75	–	–	–
Muscat — Doha	700	15	1.47	75	–	–	–
Shiraz — Abu Dhabi	600	21	1.32	74	–	30-43	5
Amman — Beirut	240	15	0.35	75	–	–	–

2. Estimated economy class normal fare levels per passenger-kilometre are shown in the following table:

Estimated economy class normal fares per passenger-kilometre	Distance in km					
	250	500	1000	2000	4000	6000
Fares in cents per pass-km, 1991	30.1	25.7	22.0	18.9	16.1	14.7
Percentage change (%), 1991/1990	−3.2	−1.3	0.6	2.6	4.6	5.8

Other passenger fares

3. Table 5-15 shows for September 1991 for a sample of 10 city-pairs in the route group the range of fares available as appearing in multilateral airline guides. As illustrated by the sample, first and intermediate class fares were widely available in this route group in September 1991. Economy class excursion fares were also widely available with a level some 30 per cent lower on average than the related economy class normal fares. A few group fares were also available. While there is a general lack of other special fares available to the general public for travel within Africa, there are a large number of preferential fares available to certain categories of passengers (youths, students, families, senior citizens, African diplomats, artists, sports people and seamen). Where available, these fares were some 10 to 50 per cent below the level of the applicable normal fares.

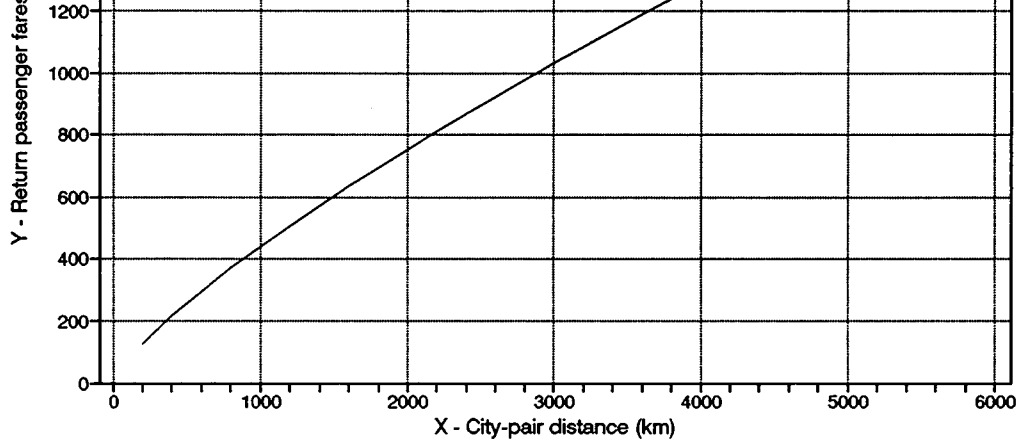
General cargo rates for small shipments

4. The curve on Graph 5-16 has been statistically computed so as to reflect best the average level of general cargo rates for shipments of less than 45 kg for this route group at different distances.

5. Estimated small shipment general cargo rate levels per tonne-kilometre are shown in the following table:

Estimated general cargo rates for shipments of less than 45 kg	Distance in km					
	250	500	1000	2000	4000	6000
Rates in cents per tonne-km, 1991	216	185	158	135	115	105
Percentage change (%), 1991/1990	14.6	10.8	7.1	3.6	0.2	−1.8

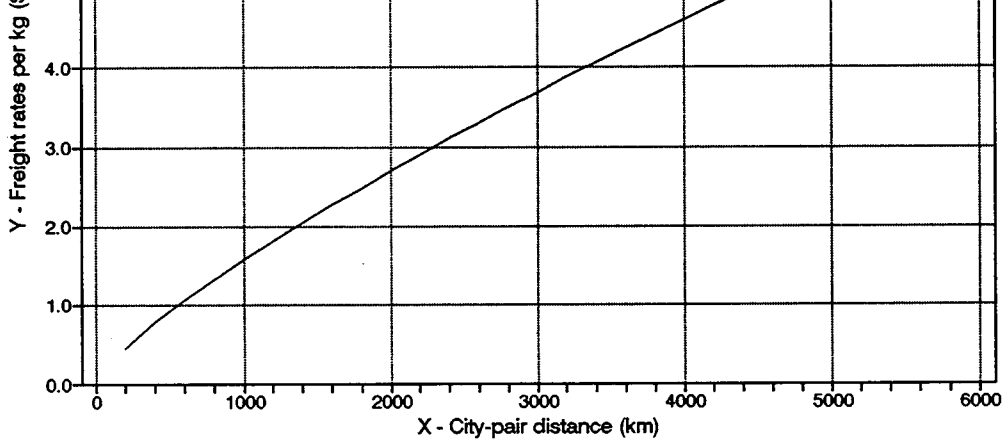
per cent lower than the general cargo rates. [illegible] rates remained available in this route group, giving an average reduction of around 60 per cent in the general cargo rates for small shipments.



Graph 5-15. Economy class normal passenger fares (route group 8)

Table 5-15. Range of passenger fares available (route group 8)

City-pair (originating city first)	Flight distance (km)	Highest economy class normal (U.S.$)	INDIVIDUAL FARES: First class normal	Inter-mediate class normal	Economy class restricted	Economy class excursion	Economy class APEX	GROUP FARES: Economy class
			(as a percentage of the highest economy class normal fare)					
Addis Ababa — Lagos	3 920	1 474	140	110	–	69	–	–
Nairobi — Johannesburg	2 910	742	145	115	–	81	–	–
Lomé — Kinshasa	1 970	981	133-140	109-115	–	68	–	–
Dar-es-Salaam — Lusaka	1 500	391	138-145	110-115	–	61-67	–	–
Monrovia — Dakar	1 230	746	140	114	–	70	–	–
Johannesburg — Harare	960	465	145	115	–	72	–	–
Antananarivo — St. Denis	870	463	145	115	–	59-72	–	48
Abidjan — Cotonou	710	307	140	115	–	70	–	50
Niamey — Ouagadougou	420	220	140	115	–	70	–	50
Conakry — Freetown	120	116	141	116	–	74	–	–



Graph 5-16. General cargo rates for shipments of less than 45 kg (route group 8)

Table 5-16. Range of cargo rates available (route group 8)

City-pair (originating city first)	Flight distance (km)	GENERAL CARGO RATES: Minimum charge (U.S.$)	Under 45 kg (U.S.$/kg)	Over 45 kg (as a percentage of under-45 kg rate)	Over 500 kg (as a percentage of under-45 kg rate)	SPECIFIC COMMODITY RATES: Range (as a percentage of under-45 kg rate)	Number of commo-dities
Addis Ababa — Lagos	3 920	39	4.78	75	–	23-58	6
Nairobi — Johannesburg[1]	2 910	25	2.74	–	–	19-45	5
Lomé — Kinshasa	1 970	40	2.80	75	–	65-74	3
Dar-es-Salaam — Lusaka	1 500	22	0.86	77	–	21-49	14
Monrovia — Dakar	1 230	43	3.15	75	–	37	1
Johannesburg — Harare[1]	960	12	1.40	–	50	30-65	4
Antananarivo — St. Denis	870	35	1.50	75	–	–	–
Abidjan — Cotonou	710	40	1.35	76	–	–	–
Niamey — Ouagadougou	420	40	0.84	75	–	–	–
Conakry — Freetown	120	39	0.71	76	–	–	–

1. The first breakpoint for general cargo rates is 100 kg (not 45 kg).

2. Estimated economy class normal fare levels per passenger-kilometre are shown in the following table:

Estimated economy class normal fares per passenger-kilometre	Distance in km				
	500	1000	2000	4000	6000
Fares in cents per pass-km, 1991					
Average	32.6	28.8	25.4	22.4	20.8
Eastbound	30.9	28.7	26.7	24.8	23.8
Westbound	34.6	28.9	24.1	20.2	18.2
Percentage change (%), 1991/1990					
Average	19.2	15.1	11.2	7.4	5.2
Eastbound	15.7	11.4	7.4	3.4	1.2
Westbound	23.6	19.3	15.2	11.2	8.9

3. Between September 1990 and September 1991 there was a significant reduction in the directional imbalance in the level of the estimated economy class normal fare per passenger-kilometre expressed in U.S. dollars at the longer distances.

Other passenger fares

4. Table 5-17 shows for September 1991 for a sample of 10 city-pairs in the route group the range of fares available as appearing in multilateral airline guides. As illustrated by the sample, first and intermediate class fares remained widely available in this route group in September 1991. Economy class excursion fares remained widely available to the general public at levels about 30 per cent lower on average than the applicable economy class normal fares. In September 1991 pex-type fares were available on 5 of the 10 city-pairs in the sample, three more than for September 1990. With few exceptions, where available the level of these fares was some 40 to 50 per cent below that of the related economy class normal fare.

General cargo rates for small shipments

5. The curves on Graph 5-18 have been statistically computed so as to reflect best the average level of general cargo rates for shipments of less than 45 kg for this route group at different distances.

6. Estimated small shipment general cargo rate levels per tonne-kilometre are shown in the following table:

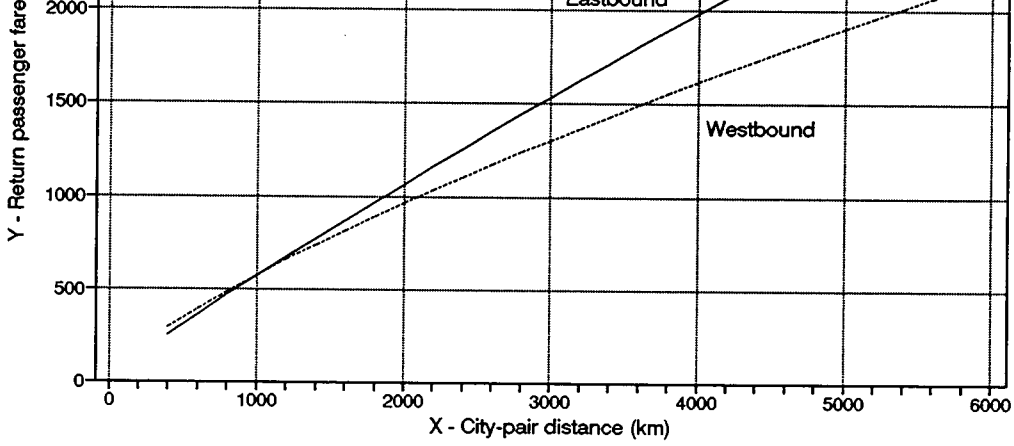
Eastbound	151	160	169	179	185
Westbound	183	165	148	133	125
Percentage change (%), 1991/1990					
Average	19.5	14.6	10.0	5.5	3.0
Eastbound	22.8	14.9	7.5	0.6	–3.2
Westbound	16.2	14.3	12.4	10.6	9.6

7. Between September 1990 and September 1991 there was a small reduction in the directional imbalance in the rate levels between the eastbound and westbound direction of the estimated general cargo rates expressed in U.S. dollars for shipments of less than 45 kg at the shorter distances. However it decreased significantly at the longer distances.

8. In September 1991 there was a significant spread of general cargo rates for small shipments (less than 45 kg) above and below the estimated average for rates in both directions. Thus, as in previous years, in September 1991 rates in this route group remained less dependent on distance and more dependent on other factors than rate levels in some other areas of the world.

Other cargo rates

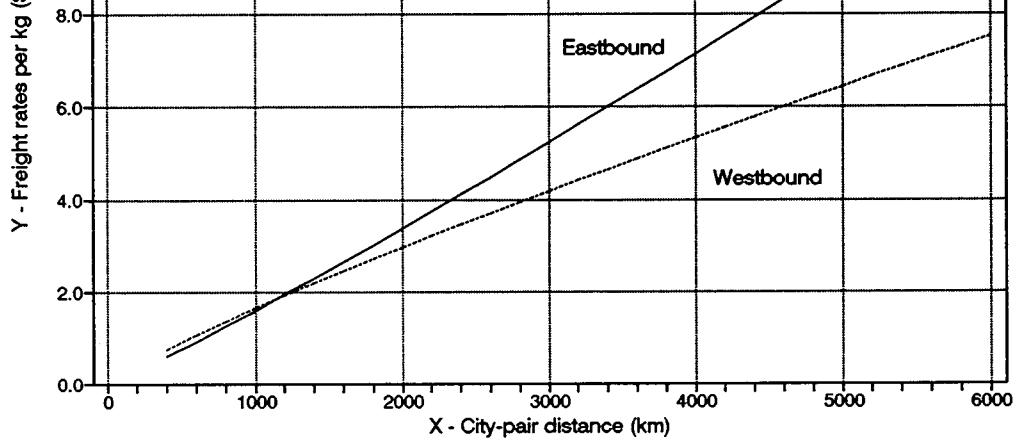
9. Table 5-18 shows for September 1991 for a sample of 10 city-pairs in the route group the range of cargo rates available as appearing in multilateral airline guides. General cargo rates with a breakpoint of 45 kg remained some 25 per cent lower than the general cargo rates for small shipments (for routes from the United Kingdom the first breakpoint was 100 kg). General cargo rates for large shipments (including breakpoints above and below 500 kg) remained available for 5 of the 10 city-pairs in the sample. A large number of specific commodity rates remained available for 6 of the city-pairs in the sample. As for the previous year, where available they were at levels some 55 per cent lower on average than the general cargo rates for small shipments.



Graph 5-17. Economy class normal passenger fares (route group 9)

Table 5-17. Range of passenger fares available (route group 9)

City-pair (originating city first)	Flight distance (km)	INDIVIDUAL FARES: Highest economy class normal (U.S.$)	First class normal	Inter-mediate class normal	Economy class restricted	Economy class excursion	Economy class APEX, PEX	GROUP FARES: Economy class
			(as a percentage of the highest economy class normal fare)					
London — Abu Dhabi	5 510	2 259	180	115	76	82	59	–
Dubai — Brussels	5 150	2 070	144	110	–	54-67	–	–
Zurich — Dubai	4 767	2 633	145	112	–	73	–	–
Tehran — Paris	4 188	1 730	147	110	–	78	–	–
Jeddah — Algiers	3 840	1 266	137	110	–	69	–	–
Amsterdam — Tel Aviv	3 310	1 903	146	–	–	52-62	26	49
Cairo — Frankfurt	2 920	1 156	146	110	–	55-68	55	–
Warsaw — Damascus	2 460	916	147	110	–	64	52	–
Sofia — Baghdad	2 100	1 250	140	110	–	66	52	–
Amman — Istanbul	1 210	477	129	110	–	68	–	–



Graph 5-18. General cargo rates for shipments of less than 45 kg (route group 9)

Table 5-18. Range of cargo rates available (route group 9)

		GENERAL CARGO RATES				SPECIFIC COMMODITY RATES	
City-pair (originating city first)	Flight distance (km)	Minimum charge (U.S.$)	Under 45 kg (U.S.$/kg)	Over 45 kg (as a percentage of under-45 kg rate)	Over 500 kg (as a percentage of under-45 kg rate)	Range (as a percentage of under-45 kg rate)	Number of commo-dities
London — Abu Dhabi[1]	5 510	83	7.84	–	44	65-68	6
Dubai — Brussels	5 150	52	7.59	75	32	22-37	5
Zurich — Dubai	4 767	78	7.91	78	33	40	1
Tehran — Paris	4 188	47	6.47	75	27	21-54	11
Jeddah — Algiers	3 840	47	3.90	75	35	–	–
Amsterdam — Tel Aviv	3 310	75	6.44	75	–	36-100	10
Cairo — Frankfurt	2 920	27	2.35	75	–	18-43	12
Warsaw — Damascus	2 460	35	5.02	75	–	–	–
Sofia — Baghdad	2 100	33	3.69	74	–	–	–
Amman — Istanbul	1 210	30	1.47	74	–	–	–

1. The first breakpoint for general cargo rates out of the United Kingdom is 100 kg (not 45 kg).

2. Estimated economy class normal fare levels per passenger-kilometre are shown in the following table:

Estimated economy class normal fares per passenger-kilometre	Distance in km					
	500	1000	2000	4000	7000	10000
Fares in cents per pass-km, 1991						
Average	27.7	24.8	22.3	20.0	18.3	17.3
Northbound	29.6	24.9	21.0	17.6	15.3	14.0
Southbound	26.0	24.8	23.7	22.6	21.7	21.2
Percentage change (%), 1991/1990						
Average	5.6	5.2	4.7	4.3	4.0	3.8
Northbound	3.4	3.3	3.2	3.1	3.0	2.9
Southbound	8.3	7.3	6.3	5.4	4.6	4.1

Other passenger fares

3. Table 5-19 shows for September 1991 for a sample of 10 city-pairs in the route group the range of fares available as appearing in multilateral airline guides. As illustrated by the sample, first and intermediate class fares were widely available in this route group in September 1991. Economy class excursion fares were also widely available, with levels averaging some 30 per cent lower than the applicable economy class normal fare. For 6 city-pairs, Apex and Pex-type fares were also available at levels some 45 per cent lower than the applicable economy class normal fare.

General cargo rates for small shipments

4. The curves on Graph 5-20 have been statistically computed so as to reflect best the average level of general cargo rates for shipments of less than 45 kg for this route group at different distances.

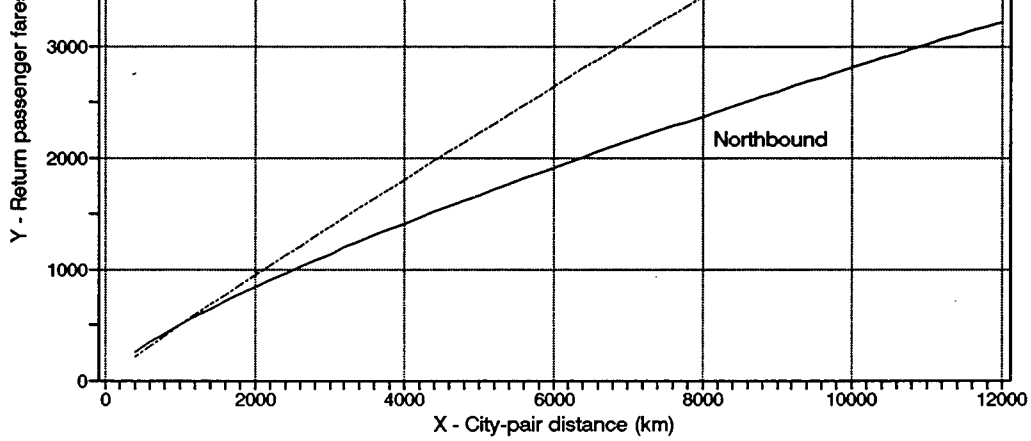
5. Estimated small shipment general cargo rate levels per tonne-kilometre are shown in the following table:

Estimated general cargo rates for shipments of less than 45 kg	Distance in km					
	500	1000	2000	4000	7000	10000
Rates in cents per tonne-km, 1991						
Average	243	204	171	143	124	114
Northbound	330	229	159	111	83	68
Southbound	178	180	181	183	184	185
Percentage change (%), 1991/1990						
Average	9.6	7.2	4.8	2.4	0.5	–0.6
Northbound	5.7	5.4	5.1	4.8	4.6	4.4
Southbound	14.8	9.5	4.4	–0.5	–4.2	–6.6

distance and more dependent on other factors than those in the southbound direction.

Other cargo rates

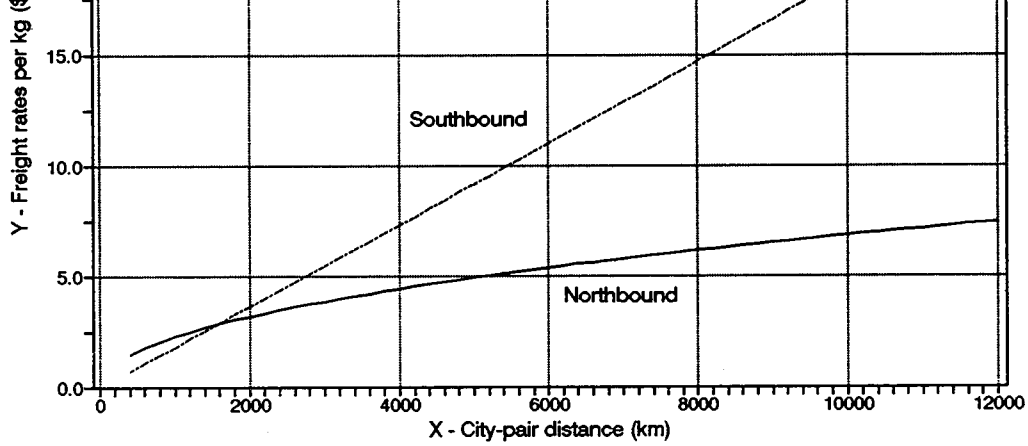
8. Table 5-20 shows for September 1991 for a sample of 10 city-pairs in the route group the range of cargo rates available as appearing in multilateral airline guides. As in previous years, the only general cargo rates for large shipments widely available were those with a breakpoint of 45 kg, at a level 25 per cent lower than the general cargo rates for small shipments. A significant number of specific commodity rates remained available in this route group, giving an average reduction of around 60 per cent on the general cargo rate for small shipments. Bulk unitization rates for freight carried in unit load devices (ULDs) were available for one city-pair in the sample (London-Johannesburg).



Graph 5-19. Economy class normal passenger fares (route group 10)

Table 5-19. Range of passenger fares available (route group 10)

City-pair (originating city first)	Flight distance (km)	Highest economy class normal (U.S.$)	INDIVIDUAL FARES: First class normal	Inter-mediate class normal	Economy class restricted	Economy class excursion	Economy class APEX, PEX	GROUP FARES: Economy class
			(as a percentage of the highest economy class normal fare)					
Moscow — Maputo	9 360	5 240	168	115	62	–	–	–
London — Johannesburg	9 070	3 013	235	131	–	72	40-53	–
Harare — London	8 300	1 939	168	119	–	80-86	60	–
Johannesburg — Tel Aviv	6 620	1 725	156	111	–	74	62	–
Kinshasa — Brussels	6 240	2 670	145	115	–	66	55	–
Rome — Nairobi	5 400	2 557	160	115	–	75	51	–
Abidjan — Paris	4 900	2 170	151	115	–	75	55	–
Khartoum — Kano	2 640	794	128	115	–	65	–	–
Addis Ababa — Jeddah	1 410	753	145	110	–	49-74	–	–
Tunis — Tripoli	540	169	140	–	–	–	–	–



Graph 5-20. General cargo rates for shipments of less than 45 kg (route group 10)

Table 5-20. Range of cargo rates available (route group 10)

City-pair (originating city first)	Flight distance (km)	GENERAL CARGO RATES: Minimum charge (U.S.$)	Under 45 kg (U.S.$/kg)	Over 45 kg (as a percentage of under-45 kg rate[1])	Over 500 kg (as a percentage of under-45 kg rate[1])	SPECIFIC COMMODITY RATES: Range (as a percentage of under-45 kg rate[1])	Number of commodities
Moscow — Maputo	9 360	73	18.60	75	–	–	
London — Johannesburg[2]	9 070	83	10.83	–	71-81	10	
Harare — London[1]	8 300	26	2.79	–	36-71	3	
Johannesburg — Tel Aviv[1]	6 620	28	3.65	–	–	–	
Kinshasa — Brussels	6 240	55-57	4.94-6.76	75	20-57	12	
Rome — Nairobi	5 400	72	9.71	75	30-58	13	
Abidjan — Paris	4 900	56	5.92	75	15-45	17	
Khartoum — Kano	2 640	57	2.67	75	34	1	
Addis Ababa — Jeddah	1 410	39	2.97	75	13-47	8	
Tunis — Tripoli	540	39	0.47	76	39-63	4	

1. Rates calculated as a percentage of the higher under-45 kg rate where applicable.
2. The first breakpoint for general cargo rates is 100 kg (not 45 kg).

existed in September 1991 between fares and distance for the westbound direction, or over-all (see paragraph 3 below).

2. Estimated economy class normal fare levels per passenger-kilometre are shown in the following table:

Estimated economy class normal fares per passenger-kilometre	Distance in km				
	4000	6000	8000	10000	12000
Fares in cents per pass-km, 1991					
Average	22.4	20.5	17.0	15.5	14.4
Eastbound	23.1	19.9	17.5	16.0	14.9
Westbound	21.7	21.1	16.5	15.1	14.0
Percentage change (%), 1991/1990					
Average			[see paragraph 4]		
Eastbound	18.0	18.0	18.0	18.0	18.1
Westbound			[see paragraph 4]		

3. Between September 1990 and September 1991 there was a significant narrowing of the spread in the level of fares expressed in U.S. dollars above and below the average in the westbound direction (to North America). In September 1991, fares in this direction were more dependent on distance than on other factors than in September 1990.

4. Since no estimated average fare levels were published for the westbound direction for September 1990, no percentage changes between September 1990 and September 1991 are shown in the table above.

5. When comparing fare levels by direction on the North Atlantic it should be noted that these refer to return fares. On many North Atlantic routes carriers are applying lower fares for return journeys in an attempt to discourage the practice of passengers obtaining reduced fares through the purchase of two one-way fares. In September 1991 return fares for 79 out of 254 city-pairs in the westbound direction were some 8 to 20 per cent lower than twice the corresponding one-way fare.

Other passenger fares

6. Table 5-21 shows for September 1991 for a sample of 10 city-pairs in the route group the range of fares available as appearing in multilateral airline guides. As illustrated by the sample, first and intermediate class fares were widely available on the North Atlantic but were frequently very high relative to the economy class "normal" fares, in some cases reflecting the low level of the economy class restricted fare and non-availability of an economy class unrestricted fare. Economy class restricted fares remained a major feature of this route group (offered on 7 out of 10 city-pairs in the sample). Excursion fares were available on several of the sample city-pairs in this route group at levels some 40 per cent lower than the applicable highest economy class "normal" fare. Apex and/or Pex-type fares were seen to be available for almost all city-

7. The curves on Graph 5-22 have been statistically computed so as to reflect best the average level of general cargo rates for shipments of less than 45 kg for this route group at different distances. The graph shows only the variation of rates with distance in the eastbound direction as no significant relationship existed in September 1991 between fares and distances for the westbound direction or over-all (see paragraph 9 below).

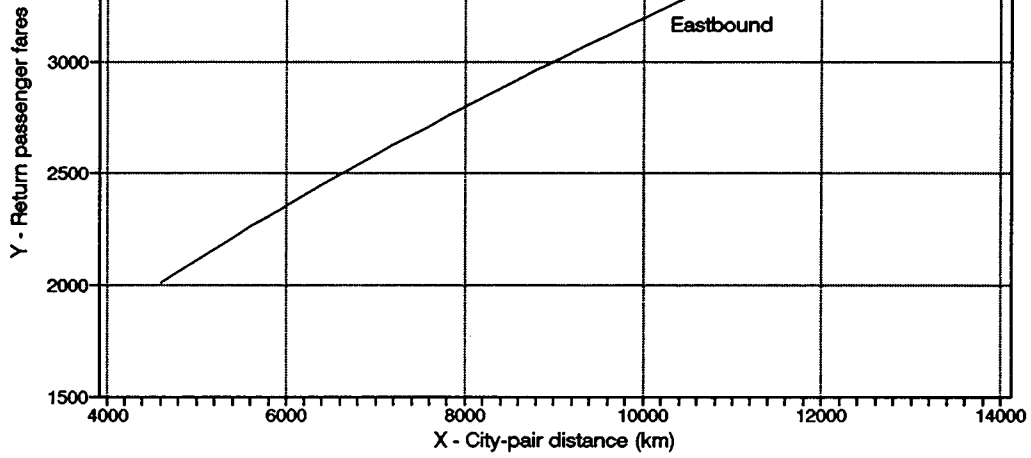
8. Estimated small shipment general cargo rate levels per tonne-kilometre are shown in the following table:

Estimated general cargo rates for shipments of less than 45 kg	Distance in km				
	4000	6000	8000	10000	12000
Rates in cents per tonne-km, 1991					
Average			[see paragraph 9]		
Eastbound	154	126	110	99	90
Westbound			[see paragraph 9]		
Percentage change (%), 1991/1990					
Average			[see paragraph 9]		
Eastbound	12.8	12.6	12.4	12.3	12.2
Westbound			[see paragraph 9]		

9. In September 1991 there was a significant spread in the level of general cargo rates for small shipments (less than 45 kg) above and below the average rates in the westbound direction (to North America). Figures for September 1991 suggest that rates across the North Atlantic in the westbound direction are less dependent on distance than on other factors. This apparent lack of relationship between rates and distance was notably influenced by the relatively lower general cargo rate levels for small shipments from Germany. In September 1991 these rates expressed in U.S. dollars were some 50 to 60 per cent lower than the estimated average rates from the other countries in Europe/Middle East/Africa for routes across the North Atlantic. In September 1991, the level of general cargo rates for small shipments expressed in U.S. dollars from these other countries was similar to that of the rates in the eastbound direction. Excluding rates from Germany, the over-all average general cargo rate level for small shipments expressed in U.S. cents per tonne-kilometres ranged from 144 at 4 000 km to 94 at 12 000 km.

Other cargo rates

10. Table 5-22 shows for September 1991 for a sample of 10 city-pairs in the route group the range of cargo rates available as appearing in multilateral airline guides. Several general cargo rates for shipments of more than 45 kg exist in each case, including for most city-pairs discounts for shipments over 100 and 300 kg. Large shipments of over 500 kg benefited from reductions of between 30 and 71 per cent, averaging some 60 per cent. Specific commodity rates were available for most of the selected city-pairs. Excluding specific commodity rates for shipments from Germany, these rates were on average some 65 per cent lower than the general cargo rates for small shipments. Bulk unitization rates for freight carried in unit load devices (ULDs) were available for most city-pairs in the sample. On the route from London to New York, these rates have almost completely replaced the relatively large number of specific commodity rates which were formerly offered.

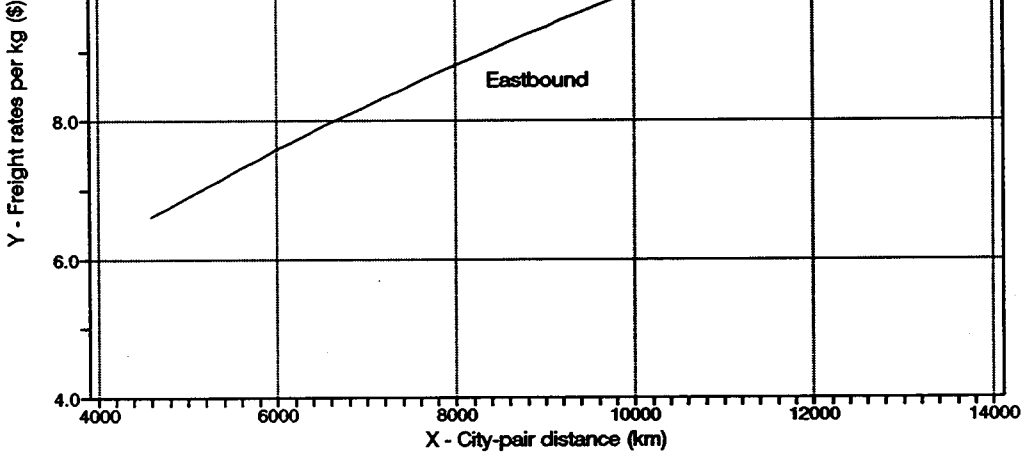


Graph 5-21. Economy class normal passenger fares (route group 11)

Table 5-21. Range of passenger fares available (route group 11)

City-pair (originating city first)	Flight distance (km)	INDIVIDUAL FARES[1] Highest economy class normal (U.S.$)	First class normal	Inter-mediate class normal	Economy class restricted	Economy class excursion	Economy class APEX	GROUP FARES Economy class
			(as a percentage of the highest economy class normal fare)					
Jeddah — New York	10 220	2 470	167	110	84	46-62	–	55
Amsterdam — Los Angeles	8 960	2 883	211	134	–	57	34	–
New York — Lagos	8 440	2 790	167	116	96	81	63	–
Houston — Paris	8 070	2 430	234	146	100	62	43-52	52
Frankfurt — Atlanta	7 410	2 659	191	109	100	–	30-35	–
Miami — Madrid	7 110	1 894	261	159	97-100	72	53	49-53
Chicago — Copenhagen	6 850	2 164	232	118	100	–	42-54	–
Milan — Toronto	6 610	2 588	192	114	–	57	51	–
London — New York[2]	6 510	1 960	328	180-202[3]	56-65	–	34-53	53
Montreal — Warsaw	6 460	2 830	183	108	–	57	41-42	–

1. Where applicable, only mid-week fare levels are shown; weekend fares are somewhat higher.
2. Fares for supersonic aircraft also available.
3. Intermediate class restricted fares also available.



Graph 5-22. General cargo rates for shipments of less than 45 kg (route group 11)

Table 5-22. Range of cargo rates available (route group 11)

City-pair (originating city first)	Flight distance (km)	GENERAL CARGO RATES: Minimum charge (U.S.$)	Under 45 kg (U.S.$/kg)	Over 45 kg (as a percentage of under-45 kg rate)	Over 500 kg (as a percentage of under-45 kg rate)	SPECIFIC COMMODITY RATES: Range (as a percentage of under-45 kg rate)	Number of commodities
Jeddah — New York	10 220	61	12.70	76	46	31	1
Amsterdam — Los Angeles	8 960	75	10.19	79	34	32-40	10
New York — Lagos	8 440	65	13.80	76	53	33-56	7
Houston — Paris	8 070	70	9.89	79	35	20-39	10
Frankfurt — Atlanta	7 410	85	3.47	83	70	106	2
Miami — Madrid	7 110	60	8.76	80	32	20-27	1
Chicago — Copenhagen[1]	6 850	60	8.41	–	29	–	–
Milan — Toronto[1]	6 610	72	5.88	–	42	–	–
London — New York[1]	6 510	83	6.53	–	29	24-25	2
Montreal — Warsaw	6 460	66	7.43	81	35	25-79	4

1. The first breakpoint for general cargo rates is 100 kg (not 45 kg).

following table:

Estimated economy class normal fares per passenger-kilometre	Distance in km 6000	8000	10000	12000
Fares in cents per pass-km, 1991				
Average		[see paragraph 3]		
Eastbound		[see paragraph 3]		
Westbound	20.2	18.4	17.1	16.1
Percentage change (%), 1991/1990				
Average		[see paragraph 3]		
Eastbound		[see paragraph 3]		
Westbound	1.7	2.3	2.7	3.1

3. Between September 1990 and September 1991 there was a significant broadening in the spread in economy class normal fare levels above and below the estimated averages in the eastbound direction. Hence, in September 1991 fares in this direction were less dependent on distance and more dependent on other factors than in September 1990.

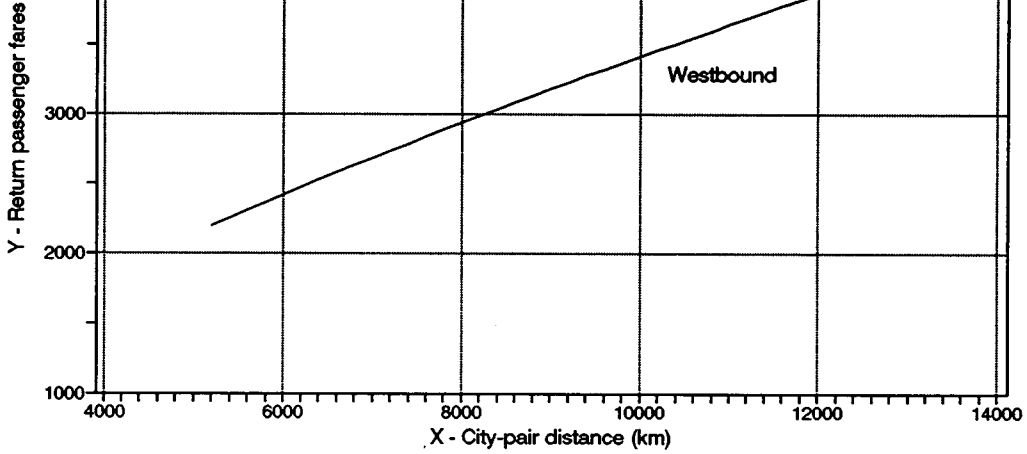
Other passenger fares

4. Table 5-23 shows for September 1991 for a sample of 10 city-pairs in the route group the range of fares available as appearing in multilateral airline guides. As illustrated by the sample, first and intermediate class fares were widely available in this route group. Economy class excursion fares continued to be widely available in September 1991 at an average level some 25 per cent lower than the applicable economy class normal fares. As for the previous year, Apex and Pex-type fares remained available for some city-pairs in the sample, at a level about 50 per cent lower than the applicable economy class normal fare on average.

General cargo rates for small shipments

5. In September 1991 there was a significant spread in the level of rates for small shipments (less than 45 kg) above and below the average in the eastbound and westbound directions. Rate levels in the eastbound direction were virtually independent of distance and are therefore not included. The apparent lack of relationship between rates and distance in the westbound direction (i.e. to the Caribbean and Latin America) was notably influenced by the relatively lower general cargo rate levels for small shipments from Germany. In September 1991 these rates expressed in U.S. dollars were some 45 to 55 per cent lower than the estimated average rates from other countries in Europe/Middle East/Africa for routes across the Mid Atlantic. Excluding rates from Germany, the level of general cargo rates for small shipments expressed in U.S. cents per tonne-kilometres in the westbound direction ranged from 143 at 6 000 km to 144 at 12 000 km.

With the exception of shipments from Germany, shipments over 500 kg continued to benefit from reductions of some 55 to 75 per cent on the small shipment rate. Similarly, specific commodity rates were available for most city-pairs in the sample, giving as in previous years a reduction of some 70 per cent on average from the small shipment rate. Bulk unitization rates for freight carried in unit load devices (ULDs) were available for 5 of the 10 city-pairs in the sample. The relatively high level on average of general cargo rates across the Mid Atlantic shown in paragraph 5 should therefore be considered in the context of the particularly large number of lower rates available.



Graph 5-23. Economy class normal passenger fares (route group 12)

Table 5-23. Range of passenger fares available (route group 12)

City-pair (originating city first)	Flight distance (km)	Highest economy class normal (U.S.$)	INDIVIDUAL FARES: First class normal	Inter-mediate class normal	Economy class restricted	Economy class excursion	Economy class APEX, PEX	GROUP FARES: Economy class
			(as a percentage of the highest economy class normal fare)					
Lima — Madrid	10 030	2 676	163	108	–	63-80	58	–
Moscow — Havana	9 860	2 800	165	112	–	68	–	58-60
Amsterdam — Guayaquil	9 840	3 637	165	109	–	76	46	–
Mexico — Frankfurt	9 770	2 530	179	114	–	73	50	–
Bogota — Paris	8 660	2 348	171	110	–	65-77	–	–
Caracas — Milan	8 060	2 292	165	110	–	62-80	–	–
Frankfurt — San Juan	7 375	2 466	158	111	–	80	42-45	–
Port of Spain — London	7 090	2 230	187	122	72	–	47-52	–
Madrid — Santo Domingo	6 690	2 648	169	112	–	78	50-58	54
Lisbon — Recife	5 860	2 071	165	110	–	76	57	57

In September 1991 there was no significant relationship between rates and distance on routes across the Mid-Atlantic in either direction.

Graph 5-24. General cargo rates for shipments of less than 45 kg (route group 12)

Table 5-24. Range of cargo rates available (route group 12)

		GENERAL CARGO RATES				SPECIFIC COMMODITY RATES	
City-pair (originating city first)	Flight distance (km)	Minimum charge (U.S.$)	Under 45 kg (U.S.$/kg)	Over 45 kg (as a percentage of under-45 kg rate)	Over 500 kg (as a percentage of under-45 kg rate)	Range (as a percentage of under-45 kg rate)	Number of commo-dities
Lima — Madrid	10 030	51	14.66	77	36	12-33	12
Moscow — Havana	9 860	90	18.62	78	40	39-44	1
Amsterdam — Guayaquil[1]	9 840	75	17.55	–	24	–	–
Mexico — Frankfurt	9 770	60	9.84	84	41	13-65	15
Bogota — Paris	8 660	50	10.30	80	38	11-44	17
Caracas — Milan	8 060	60	10.30	80	27	9-27	11
Frankfurt — San Juan	7 375	85	3.88	84	74	97	2
Port of Spain — London	7 090	68	15.00	76	38	4-60	4
Madrid — Santo Domingo	6 690	77	8.73	–	42	42-64	2
Lisbon — Recife	5 860	43	9.73	75	43	22-40	18

1. The first breakpoint for general cargo rates is 100 kg (not 45 kg).

2. Estimated economy class normal fare levels per passenger-kilometre are shown in the following table:

Estimated economy class normal fares per passenger-kilometre	Distance in km				
	6000	8000	10000	12000	14000
Fares in cents per pass-km, 1991					
Average	15.9	16.5	17.1	17.5	17.9
Eastbound	18.6	17.1	16.0	15.2	14.6
Westbound	13.4	15.9	18.2	20.3	22.2
Percentage change (%), 1991/1990					
Average	5.7	7.4	8.8	10.0	11.0
Eastbound	20.8	19.5	18.5	17.7	17.0
Westbound	–6.3	–2.8	–0.1	2.2	4.2

3. Between September 1990 and September 1991 there was a significant increase in the directional imbalance in economy class normal fares between the eastbound and westbound directions at the shorter distances, however the directional imbalance in fare levels at the longer distances was reduced.

Other passenger fares

4. Table 5-25 shows for September 1991 for a sample of 10 city-pairs in the route group the range of fares available as appearing in multilateral airline guides. As illustrated by the sample, in September 1991 first and intermediate class fares were widely available in this route group. Economy class excursion fares continued to be widely available in September 1991 at levels some 25 per cent below the related economy class normal fare. Pex-type fares remained available for most city-pairs in the sample at levels ranging between about 40 and 60 per cent below the economy class normal fare.

General cargo rates for small shipments

5. The curves on Graph 5-26 have been statistically computed so as to reflect best the average level of general cargo rates for shipments of less than 45 kg for this route group at different distances.

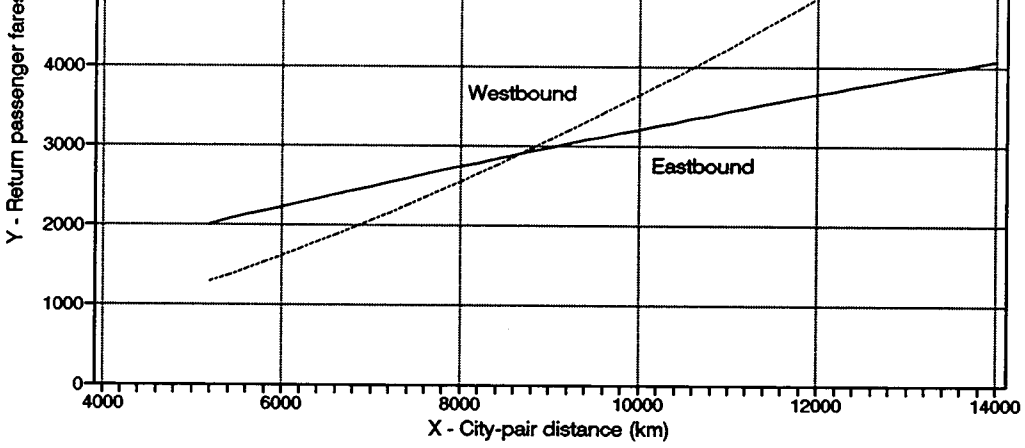
6. Estimated small shipment general cargo rate levels per tonne-kilometre are shown in the following table:

Average			[see paragraph 7]		
Eastbound	157	139	127	118	110
Westbound			[see paragraph 7]		
Percentage change (%), 1991/1990					
Average			[see paragraph 7]		
Eastbound	25.9	19.7	15.1	11.4	8.5
Westbound			[see paragraph 7]		

7. Between September 1990 and September 1991 there was a significant broadening of the spread in the level of general cargo rates for small shipments (less than 45 kg) above and below the average rates in the westbound direction (to South America). Figures for September 1991 suggest that rates across the South Atlantic in the westbound direction are less dependent on distance than on other factors. This apparent lack of relationship between rates and distance was notably influenced by a significant decrease in general cargo rate levels for small shipments from Germany to destinations in South America, except to Brazil. In September 1991 rates to the rest of South America expressed in U.S. dollars were some 45 to 50 per cent below those available in September 1990 and some 45 to 55 per cent lower than the estimated average rates from the other countries in Europe/Middle East/Africa for routes across the South Atlantic. Excluding rates from Germany, in September 1991, the level of general cargo rates for small shipments expressed in U.S. cents per tonne-kilometre in the westbound direction ranged from 149 at 6 000 km to 141 at 14 000 km.

Other cargo rates

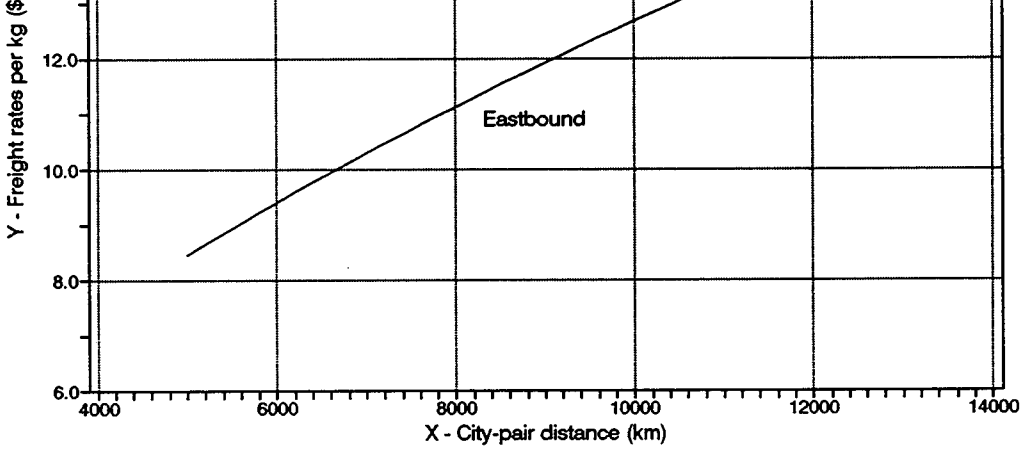
8. Table 5-26 shows for September 1991 for a sample of 10 city-pairs in the route group the range of cargo rates available as appearing in multilateral airline guides. Several cargo rates for shipments of more than 45 kg exist in each case including discounts for shipments over 100 and 300 kg. With the exclusion of shipments from Germany, shipments over 500 kg continued to benefit from an average reduction of some 60 per cent on the small shipment rate. As in previous years a large number of specific commodity rates also remained available in this route group, with an average level some 70 per cent lower than the general cargo rates for small shipments. Bulk unitization rates for freight carried in unit load devices (ULDs) remained available for one city-pair in the sample (London-Rio de Janeiro). The high level of the general cargo rates across the South Atlantic should thus be considered in the context of the particularly large number of lower rates available.



Graph 5-25. Economy class normal passenger fares (route group 13)

Table 5-25. Range of passenger fares available (route group 13)

City-pair (originating city first)	Flight distance (km)	INDIVIDUAL FARES: Highest economy class normal (U.S.$)	First class normal	Inter-mediate class normal	Economy class restricted	Economy class excursion	Economy class PEX	GROUP FARES: Economy class
			(as a percentage of the highest economy class normal fare)					
Frankfurt — Santiago de Chile	12 700	4 568	149	110	–	97	41	–
Santiago de Chile — Paris	12 316	3 675	150	112	–	56-65	–	–
Amsterdam — Montevideo	11 380	4 506	156	112	–	75	43	–
Buenos Aires — Rome	11 170	3 435	147-150	108-110	–	77-78	51-57	–
Copenhagen — Rio de Janeiro	10 180	4 411	156	108	–	72	49	–
Asuncion — Madrid	9 620	2 707	152	110	–	78	57	–
Rio de Janeiro — Casablanca	9 300	2 690	163	110	–	74	59	–
London — Rio de Janeiro	9 250	2 970	245	154	–	98	57	–
Lisbon — Sao Paulo	8 070	2 330	159	110	–	76	55	55
Rio de Janeiro — Johannesburg	7 149	2 494	143	115	–	70	–	–



Graph 5-26. General cargo rates for shipments of less than 45 kg (route group 13)

Table 5-26. Range of cargo rates available (route group 13)

City-pair (originating city first)	Flight distance (km)	GENERAL CARGO RATES: Minimum charge (U.S.$)	Under 45 kg (U.S.$/kg)	Over 45 kg (as a percentage of under-45 kg rate)	Over 500 kg (as a percentage of under-45 kg rate)	SPECIFIC COMMODITY RATES: Range (as a percentage of under-45 kg rate)	Number of commodities
Frankfurt — Santiago de Chile[1]	12 700	85	7.71	–	58	–	–
Santiago de Chile — Paris	12 316	50	14.56	75	36	13-17	13
Amsterdam — Montevideo[1]	11 380	75	15.29	–	27	–	–
Buenos Aires — Rome	11 170	50	13.69	75	38	13-66	21
Copenhagen — Rio de Janeiro	10 180	73	14.96	76	37	27-32	2
Asuncion — Madrid	9 620	50	12.23	76	38	15-33	8
Rio de Janeiro — Casablanca	9 300	50	10.37	75	43	22-43	15
London — Rio de Janeiro[1]	9 250	83	10.80	–	41	48-83	3
Lisbon — Sao Paulo	8 070	43	9.89	75	43	18-40	19
Sao Paulo — Dakar	5 310	50	8.46	78	34	19	1

1. The first breakpoint for general cargo rates is 100 kg (not 45 kg).

2. Estimated economy class normal fare levels per passenger-kilometre are shown in the following table:

Estimated economy class normal fares per passenger-kilometre	Distance in km						
	250	500	1000	2000	4000	7000	10000
Fares in cents per pass-km, 1991	24.3	22.0	19.9	18.0	16.3	15.1	14.3
Percentage change (%), 1991/1990	16.9	15.3	13.8	12.2	10.7	9.5	8.7

Other passenger fares

3. Table 5-27 shows for September 1991 for a sample of 10 city-pairs in the route group the range of fares available as appearing in multilateral airline guides. As illustrated by the sample, first and intermediate class fares remained widely available in September 1991. Some individual economy class special fares were also available for 8 out of 10 city-pairs in the sample. Where available, these fares ranged between about 10 and 60 per cent below the level of the applicable economy class normal fare. A few group fares were also available. Other fares, not appearing in multilateral tariff manuals, are known to be available for many city-pairs in this route group.

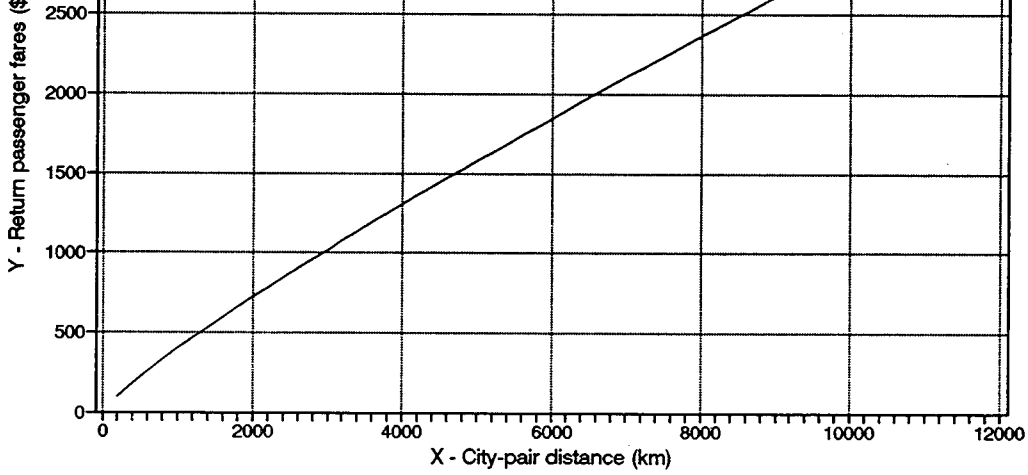
General cargo rates for small shipments

4. The curve on Graph 5-28 has been statistically computed so as to reflect best the average level of general cargo rates for shipments of less than 45 kg for this route group at different distances.

5. Estimated small shipment general cargo rate levels per tonne-kilometre are shown in the following table:

Estimated general cargo rates for shipments of less than 45 kg	Distance in km						
	250	500	1000	2000	4000	7000	10000
Rates in cents per tonne-km, 1991	238	198	165	137	114	98	89
Percentage change (%), 1991/1990	16.0	13.7	11.4	9.1	6.9	5.2	4.1

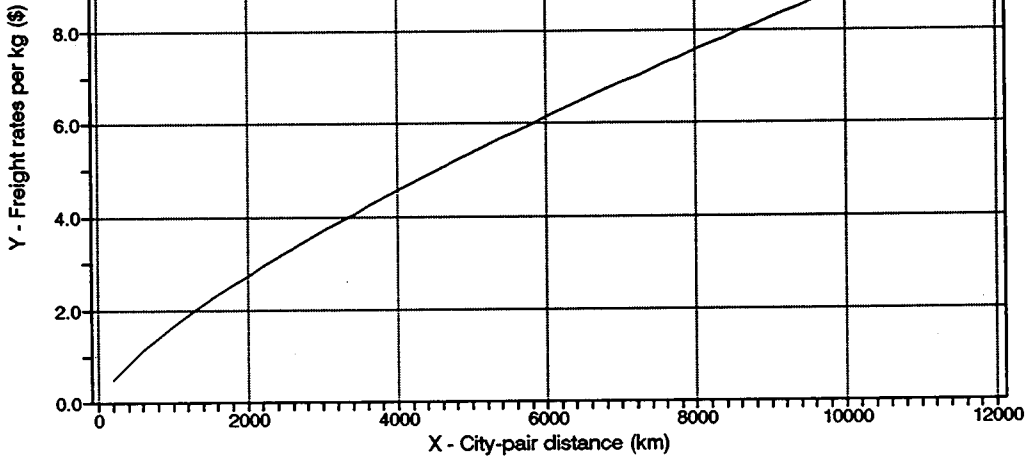
for shipments of more than 45 kg were about 25 per cent lower than the rates for small shipments. Specific commodity rates were available for most city-pairs in the sample at a level some 65 per cent lower on average than the general cargo rates for small shipments. Bulk unitization rates for freight carried in unit load devices (ULDs) were available for a few city-pairs mainly within the South West Pacific area.



Graph 5-27. Economy class normal passenger fares (route group 14)

Table 5-27. Range of passenger fares available (route group 14)

City-pair (originating city first)	Flight distance (km)	Highest economy class normal (U.S.$)	INDIVIDUAL FARES: First class normal	Inter-mediate class normal	Economy class restricted	Economy class excursion	Economy class APEX	GROUP FARES: Economy class
			(as a percentage of the highest economy class normal fare)					
Auckland — Singapore	8 410	2 337	150	115	–	40-76	39-56	–
Karachi — Manila	5 720	1 228	144	115	–	55-58	–	–
Beijing — Karachi	4 863	1 601	140	110	–	–	–	–
Bangkok — Seoul	3 690	1 201	147	110	–	85	–	–
Hong Kong — Tokyo	2 940	827	136	110	–	89	–	–
Melbourne — Christchurch	2 410	940	174	136	–	68	55-81	68
Port Moresby — Brisbane	2 090	887	175	133	–	–	76	58
Sydney — Noumea	1 980	985	145	125	–	64	–	52
Kuala Lumpur — Jakarta	1 200	365	131	115	–	73	–	–
Madras — Colombo	650	81	145	130	–	–	–	–



Graph 5-28. General cargo rates for shipments of less than 45 kg (route group 14)

Table 5-28. Range of cargo rates available (route group 14)

		GENERAL CARGO RATES				SPECIFIC COMMODITY RATES	
City-pair (originating city first)	Flight distance (km)	Minimum charge (U.S.$)	Under 45 kg (U.S.$/kg)	Over 45 kg (as a percentage of under-45 kg rate)	Over 500 kg (as a percentage of under-45 kg rate)	Range (as a percentage of under-45 kg rate)	Number of commo-dities
Auckland — Singapore	8 410	29	7.36	75	–	20-45	6
Karachi — Manila	5 720	17	3.72	75	–	15-52	4
Beijing — Karachi	4 863	16	3.78	75	–	–	–
Bangkok — Seoul	3 690	27	4.26	75	–	39-58	2
Hong Kong — Tokyo	2 940	24	2.87	75	–	55-57	4
Melbourne — Christchurch	2 410	27	4.22	75	44	23-42	3
Port Moresby — Brisbane	2 090	31	2.79	–	85	32-73	4
Sydney — Noumea	1 980	27	2.34	75	–	70	1
Kuala Lumpur — Jakarta	1 200	18	1.19	75	–	–	–
Madras — Colombo	650	8	0.36	74	–	68	1

2. Estimated economy class normal fare levels per passenger-kilometre are shown in the following table:

Estimated economy class normal fares per passenger-kilometre	Distance in km					
	1000	3000	6000	10000	14000	18000
Fares in cents per pass-km, 1991						
Average	15.0	15.2	15.3	15.4	15.5	15.5
Eastbound	21.6	18.9	17.3	16.3	15.7	15.2
Westbound	10.2	12.1	13.5	14.6	15.3	15.9
Percentage change (%), 1991/1990						
Average	9.2	8.7	8.3	8.1	7.9	7.8
Eastbound	23.0	13.5	7.9	4.0	1.4	–0.4
Westbound	–5.2	2.9	8.4	12.6	15.4	17.6

3. Between September 1990 and September 1991 there was a significant increase in the directional imbalance in the level of the estimated economy class normal fare per passenger-kilometre between the eastbound and westbound directions at the shorter distances.

Other passenger fares

4. Table 5-29 shows for September 1991 for a sample of 10 city-pairs in the route group the range of fares available as appearing in multilateral airline guides. As illustrated by the sample, first and intermediate class normal fares remained widely available for this route group in September 1991. A few restricted or special fares for first and intermediate class were also available as were some economy class special fares. Economy class excursion fares or Pex-type fares were available for 9 city-pairs in the sample, two city-pairs more than for the previous year. The level of these fares ranged between 17 to 59 per cent below the related economy class normal fare. Other fares, not appearing in multilateral tariff manuals, are known to be available for some city-pairs in this route group.

General cargo rates for small shipments

5. The curves on Graph 5-30 have been statistically computed so as to reflect best the average level of general cargo rates for shipments of less than 45 kg for this route group at different distances.

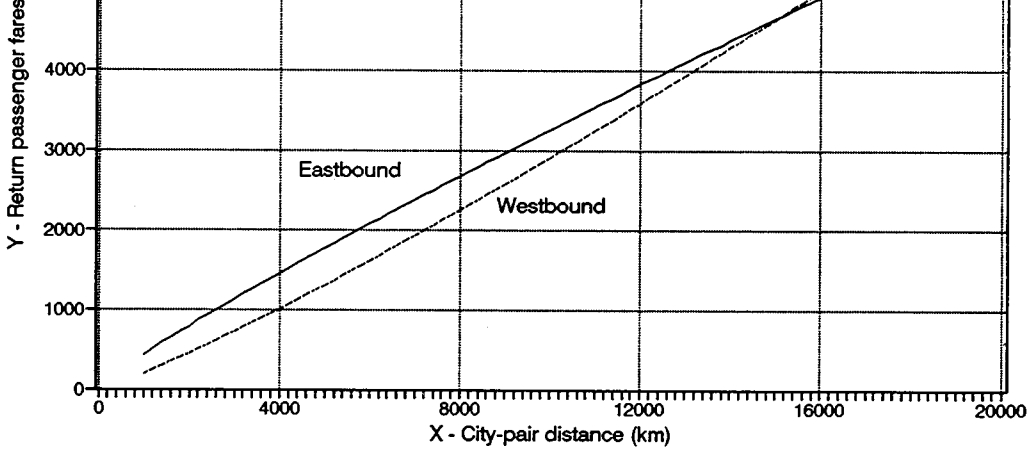
6. Estimated small shipment general cargo rate levels per tonne-kilometre are shown in the following table:

Eastbound	242	175	142	122	110	102
Westbound	85	89	91	93	94	95
Percentage change (%), 1991/1990						
Average	3.8	3.4	3.2	3.0	2.9	2.8
Eastbound	26.3	12.3	4.3	−1.3	−4.8	−7.3
Westbound	−16.5	−5.8	1.6	7.4	11.4	14.5

7. Between September 1990 and September 1991 there was a significant increase in the directional imbalance in the level of the estimated general cargo rate for small shipments (less than 45 kg) between the eastbound and westbound direction at the shorter distances. However, at the longer distances the directional imbalance was significantly reduced.

Other cargo rates

8. Table 5-30 shows for September 1991 for a sample of 10 city-pairs in the route group the range of cargo rates available as appearing in multilateral airline As in previous years general cargo rates for shipments of more than 45 kg remained widely available. Discounts for large shipments (over 500 kg) were available for some city-pairs giving, as for the previous year, an average reduction of some 50 to 60 per cent with substantially lower levels in two instances. In September 1991, a number of specific commodity rates remained available in the route group at a level some 55 per cent lower on average than the general cargo rate for small shipments. As for the previous year, in September 1991 there were no bulk unitization rates for freight carried in unit load devices (ULDs) for the ten city-pairs in the sample.

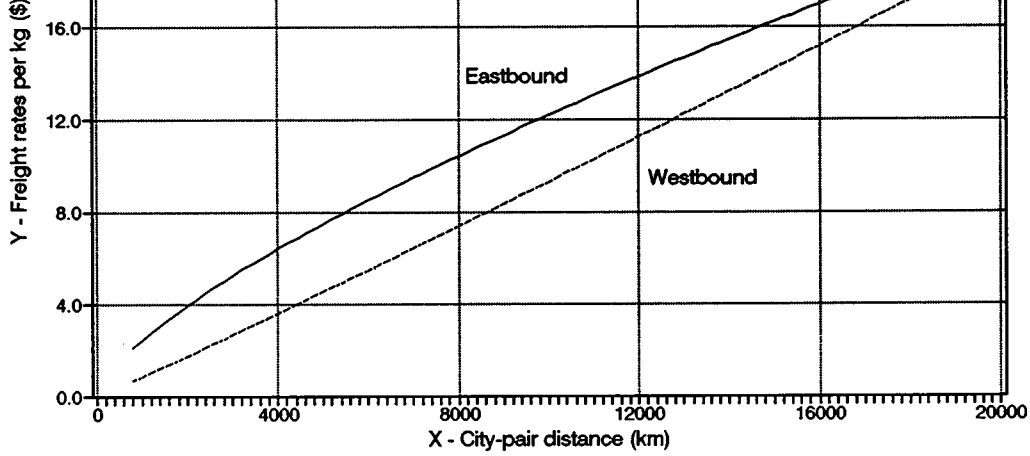


Graph 5-29. Economy class normal passenger fares (route group 15)

Table 5-29. Range of passenger fares available (route group 15)

City-pair (originating city first)	Flight distance (km)	INDIVIDUAL FARES: Highest economy class normal (U.S.$)	First class normal	Inter-mediate class normal	Economy class restricted	Economy class excursion	Economy class PEX	GROUP FARES: Economy class
			(as a percentage of the highest economy class normal fare)					
Melbourne — Belgrade	15 690	4 744	146	110	–	50-66	42	–
Zurich — Seoul	12 340	4 095	163-174	104-110	–	–	45-48	–
Jakarta — Rome	11 630	3 240	162	110	–	57	–	–
London — Tokyo	9 590	4 367	186	110	52	–	41	–
Perth — Harare	8 500	3 919	154	118	–	–	57	53
Bahrain — Manila	7 560	2 314	150	110	–	70	–	–
Bombay — Moscow	5 500	922	139	115	–	63	–	47-65
Nairobi — Bombay	4 530	624	151	110	–	78-83	–	63
Dhaka — Dubai	3 540	1 064	132	110	–	–	–	72
Dhahran — Karachi	1 710	693	142[1]	110	–	71	–	–

1. First class excursion fares also available.



Graph 5-30. General cargo rates for shipments of less than 45 kg (route group 15)

Table 5-30. Range of cargo rates available (route group 15)

		GENERAL CARGO RATES				SPECIFIC COMMODITY RATES	
City-pair (originating city first)	Flight distance (km)	Minimum charge (U.S.$)	Under 45 kg (U.S.$/kg)	Over 45 kg (as a percentage of under-45 kg rate)	Over 500 kg (as a percentage of under-45 kg rate)	Range (as a percentage of under-45 kg rate)	Number of commo-dities
Melbourne — Belgrade	15 690	43	10.62	75	26	22-27	1
Zurich — Seoul	12 340	78	14.62	71	28	–	–
Jakarta — Rome	11 630	64	10.29	80	–	35-58	11
London — Tokyo[1]	9 590	83	13.45	–	54	30-57	9
Perth — Harare[1]	8 500	43	8.05	–	50	26-36	1
Bahrain — Manila	7 560	59	14.57	75	–	–	–
Nairobi — Bombay	5 500	27	3.42	75	–	50	1
Bombay — Moscow[1]	4 530	19	3.41	–	50	42-68	9
Dhaka — Abu Dhabi	3 540	19	3.52	75	50	–	–
Dhahran — Karachi	1 710	37	2.90	75	–	39-54	2

1. The first breakpoint for general cargo rates is 100 kg (not 45 kg).

2. Estimated economy class normal fare levels per passenger-kilometre for which a relationship with distance exist are shown in the following table:

Estimated economy class normal fares per passenger-kilometre	Distance in km				
	6000	8000	10000	14000	18000
Fares in cents per pass-km, 1991					
Average	14.1	12.4	11.3	9.7	8.7
Eastbound	14.8	12.8	11.4	9.6	8.5
Westbound	13.4	12.1	11.1	9.9	9.0
Percentage change (%), 1991/1990					
Average	11.2	11.4	11.5	11.6	11.7
Eastbound	12.5	12.1	11.8	11.3	10.9
Westbound	9.7	10.5	11.2	12.1	12.8

3. Though no longer the single major cause for the spread in the level of fares expressed in U.S. dollars above and below the average in the eastbound direction (from Asia), fare levels from Japan continued to remain well above the estimated average. In September 1991, economy class normal fares from Japan across the North-Mid Pacific were represented by 35 of the 97 city-pairs in the eastbound direction. In U.S. dollar terms these fares remained on average between 35 and 50 per cent higher than the estimated average fares from other Asian countries across the North-Mid Pacific.

Other passenger fares

4. Table 5-31 shows for September 1991 for a sample of 10 city-pairs in the route group the range of fares available as appearing in multilateral airline guides. As illustrated by the sample, first class normal fares are relatively high in comparison with economy class normal fares on the North-Mid Pacific routes. On the other hand, intermediate class normal as well as some restricted fares were available for all the city-pairs in the sample. Also intermediate class normal fares were, in some cases, at a level similar to the highest economy class normal fare. Economy class restricted fares remained available for most city-pairs in the sample in September 1991. For some of these city-pairs, the economy class restricted fares were at the level of the highest economy class normal fare whereas for others they ranged on average some 8 to 17 per cent below the economy class normal fare. Economy class excursion fares were offered on 5 of the 10 city-pairs in the sample, at average levels some 25 per cent below the economy class normal fare. The relatively commonly available Apex and Pex-type fares which, on average, offered reductions of around 35 per cent of the economy class normal fare were at a somewhat higher level than those available in September 1990. Between September 1990 and September 1991 there was a significant reduction in the number of city-pairs where group fares were available. In September 1991 group fares were available for only 2 of the 10 city-pairs in the sample compared with 7 city-pairs in September 1990. Where available group fares were some 18 to 37 per cent below the applicable economy class normal fare. "Circle fares" were also available for a few city-pairs in the sample. These are published fares which allow for travel by a continuous circuitous air route which may include points in the South Pacific; generally four free stopovers are allowed.

existed in September 1991 between rates and distance for the eastbound direction (see paragraph 6 below).

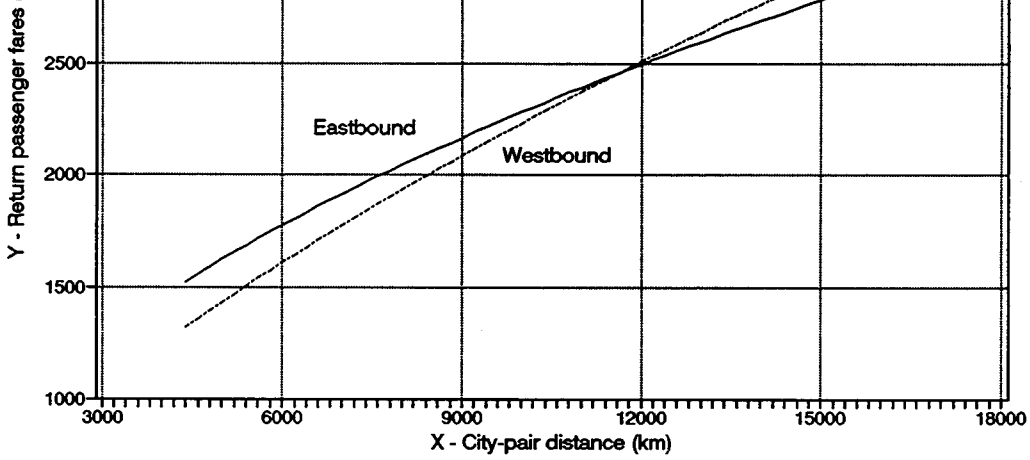
6. Estimated small shipment general cargo rate levels per tonne-kilometre for which a relationship with distance exists are shown in the following table:

Estimated general cargo rates for shipments of less than 45 kg	Distance in km				
	6000	8000	10000	14000	18000
Rates in cents per tonne-km, 1991					
Average			[see paragraph 7]		
Eastbound			[see paragraph 7]		
Westbound	116	97	85	69	59
Percentage change (%), 1991/1990					
Average			[see paragraph 7]		
Eastbound			[see paragraph 7]		
Westbound	7.6	7.9	8.1	8.5	8.8

7. As in previous years in September 1991 cargo rates from Asia across the North-Mid Pacific remained virtually independent of distance. The scatter of actual rates above and below the average from Asia is generalized and not mainly due to relatively high rates from Japan, although the latter remained a factor.

Other cargo rates

8. Table 5-32 shows for September 1991 for a sample of 10 city-pairs in the route group the range of cargo rates available as appearing in multilateral airline guides. Several general cargo rates for shipments of more than 45 kg existed in each case (including breakpoints at 100 and 300 kg for all city-pairs in the sample) with an average reduction of some 50 per cent for large shipments (over 500 kg). In September 1991, specific commodity rates were available for almost all the city-pairs in the sample with an average reduction of some 60 per cent on the applicable general cargo rate for small shipments. Bulk unitization rates for freight carried in unit load devices (ULDs) remained available for 7 out of 10 city-pairs in the sample.

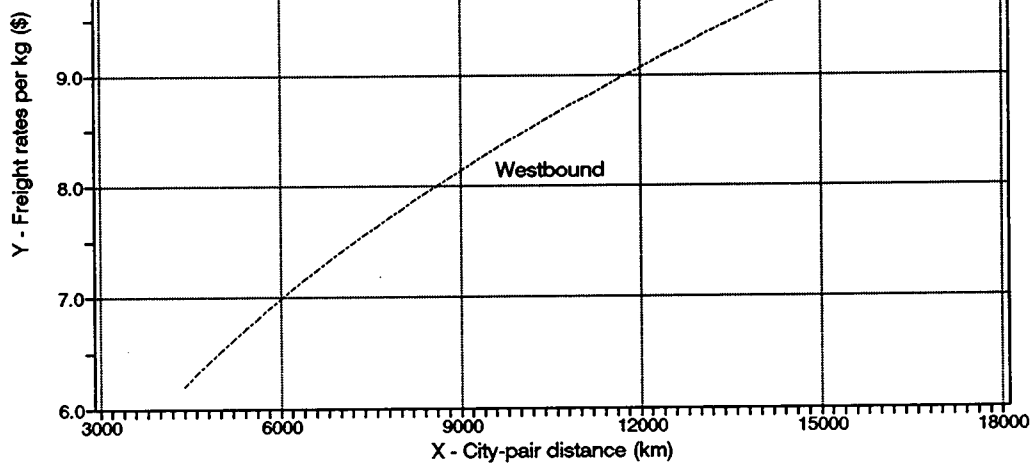


Graph 5-31. Economy class normal passenger fares (route group 16)

Table 5-31. Range of passenger fares available (route group 16)

City-pair (originating city first)	Flight distance (km)	INDIVIDUAL FARES[1] Highest economy class normal (U.S.$)	First class normal	Inter-mediate class normal	Economy class restricted	Economy class excursion	Economy class APEX, PEX[2]	GROUP FARES Economy class
			(as a percentage of the highest economy class normal fare)					
Lima — Tokyo	15 470	3 318	185	102	88	–	59	–
Bangkok — Dallas/Fort Worth	14 970	2 597	185	109	100	–	62	–
Singapore — San Francisco	13 680	3 050	157	110	–	65-88	54	75-82
Los Angeles — Manila	12 380	1 966	165-220[3]	92-121[4]	62-92	75	43-62	–
Tokyo — Mexico	11 446	2 997	190	–	–	–	72-82	–
San Francisco — Hong Kong	11 110	1 980	210	116[4]	96-97	65-70	50-65	–
Hong Kong — Vancouver	10 250	1 782	219	121	100	87	80-85	–
Seattle — Okinawa	9 330	2 120	223	122	100	–	55	–
Seoul — Seattle	8 350	1 704	190	111[4]	83-100	80	–	63
Honolulu — Tokyo	6 130	1 400	252	133	100	–	60	–

1. Where applicable, only mid-week fare levels are shown; weekend fares are somewhat higher.
2. "Budget" and "Super PEX" fares also included.
3. First class restricted fares also available.
4. Intermediate class restricted fares also available.



Graph 5-32. General cargo rates for shipments of less than 45 kg (route group 16)

Table 5-32. Range of cargo rates available (route group 16)

City-pair (originating city first)	Flight distance (km)	GENERAL CARGO RATES: Minimum charge (U.S.$)	Under 45 kg (U.S.$/kg)	Over 45 kg (as a percentage of under-45 kg rate)	Over 500 kg (as a percentage of under-45 kg rate)	SPECIFIC COMMODITY RATES: Range (as a percentage of under-45 kg rate)	Number of commodities
Lima — Tokyo	15 470	60	12.19	76	49	27-35	9
Bangkok — Dallas/Fort Worth	14 970	55	6.37	75	58	47-60	4
Singapore — San Francisco	13 680	61	10.94	76	54	37-70	4
Los Angeles — Manila	12 627	55	7.82	77	–	–	–
Tokyo — Mexico	11 450	73	16.88	73	50	50	2
San Francisco — Hong Kong	11 110	55	8.27	77	–	29	1
Hong Kong — Vancouver	10 250	60	10.97	76	47	35-63	11
Los Angeles — Osaka	9 760	55	8.19	76	49	30-42	11
Seoul — Seattle	8 350	45	4.66	79	68	–	–
Honolulu — Tokyo	6 130	55	6.77	77	50	29-38	3

2. Estimated economy class normal fare levels per passenger-kilometre are shown in the following table:

Estimated economy class normal fares per passenger-kilometre	Distance in km				
	4000	6000	8000	12000	16000
Fares in cents per pass-km, 1991					
Average	19.4	18.6	18.0	17.6	16.8
Eastbound	18.2	18.1	18.0	17.9	17.9
Westbound	20.9	19.2	18.1	16.6	15.7
Percentage change (%), 1991/1990					
Average	23.6	19.5	16.7	12.8	10.2
Eastbound	8.0	10.3	12.0	14.4	16.1
Westbound	43.6	30.5	22.0	10.9	3.7

3. Between September 1990 and September 1991 there was a significant increase in the spread of economy class normal fares above and below the estimated average in the westbound direction. Hence in September 1991 fare levels in this direction were less dependent on distance and more dependent on other factors than in September 1990.

Other passenger fares

4. Table 5-33 shows for September 1991 for a sample of 10 city-pairs in the route group the range of fares available as appearing in multilateral airline guides. As illustrated by the sample, first class normal fares are relatively high in comparison with economy class normal fares on South Pacific routes. On the other hand, intermediate class normal fares were available for all the city-pairs in the sample whereas first and/or intermediate class restricted fares remained available on 8 of the city-pairs in the sample (compared with all city-pairs in the sample in September 1990). Economy class restricted fares were also widely available in this route group. In general they were at a level ranging some 15 to 35 per cent lower than the applicable economy class normal fare. Economy class excursion fares, in most cases at a level of more than 50 per cent below the economy class normal fare, were widely available. Apex-type fares were very common, ranging from 33 to 76 per cent below the applicable economy class normal fares. In September 1991, one-way Apex fares were available, often at a higher level than the excursion fares (special fares are generally only available for round trips). Several "circle fares" were also available in September 1991. These are published fares which allow for travel by a continuous circuitous air route which may include points in the North-Mid Pacific; generally four free stopovers are allowed.

General cargo rates for small shipments

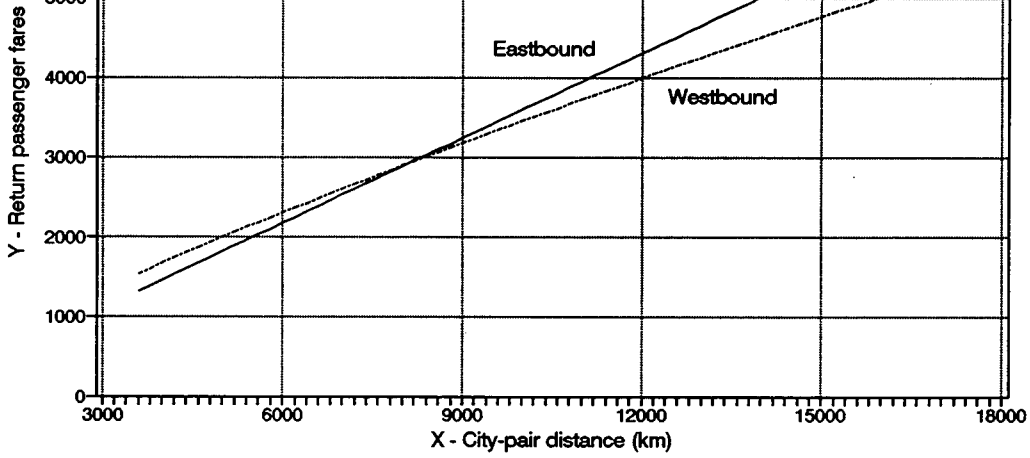
5. The curves on Graph 5-34 have been statistically computed so as to reflect best the average level of general cargo rates for shipments of less than 45 kg for this route group at different distances.

for shipments of less than 45 kg	4000	6000	8000	12000	16000
Rates in cents per tonne-km, 1991					
Average	142	124	112	98	88
Eastbound	137	120	110	96	88
Westbound	149	128	115	99	89
Percentage change (%), 1991/1990					
Average	−5.2	1.1	5.9	13.0	18.3
Eastbound	−12.3	−5.5	−0.3	7.4	13.3
Westbound	5.2	9.6	12.8	17.5	21.0

7. Between September 1990 and September 1991, there was a significant decrease in the spread of rates for small shipments above and below the average in the westbound direction (i.e. to the South Pacific). Thus in September 1991 these rates were more dependent on distance and less dependent on other factors than in September 1990. In September 1991 rates in the eastbound direction were significantly less dependent on distance and more dependent on other factors that those in the westbound direction.

Other cargo rates

8. Table 5-34 shows for September 1991 for a sample of 10 city-pairs in the route group the range of cargo rates available as appearing in multilateral airline guides. Several general cargo rates for shipments of more than 45 kg were often available (including breakpoints at 100 and 300 kg for most city-pairs in the sample). As for previous years, reductions of about 35 per cent on average were available for large shipments (over 500 kg) with a substantially lower level in one instance in the sample. Specific commodity rates were also fairly common in this route group, with an average reduction of some 60 per cent on the applicable general cargo rates for small shipments. Bulk unitization rates for freight carried in unit load devices (ULDs) remained available for 7 out of 10 city-pairs in the sample.

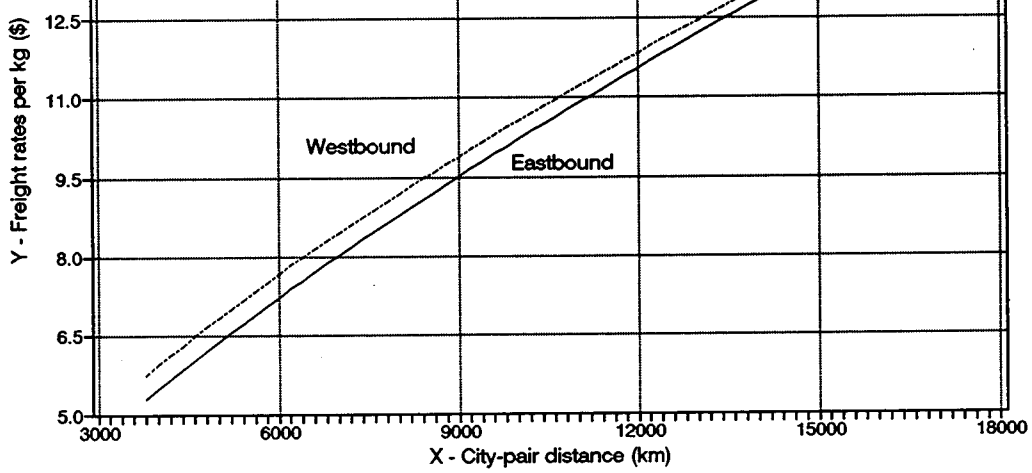


Graph 5-33. Economy class normal passenger fares (route group 17)

Table 5-33. Range of passenger fares available (route group 17)

City-pair (originating city first)	Flight distance (km)	INDIVIDUAL FARES: Highest economy class normal (U.S.$)	First class normal	Inter-mediate class normal	Economy class restricted	Economy class excursion	Economy class APEX	GROUP FARES: Economy class
			(as a percentage of the highest economy class normal fare)					
Sydney — Toronto[1]	15 640	4 999	178	120	87	46	35	–
San Francisco — Melbourne	12 650	4 154	207	135	67	46	33-59	–
Vancouver — Sydney	12 520	4 397	207	135	67	47	34-58	–
Auckland — Los Angeles	10 490	3 642	191	124	83	–	27-57	–
Nadi — Vancouver	9 460	2 411	161	124	82	39	53	–
Los Angeles — Nadi	9 200	3 194	205	130	76	42	38-59	–
Melbourne — Honolulu	8 870	3 675	188	126	88	36	24-56	–
Honolulu — Auckland	7 090	2 760	219	136	84	56	37-67	–
Los Angeles — Papeete[1]	6 610	2 376	213	127	100	48	39	–
Nadi — Honolulu	5 110	1 856	172	137	72	38	52	–

1. First and Intermediate class restricted fares not available in September 1991.



Graph 5-34. General cargo rates for shipments of less than 45 kg (route group 17)

Table 5-34. Range of cargo rates available (route group 17)

		GENERAL CARGO RATES				SPECIFIC COMMODITY RATES	
City-pair (originating city first)	Flight distance (km)	Minimum charge (U.S.$)	Under 45 kg (U.S.$/kg)	Over 45 kg (as a percentage of under-45 kg rate)	Over 500 kg (as a percentage of under-45 kg rate)	Range (as a percentage of under-45 kg rate)	Number of commo-dities
Sydney — Toronto	15 640	55	13.81	51	20	–	–
San Francisco — Melbourne	12 650	66	13.10	80	63	–	–
Vancouver — Sydney	12 520	57	12.18	76	62	–	–
Auckland — Los Angeles	10 490	46	9.99	76	64	19-41	4
Nadi — Vancouver	9 460	47	7.08	76	67	20-45	4
Los Angeles — Nadi	9 200	66	9.11	76	67	36	1
Melbourne — Honolulu	8 870	39	9.92	64	–	31	1
Honolulu — Auckland	7 090	66	6.98	78	75	46	1
Los Angeles — Papeete	6 610	66	9.95	76	68	19-72	10
Papeete — Honolulu	4 420	54	8.79	77	73	29	3

group	Description
1	*Between North America and Central America/Caribbean.* Includes routes between on the one hand Canada and/or the United States (including Alaska and Hawaii) and on the other hand Central America and the Caribbean. Routes between the United States and Puerto Rico/Virgin Islands are considered domestic and are excluded. Central America/ Caribbean is defined as the geographical area covered by route group 2 but excluding Mexico.
2	*Between and within Central America and the Caribbean.* Includes routes between or among the Bahamas, Belize, Bermuda, Costa Rica, El Salvador, Guatemala, Honduras, the islands of the Caribbean Sea (including Puerto Rico and the Virgin Islands), Mexico, Nicaragua and Panama.
3	*Between Canada, Mexico and the United States.* Includes routes between or among the above States. The United States includes Alaska and Hawaii but excludes Puerto Rico and the Virgin Islands.
4	*Between North America/Central America/Caribbean and South America.* Includes routes between the geographical areas defined on the one hand by route group 1 and/or Mexico and on the other hand by route group 5 ("local South America").
5	*Local South America.* Includes routes between or among the following States: Argentina, Bolivia, Brazil, Chile, Colombia (including San Andres Island), Ecuador, Falkland Islands (Malvinas), French Guiana, Guyana, Paraguay, Peru, Suriname, Uruguay and Venezuela.
6	*Local Europe.* Includes routes between or among the States of geographical Europe, Algeria, Azores, Canary Islands, Greenland, Iceland, Madeira, Malta, Morocco, Tunisia and Turkey.
7	*Local Middle East.* Includes routes between or among the following States: Bahrain, Cyprus, Egypt, Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, Syrian Arab Republic, United Arab Emirates and Yemen.
8	*Local Africa.* Includes routes between or among the States of continental Africa and offshore islands, but excluding Algeria, Azores, Canary Islands, Egypt, Madeira, Malta, Morocco, Sudan and Tunisia.
9	*Between Europe and Middle East.* Includes routes between the two geographical areas defined by route group 6 ("local Europe") and route group 7 ("local Middle East") respectively.
10	*Between Europe/Middle East and Africa.* Includes routes between on the one hand the geographical areas defined by route group 6 ("local Europe") and/or route group 7 ("local Middle East") and on the other hand the geographical area defined by route group 8 ("local Africa").

de Janeiro and on the other hand the geographical areas defined by IATA Tariff Conference 2 ("local Europe" and/or "local Middle East" and/or "local Africa").

13 *South Atlantic.* Includes routes between on the one hand Rio de Janeiro or any other gateway south thereof in route group 5 ("local South America) and on the other hand the geographical areas defined by IATA Tariff Conference 2 ("local Europe" and/or "local Middle East" and/or "local Africa").

14 *Local Asia/Pacific.* Includes IATA Tariff Conference 3, that is international routes within Asia to the east of the Islamic Republic of Iran and of the Ural Mountains, Australia, New Zealand, Papua New Guinea, the islands of the Pacific Ocean excluding the Hawaiian Islands, Midway and Palmyra.

15 *Between Europe/Middle East/Africa and Asia/Pacific.* Includes routes between the geographical areas defined by IATA Tariff Conference 2 on the one hand and that defined by IATA Tariff Conference 3 on the other hand.

16 *North and Mid Pacific.* Includes routes via the North and Mid Pacific Ocean between on the one hand points in the Americas (i.e. IATA Tariff Conference 1) and on the other hand Asia and/or the islands adjacent thereto (i.e. IATA Tariff Conference 3 except Australia, New Zealand, Papua New Guinea and the islands of the South Pacific).

17 *South Pacific.* Includes routes via the South Pacific Ocean between on the one hand points in the Americas (i.e. IATA Tariff Conference 1) and on the other hand Australia, New Zealand, Papua New Guinea and the islands of the South Pacific.

Country or area	Local selling currency in September 1991	ISO code	Currency units per U.S. Dollar[1] 1991	1990
Afghanistan[2]	U.S. Dollar	USD	1.00	1.00
Albania[3]	Lek	ALL	5.99	5.33
Algeria	Algerian Dinar	DZD	18.11	8.92
Angola	New Kwanza	AON	62.21	29.92
Anguilla[3]	East Caribbean Dollar	XCD	2.70	2.70
Antigua and Barbuda[3]	East Caribbean Dollar	XCD	2.70	2.70
Argentina[2]	U.S. Dollar	USD	1.00	1.00
Aruba	Aruban Guilder	AWG	1.79	1.79
Australia	Australian Dollar	AUD	1.28	1.24
Austria	Schilling	ATS	12.51	10.97
Bahamas[3]	Bahamian Dollar	BSD	1.00	1.00
Bahrain	Bahraini Dinar	BHD	0.38	0.37
Bangladesh[3]	Taka	BDT	36.57	34.43
Barbados[2]	U.S. Dollar	USD	1.00	1.00
Belgium	Belgian Franc	BEF	36.61	32.08
Belize[2]	U.S. Dollar	USD	1.00	1.00
Benin	CFA Franc	XOF	303.06	262.41
Bermuda[3]	Bermudian Dollar	BMD	1.00	1.00
Bhutan	Ngultrum	BTN	25.92	17.34
Bolivia[2]	U.S. Dollar	USD	1.00	1.00
Botswana	Pula	BWP	2.08	1.79
Brazil[2]	U.S. Dollar	USD	1.00	1.00
British Virgin Islands[2]	U.S. Dollar	USD	1.00	1.00
Brunei Darussalam	Brunei Dollar	BND	1.73	1.79
Bulgaria[4]	U.S. Dollar	USD	1.00	2.93
Burkina Faso	CFA Franc	XOF	303.06	262.41
Burundi	Burundi Franc	BIF	195.37	168.27
Cambodia[2]	U.S. Dollar	USD	1.00	1.00
Cameroon	CFA Franc	XAF	303.06	262.41
Canada	Canadian Dollar	CAD	1.14	1.14
Cape Verde[2]	U.S. Dollar	USD	1.00	1.00
Cayman Islands	Cayman Islands Dollar	KYD	0.83	0.83
Central African Republic	CFA Franc	XAF	303.06	262.41
Chad	CFA Franc	XAF	303.06	262.41
Chile[2]	U.S. Dollar	USD	1.00	1.00
China	Renminbi	CNY	5.46	4.69
Colombia[2]	U.S. Dollar	USD	1.00	1.00
Comoros	Comoro Franc	KMF	303.06	262.41
Congo	CFA Franc	XAF	303.06	262.41
Cook Islands	New Zealand Dollar	NZD	1.75	1.62
Costa Rica[2]	U.S. Dollar	USD	1.00	1.00
Côte d'Ivoire	CFA Franc	XOF	303.06	262.41
Cuba	Cuban Peso	CUP	0.83	0.80

Denmark	Danish Krone	DKK	6.85	5.98
Djibouti	Djibouti Franc	DJF	173.97	176.94
Dominica[3]	East Caribbean Dollar	XCD	2.70	2.70
Dominican Republic[2]	U.S. Dollar	USD	1.00	1.00
Ecuador[2]	U.S. Dollar	USD	1.00	1.00
Egypt	Egyptian Pound	EGP	3.31	2.70
El Salvador[2]	U.S. Dollar	USD	1.00	1.00
Equatorial Guinea	CFA Franc	XAF	303.06	262.41
Ethiopia	Ethiopian Birr	ETB	2.07	2.07
Fiji	Fijian Dollar	FJD	1.49	1.46
Finland	Markka	FIM	4.31	3.69
France	French Franc	FRF	6.06	5.25
French Polynesia	CFP Franc	XPF	110.20	95.42
French Antilles	French Franc	FRF	6.06	5.25
Gabon	CFA Franc	XAF	303.06	262.41
Gambia[2]	U.S. Dollar	USD	1.00	1.00
Germany	Deutsche Mark	DEM	1.77	1.56
Ghana[2]	U.S. Dollar	USD	1.00	1.00
Greece	Drachma	GRD	195.00	154.09
Grenada[3]	East Caribbean Dollar	XCD	2.70	2.70
Guatemala[2]	U.S. Dollar	USD	1.00	1.00
Guinea[2]	U.S. Dollar	USD	1.00	1.00
Guinea-Bissau[2]	U.S. Dollar	USD	1.00	1.00
Guyana[2]	U.S. Dollar	USD	1.00	1.00
Haiti[2]	U.S. Dollar	USD	1.00	1.00
Honduras[2]	U.S. Dollar	USD	1.00	1.00
Hong Kong	Hong Kong Dollar	HKD	7.76	7.77
Hungary	Forint	HUF	78.43	64.41
Iceland[5]	Icelandic Krona	ISK	62.08	56.75
India	Indian Rupee	INR	25.92	17.34
Indonesia[2]	U.S. Dollar	USD	1.00	1.00
Iran, Islamic Republic of	Iranian Rial	IRR	600.00	66.91
Iraq	Iraqi Dinar	IQD	0.32	0.31
Ireland	Irish Pound	IEP	0.66	0.58
Israel[2]	U.S. Dollar	USD	1.00	1.00
Italy	Italian Lire	ITL	1326.01	1148.45
Jamaica[2]	U.S. Dollar	USD	1.00	1.00
Japan	Yen	JPY	137.44	148.17
Jordan	Jordanian Dinar	JOD	0.69	0.66
Kenya[4]	U.S. Dollar	USD	1.00	22.88
Kiribati	Australian Dollar	AUD	1.28	1.24
Kuwait	Kuwaiti Dinar	KWD	0.29	0.29

Luxembourg	Luxembourg Franc	LUF	36.61	32.08
Madagascar	Malagasy Franc	MGF	1965.24	1451.98
Malawi	Kwacha	MWK	2.88	2.65
Malaysia	Malaysian Ringgit	MYR	2.78	2.69
Maldives[2]	U.S. Dollar	USD	1.00	1.00
Mali	CFA Franc	XOF	303.06	262.41
Malta	Maltese Lira	MTL	0.34	0.31
Mauritania	Ouguiya	MRO	85.59	82.48
Mauritius	Mauritius Rupee	MUR	16.36	14.68
Mexico[2]	U.S. Dollar	USD	1.00	1.00
Monaco	French Franc	FRF	6.06	5.25
Mongolia[2]	U.S. Dollar	USD	1.00	1.00
Montserrat[3]	East Caribbean Dollar	XCD	2.70	2.70
Morocco	Moroccan Dirham	MAD	9.13	8.23
Mozambique	Metical	MZM	1480.58	931.22
Myanmar	Kyat	MMK	6.41	6.17
Nauru	Australian Dollar	AUD	1.28	1.24
Nepal	Nepalese Rupee	NPR	42.78	29.20
Netherlands, Kingdom of the	Guilder	NLG	1.99	1.76
Netherlands Antilles	Netherlands Antillean Guilder	ANG	1.79	1.79
New Zealand	New Zealand Dollar	NZD	1.75	1.62
Nicaragua[2]	U.S. Dollar	USD	1.00	1.00
Niger	CFA Franc	XOF	303.06	262.41
Nigeria	Naira	NGN	11.41	7.96
Norway	Norwegian Krone	NOK	6.91	6.07
Oman	Omani Rial	OMR	0.38	0.38
Pakistan	Pakistan Rupee	PKR	24.71	21.83
Panama[2]	U.S. Dollar	USD	1.00	1.00
Papua New Guinea	Kina	PGK	0.95	0.95
Paraguay[2]	U.S. Dollar	USD	1.00	1.00
Peru[2]	U.S. Dollar	USD	1.00	1.00
Philippines[2]	U.S. Dollar	USD	1.00	1.00
Poland[2]	U.S. Dollar	USD	1.00	1.00
Portugal	Portuguese Escudo	PTE	152.11	138.00
Qatar	Qatari Riyal	QAR	3.64	3.64
Republic of Korea[2]	U.S. Dollar	USD	1.00	1.00
Reunion	French Franc	FRF	6.06	5.25
Romania[4]	U.S. Dollar	USD	1.00	20.55
Rwanda	Rwanda Franc	RWF	128.90	72.77
Saint Kitts & Nevis[3]	East Caribbean Dollar	XCD	2.70	2.70
Saint Lucia[3]	East Caribbean Dollar	XCD	2.70	2.70
Saint Vincent and the Grenadines[3]	East Caribbean Dollar	XCD	2.70	2.70

Sierra Leone[2]	U.S. Dollar	USD	1.00	1.00
Singapore	Singapore Dollar	SGD	1.73	1.80
Solomon Islands	Solomon Islands Dollar	SBD	2.75	2.55
Somalia[2]	U.S. Dollar	USD	1.00	1.00
South Africa	Rand	ZAR	2.89	2.57
Spain	Spanish Peseta	ESP	110.81	96.07
Sri Lanka	Sri Lanka Rupee	LKR	41.92	39.99
Sudan	Sudanese Pound	SDP	12.30	4.50
Suriname[3]	Suriname Guilder	SRG	1.79	1.79
Swaziland	Lilangeni	SZL	2.89	2.57
Sweden	Swedish Krona	SEK	6.43	5.76
Switzerland	Swiss Franc	CHF	1.54	1.31
Syrian Arab Republic	Syrian Pound	SYP	22.00	22.00
Thailand	Baht	THB	25.57	25.19
Togo	CFA Franc	XOF	303.06	262.41
Tonga	Pa'anga	TOP	1.28	1.24
Trinidad and Tobago[2]	U.S. Dollar	USD	1.00	1.00
Tunisia	Tunisian Dinar	TND	0.99	0.86
Turkey[5]	Turkish Lira	TRL	4535.40	2680.33
Turks and Caicos Islands[2]	U.S. Dollar	USD	1.00	1.00
Tuvalu	Australian Dollar	AUD	1.28	1.24
Uganda[2]	U.S. Dollar	USD	1.00	1.00
Union of Soviet Socialist Republics[4]	U.S. Dollar	USD	1.00	0.58
United Arab Emirates	UAE Dirham	AED	3.67	3.67
United Kingdom	Pound Sterling	GBP	0.60	0.52
United Republic of Tanzania	Tanzanian Shilling	TZS	227.96	194.57
United States	U.S. Dollar	USD	1.00	1.00
Uruguay[2]	U.S. Dollar	USD	1.00	1.00
Vanuatu	Vatu	VUV	112.81	112.68
Venezuela[2]	U.S. Dollar	USD	1.00	1.00
Viet Nam[2]	U.S. Dollar	USD	1.00	1.00
Yemen[6]	Yemeni Dinar	YDD	0.46	0.46
	Yemeni Rial	YER	12.10	12.00
Yugoslavia[2]	U.S. Dollar	USD	1.00	1.00
Zaire[2]	U.S. Dollar	USD	1.00	1.00
Zambia[2]	U.S. Dollar	USD	1.00	1.00
Zimbabwe	Zimbabwe Dollar	ZWD	3.71	2.47

1. "IATA Clearing House 5-day Monthly Rate" for the month of August.
2. International fares and rates from these countries are usually quoted in U.S. dollars.
3. International fares from these countries are usually quoted in U.S. dollars whereas cargo rates are usually quoted in local currency.
4. In September 1991 international fares, and/or rates from these countries were quoted in local currency.
5. International cargo rates from these countries are usually quoted in U.S. dollars, whereas fares are usually quoted in local currency.
6. Although North and South Yemen were united into a single country, both currencies were still being used on September 1, 1991.

1. In linear regression involving two variables there is an independent variable (the X value) and a dependent variable (the Y value). The linear function or relationship between these variables is estimated by determining two constants, a and b. In this survey fares and rates were considered as the dependent variable in separate analyses, while the distance between the city-pairs over which the fare or rate applied was taken as the independent variable. Here, the terms "dependent" and "independent" connote that the variable Y (in this case the fare or rate) is assumed to depend on, and is estimated from, the value of the variable X (in this case distance).

2. The straight line which estimates best the assumed relationship between two sets of statistical data (fares and distances) is computed in linear regression by the method of "least squares". The principle of least squares states that the [equation of the] line of best fit to a set of values is the line about which the sum of the squares of the errors of estimation (i.e. the differences between the values estimated by the equation and the actual values) will be minimized.

3. There are several types of assumed relationships or "models", to which linear least squares regression techniques may be applied. One is the simple relationship $Y = a + b\,(X)$, in which Y is assumed to be a linear function of X; another is the relationship $Y = a(X^b)$, in which Y is assumed to be a function of X to some "power", i.e. b. Using logarithms, the latter relationship can be transformed into the equivalent relationship $\log Y = \log a + b\,(\log X)$, which is also a linear relationship (if the logarithms of the data are used). Least squares regression techniques may also be applied to this logarithmic relationship; the least squares technique then produces the "best" estimating relationship (minimizing the errors of estimation) in terms of the logarithms of the data.

4. In this survey, economy class normal fares/"under 45 kg" general cargo rates (Y values) were analysed as a function of distance (X values) for each of the 17 route groups and for the world. Only log linear estimates of average fares and rates were computed since these have been found to provide a better relationship statistically than the linear arithmetic form. It was further decided to show the log linear estimates plotted on arithmetic graph paper, rather than on log/log paper, to assist readers of this survey.

5. The regression equations for September 1991 by route and by fare/rate type are shown in the following two tables. While in general the levels of fares and rates for most route groups are, to a greater and lesser degree, clearly dependent on distance, for a few route groups the coefficient of the correlation is relatively low. In such cases, only data for those route groups for which a statistical test (t-test) has shown the relationship between the level of fares or rates with distance to be significant are presented in this study.

Route group		pairs	mean	mean	a	b	r
International total	WORLD	9 592	3 260	1 269	6.123	0.663	0.879
1. Between North America and Central America/Caribbean	ALL	399	2 164	798	21.319	0.461	0.851
	Northbound	204	2 150	711	26.863	0.430	0.831
	Southbound	195	2 178	729	16.407	0.497	0.874
2. Between and within Central America and the Caribbean	ALL	385	685	323	8.873	0.560	0.912
3. Between Canada, Mexico and the United States	ALL	540	1 734	594	15.410	0.494	0.846
4. Between North America/ Central America/Caribbean and South America	ALL	340	4 112	1 273	1.820	0.790	0.969
	Northbound	171	4 138	1 243	1.794	0.788	0.970
	Southbound	169	4 086	1 302	1.841	0.791	0.969
5. Local South America	ALL	207	2 085	672	2.039	0.760	0.946
6. Local Europe	ALL	2 848	1 134	844	15.470	0.569	0.773
7. Local Middle East	ALL	324	1 355	561	5.300	0.648	0.867
8. Local Africa	ALL	565	1 659	654	2.073	0.776	0.883
9. Between Europe and Middle East	ALL	546	3 265	1 537	1.999	0.820	0.842
	Northbound	275	3 263	1 687	1.183	0.895	0.835
	Southbound	271	3 267	1 383	3.447	0.741	0.907
10. Between Europe/Middle East and Africa	ALL	692	4 879	1 954	1.464	0.844	0.848
	Eastbound	341	4 862	1 681	2.788	0.751	0.815
	Westbound	351	4 896	1 219	0.795	0.932	0.911
11. North Atlantic	ALL	495	7 083	2 541	12.379	0.600	0.609
	Eastbound	241	7 071	2 608	12.795	0.599	0.654
	Westbound	254	7 094	2 477	11.792	0.602	0.586
12. Mid Atlantic	ALL	196	8 268	2 786	25.634	0.519	0.459
	Eastbound	95	8 266	2 535	104.464	0.353	0.373
	Westbound	101	8 270	3 022	6.816	0.675	0.635
13. South Atlantic	ALL	112	9 881	3 412	0.091	1.143	0.814
	Eastbound	56	9 893	3 179	4.538	0.712	0.903
	Westbound	56	9 869	3 645	0.002	1.592	0.884
14. Local Asia/Pacific	ALL	894	3 049	1 064	1.074	0.856	0.910
15. Between Europe/Middle East/Africa and Asia/Pacific	ALL	809	7 661	2 443	0.275	1.013	0.897
	Eastbound	406	7 630	2 607	0.997	0.879	0.910
	Westbound	403	7 692	2 278	0.071	1.153	0.923
16. North and Mid Pacific	ALL	191	10 618	2 359	12.562	0.564	0.599
	Eastbound	97	10 642	2 387	24.348	0.493	0.518
	Westbound	94	10 594	2 331	6.068	0.641	0.692
17. South Pacific	ALL	49	8 770	3 149	0.921	0.896	0.868
	Eastbound	25	8 677	3 160	0.412	0.985	0.874
	Westbound	24	8 867	3 137	2.314	0.794	0.872

Traffic group		pairs	mean	mean	a	b	R
International total	WORLD	7 645	3 903	5.230	0.019	0.676	0.847
1. Between North America and Central America/Caribbean	ALL	170	2 591	3.105	0.029	0.592	0.754
	Northbound	81	2 560	3.060	0.028	0.595	0.749
	Southbound	89	2 619	3.146	0.030	0.589	0.758
2. Between and within Central America and the Caribbean	ALL	216	813	1.720	0.045	0.547	0.816
3. Between Canada, Mexico and the United States	ALL	172	2 098	1.684	0.098	0.375	0.799
4. Between North America/ Central America/Caribbean and South America	ALL	310	4 527	4.863	0.018	0.668	0.916
	Northbound	155	4 516	4.262	0.027	0.608	0.928
	Southbound	155	4 537	5.464	0.012	0.732	0.931
5. Local South America	ALL	165	2 346	3.140	0.010	0.736	0.852
6. Local Europe	ALL	1 954	1 218	2.878	0.043	0.588	0.690
7. Local Middle East	ALL	299	1 332	2.046	0.020	0.641	0.825
8. Local Africa	ALL	488	1 825	2.671	0.008	0.773	0.792
9. Between Europe and Middle East	ALL	534	3 364	5.583	0.002	0.965	0.726
	Eastbound	271	3 366	6.345	0.001	1.082	0.750
	Westbound	263	3 362	4.797	0.005	0.848	0.744
10. Between Europe/Middle East and Africa	ALL	694	4 932	7.330	0.012	0.746	0.699
	Northbound	340	4 904	5.057	0.086	0.475	0.634
	Southbound	354	4 960	9.513	0.002	1.012	0.865
11. North Atlantic	ALL	511	7 175	7.964	0.062	0.543	0.359
	Eastbound	255	7 194	8.341	0.086	0.515	0.694
	Westbound	256	7 156	7.588	0.048	0.563	0.290
12. Mid Atlantic	ALL	187	8 271	11.515	0.034	0.641	0.323
	Eastbound	90	8 251	11.882	0.376	0.381	0.303
	Westbound	97	8 289	11.175	0.003	0.917	0.372
13. South Atlantic	ALL	112	9 845	13.292	0.037	0.637	0.468
	Eastbound	55	9 899	12.560	0.058	0.585	0.935
	Westbound	57	9 794	13.997	0.022	0.696	0.386
14. Local Asia/Pacific	ALL	739	3 360	4.169	0.010	0.734	0.800
15. Between Europe/Middle East/ Africa and Asia/Pacific	ALL	820	7 864	9.374	0.004	0.868	0.742
	Eastbound	416	7 842	10.798	0.019	0.702	0.707
	Westbound	404	7 887	7.908	0.001	1.038	0.844
16. North and Mid Pacific	ALL	227	10 991	9.712	1.068	0.233	0.197
	Eastbound	118	10 966	10.589	3.934	0.099	0.065
	Westbound	109	11 018	8.762	0.261	0.378	0.706
17. South Pacific	ALL	47	9 427	10.157	0.024	0.657	0.657
	Eastbound	23	9 064	9.985	0.020	0.678	0.538
	Westbound	24	9 744	10.322	0.033	0.628	0.915

- END -

the various series of publications in the air transport field issued by the International Civil Aviation Organization:

International Standards and Recommended Practices on Facilitation *(designated as Annex 9 to the Convention)* which are adopted by the Council in accordance with Articles 37, 54 and 90 of the Convention on International Civil Aviation. The uniform observance of the specifications contained in the International Standards on Facilitation is recognized as practicable and as necessary to facilitate and improve some aspect of international air navigation, while the observance of any specification contained in the Recommended Practices is recognized as generally practicable and as highly desirable to facilitate and improve some aspect of international air navigation. Any differences between the national regulations and practices of a State and those established by an International Standard must be notified to the Council in accordance with Article 38 of the Convention. The Council has also invited Contracting States to notify differences from the provisions of the Recommended Practices;

Council Statements on policy relating to air transport questions, such as the economics of airports and en-route air navigation facilities, taxation and aims in the field of facilitation;

Digests of Statistics which are issued on a regular basis, presenting the statistical information received from Contracting States on their civil aviation activities;

Circulars providing specialized information of interest to Contracting States. They include regional studies on the development of international air passenger, freight and mail traffic and specialized studies of a world-wide nature;

Manuals providing information or guidance to Contracting States on such questions as airport and air navigation facility tariffs, air traffic forecasting techniques and air transport statistics.

Also of interest to Contracting States are reports of meetings in the air transport field, such as sessions of the Facilitation Division and the Statistics Division and conferences on the economics of airports and air navigation facilities. Supplements to these reports are issued, indicating the action taken by the Council on the meeting recommendations, many of which are addressed to Contracting States.

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