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Review of maritime transport, 1971

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Review of maritime transport, 1971

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References to "tons" indicate long tons (2240 lbs), unless otherwise specified.

A dash (—) indicates that the amount is nil, or less than half the unit used.

Two dots (. .) indicate that data are not available, or are not separately reported.

A full stop (.) is used to indicate decimals.

Use of a hyphen between years, e.g., 1965-1966, indicates the full period involved, including the beginning and end years.

An oblique stroke (/) between years indicates a season or crop year, e.g., 1965/66.

Details and percentages in tables do not necessarily add up to totals, because of rounding.

Reference to dollars ($) indicates U.S. dollars, unless otherwise stated.

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ABBREVIATIONS

Names of organizations

ECA	Economic Commission for Africa
ECE	Economic Commission for Europe
EEC	European Economic Community
FAO	Food and Agriculture Organization of the United Nations
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMCO	Inter-Governmental Maritime Consultative Organization
ISO	International Organization for Standardization
OAU	Organization of African Unity

Other abbreviations

c.i.f.	Cost, insurance, freight
dwt	Deadweight tons
f.o.b.	Free on board
grt	Gross registered tons
LASH	Lighter aboard ship
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
n.e.s.	Not elsewhere specified
OBO	ore/bulk/oil
O/O	ore/oil
RSSI	Ribbed smoked sheet No. I (rubber)
VLCC	Very large crude carrier
W/M	Weight or measurement, whichever basis produces the highest revenue
F/T	Freight-ton

INTRODUCTION

1. This review has been prepared by the UNCTAD secretariat in accordance with item V of the programme of work of the Committee on Shipping.[1]

2. The purpose of this review is to present statistical evidence of developments in international maritime transport and to comment on these developments, with special reference to factors affecting the trade and shipping of developing countries.

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[1] See *Official Records of the Trade and Development Board, Fifth Session, Supplement No.* 2, (TD/B/116/Rev.1-TD/B/C.4/30/Rev.1), annex II.

Chapter I

THE VOLUME OF INTERNATIONAL SEABORNE TRADE

3. As illustrated in table 1, the volume of international seaborne trade amounted in 1970 to 2,530 million metric tons which represents an increase of 11 per cent over the previous year; this is the largest annual increase since 1965. Tanker cargo amounted to 1,410 million metric tons and dry cargo to 1,110 million metric tons; for tanker cargo, this is an increase of 11 per cent and for dry cargo of 12 per cent over the previous year. Tanker cargo now accounts for 55.7 per cent of total cargo loadings.

4. The rate of increase of the main bulk commodities in the dry cargo trade (i.e., iron-ore, grain, coal, bauxite and alumina and phosphate) was considerably greater than that of the dry cargo trade as a whole. Indeed, oceanborne cargo loadings of these commodities combined amounted in 1970 to 488 million metric tons, as compared to 419 million metric tons in 1969. This increase of 16 per cent is the largest annual increase in main bulk commodities traded since 1961 (first year for which data are available). These main bulk commodities now represent 43.6 per cent of total dry cargo loadings, which figure may be compared with the 42.5 per cent recorded in 1965 and 41.9 per cent in 1969.

5. Parallel to the rapid increase in international seaborne trade, there has been a considerable increase in the size of the world fleet while the composition of the latter has also changed considerably, both in response to shifts in the cargo composition of seaborne trade and

TABLE 1

Development of world international seaborne trade,[a] 1955-1970

(Goods loaded)

Year	Tanker cargo		Dry cargo				Total (all goods)	
			Total		Of which: main bulk commodities[b]			
	Million metric tons	Percentage increase/ decrease over previous year	Million metric tons	Percentage increase/ decrease over previous year	Million metric tons	Percentage increase/ decrease over previous year	Million metric tons	Percentage increase/ decrease over previous year
1955	350	9	450	15	..	—	800	13
1956	390	11	490	9	..	..	880	10
1957	420	8	510	4	..	..	930	6
1958	440	5	480	−6	..	..	920	−1
1959	480	9	490	2	..	..	970	5
1960	540	13	540	10	228	..	1,080	11
1961	580	7	570	6	239	5	1,150	6
1962	650	12	600	5	246	3	1,250	9
1963	710	9	640	7	269	9	1,350	8
1964	790	11	720	13	308	14	1,510	12
1965	870	10	770	7	327	6	1,640	9
1966	950	9	820	6	340	4	1,770	8
1967	1,020	7	850	4	352	4	1,870	6
1968	1,140	12	930	9	384	9	2,070	11
1969	1,270	11	1,000	8	419	9	2,270	10
1970[c]	1,410	11	1,120	12	488	16	2,530	11

Sources: for tanker cargo, total dry cargo and all goods: United Nations, *Monthly Bulletin of Statistics*, January issues; for main bulk commodities: Fearnley and Egers Chartering Co. Ltd., *Trades of World Bulk Carriers in 1970* (Oslo, 1971).

[a] Excluding international cargoes loaded at ports of the Great Lakes and St. Lawrence system for unloading at ports of the same system. Including petroleum imports into Netherlands Antilles and Trinidad for refining and re-export.

[b] Data on iron-ore, grain, coal, bauxite and alumina, and phosphates; figures before 1960 not available.

[c] Provisional.

TABLE 2

International seaborne trade,[a] 1965, 1968, 1969 and 1970 [b] shares of groups of countries [c, d]

(Percentages of world total)

Groups of countries	1965				1968				1969				1970
	Crude petroleum	*Petroleum products*	*Dry cargo*	*Total all goods*	*Crude petroleum*	*Petroleum products*	*Dry cargo*	*Total all goods*	*Crude petroleum*	*Petroleum products*	*Dry cargo*	*Total all goods*	*Total all goods*
A. GOODS LOADED													
						Million metric tons							
World total	622	242.3	768.6	1,632.9	855.8	278.5	930	2,064.3	974.5	296.0	999.3	2,269.8	2,464.7
Percentage share of each category of goods in the total	(38.1)	(14.8)	(47.1)	(100)	(41.5)	(13.5)	(45)	(100)	(42.9)	(13)	(44)	(100)	(100)
						Percentages							
World total	100	100	100	100	100	100	100	100	100	100	100	100	100
Developed market-economy countries (excluding Southern Europe)	0.1	23	53.5	28.6	0.5	23.6	55.7	28.5	0.7	24.8	54.8	27.7	30
Southern Europe	—	0.3	2.4	1.2	—	2.3	2.2	1.3	—	1.9	2.5	1.3	1.3
Socialist countries of Eastern Europe and Asia	4.6	8.9	8.1	6.9	4	10.1	8.9	7	3.7	8.5	8.8	6.6	6.2
Developing countries, total	95.3	67.8	35.9	63.3	95.5	64	33.2	63.2	95.6	64.7	33.8	64.4	62.4
of which:													
in Africa	16	1.7	10.6	11.3	21.1	1.4	10	13.5	24.2	3	10	15.2	15.3
in Asia	58.4	23.3	9.2	30	58.5	25.4	8.8	31.6	57.3	25.4	9	31.9	29.7
in Latin America and Caribbean	21	42.8	15.3	21.6	15.9	37.2	13.5	17.7	14.1	36.3	13.9	16.9	17
in Oceania	—	—	0.7	0.4	—	—	0.9	0.4	—	—	0.9	0.4	0.4
B. GOODS UNLOADED													
						Million metric tons							
World total	622	221.7	793.5	1,637.2	859.6	246.3	932.7	2,038.6	957.8	277.4	988.5	2,223.7	2,483.7
Percentage share of each category of goods in the total	(38)	(13.5)	(48.5)	(100)	(42.2)	(12.1)	(45.8)	(100)	(43.1)	(12.5)	(44.4)	(100)	(100)
						Percentages							
World total	100	100	100	100	100	100	100	100	100	100	100	100	100
Developed market-economy countries (excluding Southern Europe)	76.4	77	72.3	74.5	77.9	75.8	74.3	76	77.8	75.7	74.4	76	77
Southern Europe	2.5	2	4.2	3.3	3.8	1.9	3.3	3.4	3.4	3.1	3.9	3.6	3.6
Socialist countries of Eastern Europe and Asia	0.4	1	5.9	3.2	0.5	1.3	5	2.6	1	1.3	4.8	2.7	2.9
Developing countries, total	20.7	20	17.6	19.1	17.8	21	17.4	18	17.7	19.9	16.9	17.6	16.5
of which:													
in Africa	2.5	5.1	4.1	3.7	2.1	4.7	3.5	3.1	2	4.6	3.6	3	2.8
in Asia	5.5	8.5	9	7.6	6.1	9.5	9.3	7.9	6.3	9.2	8.7	7.7	7.3
in Latin America and Caribbean	12.7	6	4.3	7.7	9.6	6.1	4.4	6.8	9.4	5.6	4.3	6.7	6.3
in Oceania	—	0.4	0.2	0.2	—	0.7	0.2	0.2	—	0.5	0.2	0.2	0.1

Source: United Nations estimated data; the world totals do not correspond exactly to the rounded totals in table 1.

[a] See *note a* to table 1. Great Lakes and St. Lawrence Seaway trade (in dry cargo) amounted to 37 million tons in 1965, 36 million tons in 1968, 37 million tons in 1969 and 42 million tons in 1970.

[b] Preliminary figures for 1970; break-down by type of cargo for 1970 not yet available.

[c] Derived from table I in annex II; 1970 figures estimated from data in United Nations, *Monthly Bulletin of Statistics*, November 1971 and January 1972 issues.

[d] See annex I for the composition of these groups.

as a result of technological developments. These developments in the size and composition of the world fleet are discussed in chapter II.

6. Table 2 shows the percentage shares of various groups of countries[2] in international seaborne loadings and unloadings.[3] The absolute figures on which this table is based are presented in table I in annex II which also shows a more detailed breakdown according to geographical areas.

7. The aggregate share of developing countries in seaborne loadings of all goods increased from 63.3 per cent in 1965 to 64.4 per cent in 1969.[4] There have also been some changes in the relative percentage shares of groups of developing countries. There is a noticeable increasing trend for developing countries in Africa (1965: 11.3; 1968: 13.5; 1969: 15.2; 1970: 15.3 per cent) and a marked decreasing trend for developing countries in Latin America and the Caribbean (1965: 21.6; 1968: 17.7; 1969: 16.9; 1970: 17 per cent); developing countries in Asia and Oceania, on the other hand, have maintained about the same share.

8. With respect to the various categories of goods loaded, the share of developing countries in crude petroleum loadings has remained about the same since 1965 at slightly over 95 per cent. There are noticeable decreasing trends, however, in the relative shares of developing countries in loadings of petroleum products and of dry cargo, i.e. petroleum products: 1965: 67.8; 1968: 64; 1969: 64.7 per cent, and dry cargo—1965: 35.9; 1968: 33.2; 1969: 33.8 per cent.

9. The relative shares of developed market-economy countries, countries of southern Europe and socialist countries of eastern Europe and Asia as well as the relative percentage shares of these groups of countries with respect to the various categories of goods loaded have not changed greatly since 1965.

[2] See annex I for the composition of the groups of countries referred to.

[3] Data are shown in table 2 for the years 1965, 1968, 1969 and 1970; however, a breakdown by type of cargo was not yet available for 1970 at the time of publication of this document. Hence, comments in the text regarding the different types of cargo refer to the period 1965 to 1969 only.

[4] The figure given for 1970 in table 2 is 62.4 per cent, but this is a preliminary estimate.

10. The aggregate share of developing countries in unloadings of international seaborne cargos shows a decreasing trend since 1965, the relative percentage figures being as follows: 1965: 19.1; 1968: 18; 1969: 17.6; 1970: 16.5. This decreasing trend is also noticeable with respect to unloadings of both crude petroleum and dry cargo, while for petroleum products the percentage share has remained about the same since 1965.

11. The relative shares in total unloadings of cargo of developed market-economy countries show a marked upward trend (1965: 74.5; 1968: 76; 1969: 76; 1970: 77 per cent); there is also a slight upward trend in the case of the countries of southern Europe (1965: 3.3; 1968: 3.4; 1969: 3.6; 1970: 3.6 per cent) while for the Socialist countries of Eastern Europe and Asia the relative percentage share has somewhat decreased since 1965 (1965: 3.2; 1968: 2.6; 1969: 2.7; 1970: 2.9).

12. The relative changes in percentage shares in loadings and unloadings of various categories of goods by groups of developing countries, i.e. in Africa, Asia, Latin America and the Caribbean and Oceania are also shown in table 2.

13. It may also be observed from table 2 that there has been a steady increase in the percentage share of crude petroleum in aggregate cargo loadings and unloadings from approximately 38 per cent in 1965 to approximately 43 per cent in 1969; the percentage shares of petroleum products and dry cargo have been decreasing correspondingly.

14. Table 3 shows the growth of international seaborne trade by groups of countries and by category of goods in the form of indices for loadings and for unloadings, 1965 being used as the base year. The table shows that international seaborne trade has increased by close to 50 per cent since 1965. This increase, however, has occurred mainly with respect to developed market-economy countries (indices for 1970: loadings: 156; unloadings: 154) and countries in southern Europe (indices for 1970: loadings: 168; unloadings: 163). The increases have been considerably smaller both for socialist countries of Eastern Europe and Asia (indices for 1970: loadings: 134; unloadings 136) and for developing countries (indices for 1970: loadings: 146; unloadings: 129).

TABLE 3

Growth of international seaborne trade [a], classified by types of cargo (1965-1969) and groups of countries [b, c]

(1965=100)

Groups of countries	A. Goods loaded 1969				B. Goods unloaded 1969				Goods loaded 1970	Goods unloaded 1970
	Crude petroleum	Petroleum products	Dry cargo	All goods	Crude petroleum	Petroleum products	Dry cargo	All goods	All goods	All goods
World total	157	122	130	139	154	125	125	136	148	149
Developed market-economy countries (excluding southern Europe)	[d]	132	133	134	157	123	128	139	156	154
Southern Europe	—	[e]	135	158	208	195	118	151	168	163
Socialist countries of Eastern Europe and Asia	126	117	140	132	369	159	100	116	134	136
Developing countries, total	157	117	122	141	132	124	119	125	146	129
of which										
in Africa	237	212	123	186	118	110	109	112	200	116
in Asia	154	133	127	147	178	135	120	138	147	143
in Latin America and Caribbean	106	104	118	109	115	117	126	118	117	122
in Oceania	—	—	155	155	—	156	124	140	161	140

Source: see table 2.

[a] See foot note *a* to table 1. Great Lakes and St. Lawrence trade (in dry cargo) amounted to 37 million tons in 1965 and in 1969, and to 42 million tons in 1970.

[b] Derived from table I in annex II. 1970 figures estimated from data in United Nations, *Monthly Bulletin of Statistics*, November, 1971 and January 1972 issues.

[c] See annex I for the composition of these groups.

[d] Crude petroleum loadings in developed market-economy countries (excluding southern Europe) amounted to 0.4 million metric tons in 1965 and to 6.5 million metric tons in 1969.

[e] Loadings of petroleum products in southern Europe amounted to 0.8 million metric tons in 1965 and to 5.6 million metric tons in 1969.

Chapter II

THE DEVELOPMENT OF THE WORLD MERCHANT FLEET

A. Size, composition, flag and age distribution

15. Table 4 shows the development of the world active seagoing merchant fleet since 1955. Total world tonnage (grt) was 2.9 times as large in 1971 as it was in 1955 with the greatest increase—relative to 1955—occurring in the tanker fleet; in 1971 the tanker fleet was in fact 3.5 times as large as in 1955, whereas for other ships the factor of increase was 2.5 (all in grt). Accordingly, during the same period, the relative share of the tanker fleet in total tonnage grt increased from 31.3 to 40.1 per cent.

16. The increase in the world commercial fleet during the past one and a half decades was not evenly distributed between groups of countries. For the period 1965-1971 this is illustrated in table 5, which also shows absolute tonnages as well as relative shares of groups of countries in 1965, 1969, 1970 and 1971 and data related to the absolute and relative increases in tonnage.

17. Between 1965 and 1971, the share of the developed market-economy countries decreased from 61.8 to 55.8 per cent. This may be partly explained by the increase in the relative combined share of Liberia and

TABLE 4

World shipping tonnage,[a, b] 1955-1971

(Mid-year figures)

Year	Tankers		Other ships[c]		Total	
	Million grt	Million dwt	Million grt	Million dwt	Million grt	Million dwt
1955	26.4	—	56.3	—	82.7	—.
1956	27.8	—	59.3	—	87.1	—
1957	29.9	—	64.1	—	94	—
1958	33.1	—	67.1	—	100.3	—
1959	37.3	—	69.7	—	107	—
1960	40.8	62.9	71.6	94.8	112.4	157.7
1961	43.1	65.4	76.3	98.7	119.3	164.1
1962	44.7	69	79.6	102.9	124.2	171.9
1963	46.5	72.1	83.7	109.3	130.1	181.4
1964	49.9	77.2	87.9	113.7	137.8	190.9
1965	54.4	86.1	92.1	118.4	146.8	204.5
1966	59.8	94.4	99.2	126.7	159	221.1
1967	63.9	102.5	107.2	138.4	171.1	240.9
1968	68.9	112.6	115	149.5	184	262.1
1969	77.1	127	125	161.3	202	288.3
1970	85.8	148	132.1	178.1	217.9	326.1
1971	95.9	169	143.1	196.2	239	365.2

Sources: Lloyd's Register of Shipping Statistical Tables, 1955-1971, and supplementary data regarding the United States Reserve fleet and the Great Lakes fleets of the United States and Canada published by the United States Department of Commerce, Maritime Administration. Figures in dwt up to and including 1969 are based on data from Institute of Shipping Economics, *Statistik der Schiffahrt* (Bremen).

[a] Excluding the United States Reserve Fleet and the Great Lakes fleets of the United States and Canada (see table 5, foot note *a* for various estimates of these fleets).

[b] Up to and including 1969, figures in grt are not strictly comparable with those in dwt, as the grt series (based on *Lloyd's Register of Shipping*) refers to all commercial vessels (including e.g. fishing and research ships) of 100 grt and above while the dwt series (based on *Statistik der Schiffahrt*) includes only sea-going cargo and/or passenger-carrying vessels and tonnage for commercial purposes of 300 grt and over.

[c] Ore and bulk carriers (including combined ore/bulk/oil carriers) comprised in this group amounted to the following tonnages (in million grt): 1964: 14.2; 1965: 16.3; 1966: 20.7; 1967: 26.4; 1968: 32.2; 1969: 39; 1970: 43.9 and 1971: 51. Figures for previous years are not available.

TABLE 5

Distribution of world tonnage (grt) by flag of registration [a], 1965, 1969, 1970 and 1971

(Mid-year figures)

Flags of registration in groups of countries[b]	Tonnage (million grt)				Shares of world tonnage (percentage)				Increase in tonnage				
									1965-1971			1970-1971	
	1965	1969	1970[c]	1971[d]	1965	1969	1970[e]	1971[f]	In million grt	Share in world total increase (percentage)	Index 1971 (1965=100)	In million grt	Share in world total increase (percentage)
World total	146.8	202	217.9	239	100	100	100	100	92.2	100	163	21.1	100
Developed market-economy countries (excluding southern Europe)	90.6	118.5	124.2	133.5	61.8	56.6	57	55.8	42.9	46.5	147	9.3	44.1
Liberia, Panama[g]	22	34.6	38.9	44.8	15	17.1	17.9	18.7	22.8	24.8	204	5.9	28
Southern Europe	11.7	15.6	18.7	21.7	8	7.7	8.6	9	10	10.8	185	3	14.2
Socialist countries of eastern Europe and Asia	10.9	18.1	19.5	21.3	7.4	9	8.9	8.9	10.4	11.3	185	1.8	8.5
Developing countries[h] total	11.4	15.3	16.6	17.7	7.8	7.6	7.6	7.4	6.3	6.8	155	1.1	5.2
of which:													
in Africa	0.6	1.1	1.2	1.6	0.4	0.6	0.6	0.7	1.0	1.1	266	0.4	1.9
in Asia	6.3	8.9	9.6	10	4.3	4.4	4.4	4.2	3.7	4	159	0.4	1.9
in Latin America and the Caribbean	4.6	5.2	5.7	6	3.1	2.6	2.6	2.5	1.4	1.5	130	0.3	1.4

Source: compiled from *Lloyd's Register of Shipping Statistical Tables* (London) and supplementary data.

[a] Excluding, respectively in 1965, 1969, 1970 and 1971
(i) United States Reserve fleet of about 10.4, 6.6, 6.3 and 5 million grt.
(ii) United States Great Lakes fleet of 2, 1.8, 1.7 and 1.7 million grt.
(iii) Canadian Great Lakes fleet of 1.2, 1.6, 1.5 and 1.5 million grt.

[b] Tonnage by individual countries and by type of ships as at 1 July 1971 is shown in annex II, table II.

[c] In million dwt., this column reads, from top to bottom: 326.1, 186.4, 67.5, 21.7, 23.2, 1.6, 14 and 7.5.

[d] In million dwt., this column reads from top to bottom: 315.1, 204.9, 78.9, 32.9, 23.6, 24.9, 2.1, 14.7 and 8.

[e] Based on dwt, this column reads, from top to bottom: 100, 57.2, 20.7, 8.4, 6.7, 7.1, 0.5, 4.3 and 2.3.

[f] Based on dwt, this column reads, from top to bottom: 100, 56.1, 21.6, 9, 6.4, 6.9, 0.5, 4.1 and 2.3.

[g] Tonnage under these two flags is shown separately, since it is believed that most of it is effectively controlled by interests foreign to these countries.

[h] Excluding Liberia and Panama.

Panama—from 15 to 18.7 per cent—since a large part of the fleets registered in these two countries is owned by residents of developed market economy countries. The relative share of the countries of southern Europe increased from 8 to 9 per cent while that of the socialist countries of eastern Europe and Asia increased from 7.4 to 8.9 per cent.

18. The relative share of the developing countries, as a group, declined from 7.8 per cent in 1965 to 7.4 per cent in 1971;[5] this resulted from an increase in the relative share of the developing countries in Africa over the same period from 0.4 to 0.7 per cent, a decrease in the relative shares of the developing countries in Asia from 4.3 to 4.2 per cent and in those of developing countries in Latin America and the Caribbean from 3.1 to 2.5 per cent.

19. Table 5 also illustrates the relative shares of groups of countries in the world tonnage increase between 1965 and 1971 which were as follows: developed market-economy countries: 46.5 per cent; Liberia and Panama combined: 24.8 per cent; southern Europe: 10.8 per cent; socialist countries of Eastern Europe and Asia: 11.3 per cent and developing countries: 6.8 per cent.

20. The relative percentage shares in the total world tonnage increases between 1970 and 1971 for the various groups of countries mentioned in the preceding paragraph are considerably different and are: 44.1 for the

[5] The share of developing countries in the world *liner and tramp fleets* (excluding full container vessels, "roll-on/roll-off" ships, barge carrying vessels and bulk carriers) amounted to 12.2 per cent as at 1 July 1971 (based on deadweight tonnage of vessels of 2,500 dwt and over). This may be broken down as follows:

	Percentage
Liners of between 2,500 and 6,000 dwt	12.1
Liners of over 6,000 dwt	14
Tramps of between 2,500 and 6,000 dwt	11
Tramps of over 6,000 dwt	10.6

The share of developing countries in the *liner* tonnage of the following particular routes as at 1 July 1971 was as follows (based on number of vessels of 6,000 dwt and over):

	Percentage
Far East—Persian Gulf/Pakistan, West Coast India	28
Mediterranean—East Coast South America	24
North West Europe—East Coast South America	15
North West Europe—West Coast America	14

Source: World Liner and Tramp Fleets, compiled by the Maritime Research Centre, The Hague, and published by Seatrade Publications, London.

developed market-economy countries, 28 for Liberia and Panama combined, 14.2 for southern Europe, 8.5 for the socialist countries of Eastern Europe and Asia and 5.2 for the developing countries. The relative share of the developing countries as a group in the world tonnage increase during last year will be seen to be considerably smaller than their share for the period 1965 to 1971 (5.2 as compared with 6.8 per cent).

21. Table 5 also shows an index of the merchant fleets of groups of countries in 1971, with base year 1965. This index should be interpreted with great care as the absolute tonnage figures in the base year in some countries may have been very small and thus small changes in tonnage in absolute terms appear relatively large; this is the case, for instance, for the developing countries in Africa.

22. Table 6 shows the shares in world tonnage (grt) of groups of countries, by type of vessel, as at 1 July 1971.

23. The index in table 6 shows that the total world fleet increased by 63 per cent between 1965 and 1971; for tankers, the increase was 76 per cent, for ore and bulk carriers 212 per cent and for all other ships combined 21 per cent.

24. The share in the world merchant fleet as at 1 July 1971 of various categories of ships was as follows: tankers: 40.1 per cent; ore and bulk carriers (including combined carriers): 21.3 per cent; general cargo ships: 28 per cent; container ships: 1.2 per cent and other ships: 9.3 per cent. As compared with the preceding year, there was an increase in the percentage share of all categories of ships mentioned except general cargo ships, whose share declined from 30.2 to 28.1 per cent, and "other ships", whose share did not change.

25. The share in world tonnage as at 1 July 1971 for developed market-economy countries and Liberia and Panama combined amounted to 74.5 per cent; for countries in southern Europe to 9.1 per cent; for the

TABLE 6

Share of world tonnage (grt) by type of vessel as at 1 July 1971 [a]

	All ships[b]	*Tankers*[b]	*Ore and bulk carriers*[c]	*General cargo*[b,d]	*Container ships*[b]	*Other ships*[b]
Share of total tonnage, 1969, 1970 and 1971 (percentage)						
World total:						
1971	100	40.1	21.3	28.1	1.2	9.3
1970	100	39.4	20.2	30.2	0.9	9.3
1969	100	38.1	19.3		42.5[e]	
Tonnage increase, index 1971 (1965 = 100)						
World total	163	176	312		121[e]	
Shares of groups of countries in total tonnage[f] *in each class, 1971 (percentage)*						
World total	100	100	100	100	100	100
Developed market-economy countries (excluding southern Europe)	55.8	57.2	60.6	49.9	96.8	51.4
Liberia, Panama	18.7	26.7	25.1	8.2	2.9	3.8
Southern Europe	9.1	7.4	7.1	13.9	0.3	7.5
Socialist countries of Eastern Europe and Asia	8.9	4.4	2.3	13.5	—	30.9
Developing countries, excluding Liberia, Panama; total:	7.4	4.3	4.9	14.4	—	6.4
of which:						
in Africa	0.6	0.3	—	1.6	—	0.9
in Asia	4.2	1.9	3.8	8.4	—	2.6
in Latin America and the Caribbean	2.5	2.1	1.1	4.2	—	3.8

Source: compiled from *Lloyd's Register of Shipping Statistical Tables, 1971* (London) and supplementary information on the United States Reserve fleet and the United States and Canadian fleets.

[a] Excluding Great Lakes fleets of the United States of America and of Canada (3.2 million grt combined of which 2.7 million grt bulk carriers) and the United States Reserve Fleet, (estimated at 5 million grt, of which 0.2 million grt tankers, 0.1 million grt bulk carriers, and 4.7 million grt other ships).

[b] Vessels of 100 grt and more.

[c] Ore and bulk carriers of 6,000 grt and more including combined ore/oil, ore/bulk/oil carriers; combined carriers amounted in 1971 to 240 ships with a total tonnage of 10,672,516 grt.

[d] This category includes both liners and tramps.

[e] Figure referring to combined tonnage of the last three categories.

[f] The percentage figures on a dwt basis do not differ significantly from those in this part of the table.

TABLE 7

Age distribution of the world merchant fleet as at 1 July 1971 [a]

(Percentage of total tonnage (grt) of each group)

	Total	Age groups (years)					
		0-4	5-9	10-14	15-19	20-24	25 and over
World total	100	38	23	18	10	5	6
By groups of countries:							
Developed market-economy countries (excluding southern Europe)	100	47	27	15	3	4	5
Liberia, Panama	100	36	19	22	13	5	5
Southern Europe	100	29	12	18	16	8	16
Socialist countries of eastern Europe and Asia	100	31	35	17	8	2	7
Developing countries total	100	19	12	26	32	6	4
By type of ship:							
Tankers	100	39	24	20	11	3	3
Bulk carriers[b]	100	57	27	11	3	1	2
Other ships	100	27	19	20	13	9	13

Source: compiled from *Lloyd's Register of Shipping Statistical Tables, 1971* (London) and supplementary data.

[a] Excludes vessels of less than 100 grt; also excludes the United States Reserve fleet and United States and Canadian Great Lakes tonnage (estimated age distribution).

[b] Ore and bulk carriers of 6,000 grt and more, including combined ore/bulk/oil carriers.

socialist countries of eastern Europe and Asia to 8.9 per cent and for the developing countries to 7.4 per cent. This last indicated percentage share was divided between developing countries in various regions as follows: Africa: 0.6 per cent; Asia: 4.2 per cent; Latin America and the Caribbean: 2.5 per cent.

26. The relative shares of developing countries as a group in the world total tonnage by categories of ships was as follows: tankers: 4.3 per cent; ore and bulk carriers: 4.9 per cent; general cargo: 14.4 per cent and, "other ships": 6.4 per cent; it will be noted that no container ships have as yet been registered in developing countries. It may also be noted that the relative shares of developing countries in world tonnage have declined —as compared to last year—with respect to every category of ship except general cargo ships and other ships.[6]

27. A detailed breakdown of world tonnage (grt and dwt) as at 1 July 1971, according to individual flags and by type of ships, is presented in annex II, table II; the distribution by groups of countries is shown in annex II, table III.

28. The age distribution of the world merchant fleet as at 1 July 1971, by group of countries and by type of ship, is shown in table 7. The differences in the percentage distribution shown in this table, when compared with similar tables published in earlier issues of the *Review of Maritime Transport,* are of course a reflection of the different rates of growth of the merchant fleets of the various groups of countries with respect to each type of vessel as illustrated in tables 5 and 6.

29. Table 7 shows that 38 per cent of the world merchant fleet at present consists of vessels less than five years old and 79 per cent of vessels less than fifteen years old; these percentages are practically identical to those of the previous year, i.e. 37 and 78 per cent. In 1968, however, the corresponding proportions were 33 and 75 per cent, so that a tendency towards a "rejuvenation" of the world fleet will be noted. One factor which appears to contribute to this tendency is the more rapid rate of obsolescence of existing vessels as a result of the introduction of new technology in ocean shipping, a development which has been very marked during recent years. Furthermore, as the above percentages are based on tonnage and the size of new ships has increased rapidly, the proportion of newer tonnage is tending also to increase.

30. The developed market-economy countries have the largest proportion of vessels under five years of age, i.e. 47 per cent. The proportion of the fleets of developing countries which consists of vessels under five years old is only 19 per cent, as a sizable portion of the fleet of many of these countries is composed of second-hand and older tonnage. It will be noted in particular that the developing countries have the lowest percentage of recently built tonnage of all the groups of countries shown in table 7.

31. With regard to the different types of vessels, the largest proportion of tonnage less than five years old is in the bulk carrier fleet (including combined carriers)

[6] See *Review of Maritime Transport, 1970* (United Nations publication, Sales No.: E.71.II.D.8)

with 57 per cent; for tankers the proportion is 39 per cent and for other ships it is 27 per cent.

B. Size of individual fleets of developing countries[7, 8]

32. As at 1 July 1971, merchant fleets registered in ten countries had a tonnage in excess of 10 million dwt. These countries are, in order of importance (dwt tonnages excess of 10 million dwt. These countries are, in order of importance (dwt tonnages is shown between brackets): Liberia (69,121,359), Japan (47,475,601), United Kingdom (41,639,025), Norway (35,970,035), United States of America (14,515,057), Greece (20,870,571), Union of Soviet Socialist Republics (16,523,059), Federal Republic of Germany (13,673,638), Italy (11,696,036), France (10,569,644).

33. The concentration of a large portion of world tonnage in a very few countries is illustrated by the fact that, as a group, the ten countries mentioned above now have a total of 282 million dwt (77.2 per cent of the present world merchant fleet). The share of these ten countries in the world fleet has continuously increased so that their domination of the shipping scene is now greater than it was, say, in 1965.

34. The merchant fleets of developing countries, excluding Liberia and Panama, are of much smaller magnitude but the following had merchant fleets in excess of 500,000 dwt as at 1 July 1971:

	Thousand grt	*Thousand dwt*
India	2,478	3,906
Brazil	1,731	2,521
Argentina	1,312	1,690
Republic of Korea	940	1,460
Philippines	946	1,338
Kuwait	647	1,056
Israel	646	927
Somalia	593	892
Hong Kong	572	843
Pakistan	582	800
Singapore	582	771
Indonesia	619	727
Mexico	401	559
Venezuela	412	559
Chile	388	563
Cuba	385	506

C. Shipbuilding

35. The growth of the world shipbuilding industry between 1965 and 1970 is reflected in table 8, which shows tonnage completed by country of construction in groups of countries. During this period annual completions increased from 12,006,000 grt to 20,980,000 grt, an increase of close to 75 per cent.

36. During 1970, of the total world tonnage completed, 47.8 per cent consisted of tankers, 25.6 per cent of bulk carriers (including combined carriers), 17.7 per cent of general cargo ships and 8.9 per cent of other ships.

37. During 1970, as compared with 1969, total tonnage completed increased in every group of countries shown, including developing countries as a group. There was a decline, however, in completions in developing countries in Latin America and the Caribbean, from 107,000 grt in 1969 to 98,000 grt in 1970.

38. Japan maintained its position as the biggest shipbuilding nation, 48.1 per cent of world tonnage completed in 1970 having been built in that country. Japan's share in completions of bulk carriers (including combined carriers) amounted to 60 per cent and in tankers to 50.9 per cent of world tonnage completions).

39. There were only small changes in the relative percentage shares of each group of countries in total completions in 1970 as compared with 1969.[9]

40. During 1970, completions of new tonnage in developing countries amounted to a total of 233,000 grt: 58,000 grt of tankers, 35,000 grt of bulk carriers, 96,000 grt of general cargo ships and 44,000 grt of other ships. Developing countries in Asia had the largest share in this total, and completions in the region included tonnage of each of the main types of ships (tankers: 56,000 grt; bulk carriers: 35,000 grt; general cargo ships: 27,000 grt and other ships: 14,000 grt). Developing countries in Latin America and the Caribbean completed mainly general cargo ships (66,000 grt) and other ships (30,000 grt) while developing countries in Africa completed only 3,000 grt of general cargo ships.

D. Tonnage on order

41. Table 9 shows world tonnage on order as at 31 October 1971 which amounted to 171.6 million dwt. This represents an increase of 30 per cent over world tonnage on order one year earlier.

42. The fact that tonnage on order at present amounts to about 47 per cent of the present world fleet gives an idea of the rapid expansion of the world merchant fleet which may be expected in the near future.[10] In considering the importance of the tonnage on order, it is necessary to take into account not only the expected expansion of world trade, but also the more rapid rate of obsolescence of vessels as a result of rapidly changing technologies in ocean shipping with resepect to practically all types of ships.

43. As compared with the situation one year earlier[11] the share of developed market-economy countries in

[7] Annex II, table II shows the distribution of world tonnage by flag of registration and by type of ship, in order of size of fleets, as at 1 July 1971; annex II, table III shows the distribution by geographical areas, also by type of ship. Both tables are in grt, supplemented, as far as possible, by dwt figures. It is to be noted that, while the combined total of the fleets with the smallest tonnage (dwt) comprises only (about) 1 per cent of the total world merchant fleet, these are nearly all fleets of developing countries which, although very small, may be of crucial importance for the country concerned.

[8] A more detailed analysis of the changes which occurred in the fleets of developing countries, and in particular of the number and tonnage of new and second-hand ships acquired by such countries during the last two years, appears in chapter III.

[9] Note that in 1970 completions in the USSR (in grt) were given for the first time by the source used; in this connexion see also foot note *a* to table 8.

[10] In this connexion, however, see paragraph 68 below.

[11] See *Review of Maritime Transport, 1970*, op. cit.

TABLE 8

Shipbuilding: completions by country of construction in groups of countries: 1965, 1969 and 1970, and by type of vessel: 1970 [a]

	Tonnage (thousands of grt) and percentages			*Of which, in 1970:*			
	1965	*1969*	*1970*	*Tankers*	*Bulk[b] carriers*	*General cargo*	*Other ships*
Japan	4,886	9,168	10,100	5,106	3,225	1,272	498
	(40.7)	(48.9)	(48.1)	(50.9)	(60)	(34.3)	(26.7)
Other developed market-economy countries (excluding southern Europe)	6,006	7,624	8,346	4,378	1,649	1,431	887
	(50)	(40.7)	(39.8)	(43.6)	(30.7)	(38.6)	(47.6)
Southern Europe	468	995	1,124	377	328	323	97
	(3.9)	(5.3)	(5.4)	(3.8)	(6.1)	(8.7)	(5.2)
Socialist countries of eastern Europe (excluding USSR[c])	569	750					
	(4.7)	(4)					
Socialist countries of eastern Europe[d]			1,177	114	136	589	337
			(5.6)	(1.1)	(2.5)	(15.8)	(18.1)
Developing countries	77	201	233	58	35	96	44
	(0.6)	(1.1)	(1.1)	(0.6)	(0.7)	(2.6)	(2.4)
of which in Africa		2	3	—	—	3	—
		(—)	(..)			(0.1)	
in Asia		93	132	56	35	27	14
		(0.5)	(0.6)	(0.6)	(0.7)	(0.7)	(0.7)
in Latin America and Caribbean		107	98	2	—	66	30
		(0.6)	(0.5)	(..)		(1.8)	(1.6)
TOTAL	12,006	18,738	20,980	10,033	5,373	3,711	1,863
	(100)	(100)	(100)	(100)	(100)	(100)	(100)
Percentage share of each type of ship in total tonnage completed in 1970:			100	47.8	25.6	17.7	8.9

NOTE.—Aggregates of sub-groups may not equal group totals, due to rounding off.

Source: compiled from *Lloyd's Register, Annual Summary of Merchant Ships Launched during 1970* (London, 1971) and supplementary data.

[a] As a result of the inclusion of the USSR as of 1970, the present table is not strictly comparable with the similar tables in earlier issues of the *Review of Maritime Transport*.

[b] Including combined bulk/oil types.

[c] Completions in the USSR prior to 1970 are available only in dwt, as provided by the USSR Ministry of Merchant Marine, i.e. (in thousands of dwt) 1965: 374; 1969: 288.

[d] Including the USSR as of 1970 with (in thousands of grt) tankers: 49.6; bulk carriers: 23.4; general cargo: 189.7; total: 350.

tonnage on order declined from 63.3 per cent in 1970 to 60.4 per cent in 1971,[12] the share of Liberia and Panama combined increased from 20.7 per cent in 1970 to 22.5 per cent in 1971; that of southern Europe declined from 7.7 to 5.9 per cent while that of the socialist countries of eastern Europe and Asia increased slightly from 3.3 to 3.5 per cent. The share of developing countries remained unchanged at 4.5 per cent.

44. Tankers of 150,000 dwt and over accounted for 50.7 per cent of the total tonnage on order, as compared with 49.6 per cent in 1970; other tankers on order accounted for 9.6 per cent, also somewhat higher than the 8.9 per cent in 1970. Only slight changes are to be noted in the percentage shares of other types of ships (ore/oil and ore/bulk/oil carriers: 1971: 15.3 per cent; 1970: 15.1 per cent; other bulk carriers: 1971: 16.3 per cent; 1970: 15.8 per cent; container ships: 1971: 2.4 per cent; 1970: 2.9 per cent) except for dry cargo ships, the share of which declined from 7.7 per cent in 1970 to 5.7 per cent in 1971.

45. Although the developing countries percentage share of all tonnage on order remained unchanged in 1971 as compared with 1970 (4.5 per cent), some considerable changes may be noted with respect to tonnage on order for various types of ships for this group of countries. With respect to tankers of 150,000 dwt and over, the share of developing countries declined from 1 per cent to 0.8 per cent; for ore/oil and ore/bulk/oil carriers, it increased from 4.3 to 5.4 per cent and for other bulk carriers from 4.5 to 7.8 per cent; for container ships there is no change (1.7 per cent) but there is also a decrease in the percentage share of dry cargo ships on order from 17.4 to 15.7 per cent.

[12] This may be accounted for, however, by a considerable percentage of tonnage on order for which the flag is as yet unknown. (1971: 3.1 per cent; 1970: 0.5 per cent). It may be supposed that the bulk of these orders were placed by interests in developed market-economy countries.

TABLE 9

World tonnage (dwt) on order as at 31 October 1971 [a]

	All ships	*Tankers (of 150,000 dwt and over)*	*Tankers (of less than 150,000 dwt)*	*Ore/oil and ore/bulk/oil carriers[b]*	*Other bulk carriers[c]*	*Container ships[d]*	*Dry cargo ships excluding container ships and bulk carriers*
				Million dwt			
World total	171.6	87	16.4	26.2	28	4.2	9.8
				Percentage			
	100	50.7	9.6	15.3	16.3	2.4	5.7
				Share of world total (percentage)			
World total	100	100	100	100	100	100	100
Developed market economy countries (excluding southern Europe)	60.4	61.1	56.4	70	55.4	80.1	41.4
Liberia, Panama	22.5	27.9	11.8	20.7	23.2	3.2	4.2
Southern Europe	5.9	3.7	14	3.8	8.2	2.7	12.2
Socialist countries of eastern Europe and Asia[e]	3.5	0.9	5.6	—	5	12	23.9
Developing countries, total	4.5	0.8	11.8	5.4	7.8	1.7	15.7
of which:							
in Africa	0.1	—	0.1	—	—	—	1.6
in Asia	2.9	0.8	8.9	1.9	5.9	1.7	7.1
in Latin America and the Caribbean	1.5	—	2.8	3.5	1.9	—	6.9
Flag not yet known	3.1	5.6	0.4	—	0.4	0.3	2.6

Source: compiled from *World Ships on Order*, No. 29, Supplement to *Fairplay International Shipping Journal* (London, 25 November 1971).

[a] Vessels of 1,000 dwt and over, excluding passenger vessels, ferries, fishing vessels and miscellaneous specialized craft.

[b] Vessels of 12,000 dwt and over.

[c] Defined as single-deck vessels of 12,000 dwt and over.

[d] Vessels with a carrying capacity of 300 ISO twenty-foot containers and over.

[e] Because of national planning periods in these countries, orders are often placed far in advance of expected delivery date. This partly explains the very high percentage share of dry cargo ships.

Chapter III

ACQUISITION OF NEW AND SECOND-HAND SHIPS BY DEVELOPING COUNTRIES[13, 14]

46. The present chapter analyses the changes which occurred in the merchant fleets of developing countries during 1970. Table 10 shows the composition of the world merchant fleet[15] at the end of 1969 and 1970 as well as the net changes in the fleet during 1970. Table 11 shows further details of the changes which took place in the merchant fleets of developing countries[16] during 1970, by type of ship.

47. Table 10 shows that, as at 31 December 1970, the world merchant fleet comprised 19,222 vessels, totalling 205.9 million grt and 320.3 million dwt. Of this total, 1,904 ships, aggregating 13 million grt and 18.7 million dwt, were registered in developing countries, the regional breakdown being as follows: Africa: 217 ships; Asia: 1,046 ships; Latin America and the Caribbean: 637 ships; and Oceania: 4 ships. Net world additions during 1970 amounted to 554 ships with 16.1 million grt and 30.8 million dwt: of this total, net additions in developing countries were 28 ships with 0.7 million grt and 1.2 million dwt.

48. As shown in table 11, total additions to the merchant fleets of developing countries during 1970 amounted to 218 ships aggregating 1.7 million grt and 2.6 million dwt. Of this total 58 ships (0.7 million grt; 1.2 million dwt) were new deliveries, 144 ships (0.9 million grt; 1.3 million dwt) were second-hand ships obtained from other countries and 16 ships (8.5 thousand grt: 120 thousand dwt) were acquired by the country

[13] The classification of countries and territories is shown in annex I.

[14] This special chapter is provided in response to resolution 9 (IV) adopted by the Committee on Shipping at its fourth session (Geneva, 20 April-4 May 1970) which, *inter alia:* "*Requests* the UNCTAD secretariat to collect regularly information on the number and tonnage of new and second-hand ships sold to developing countries and make such information available through its annual *Review of Maritime Transport*". For the complete text of the resolution, see the report of the Committee on its fourth session, in *Official Records of the Trade and Development Board, Tenth session, Supplement No. 5* (TD/B/301-TD/B/C.4/73), annex I.

[15] 1000 grt and over; see also note *a* to table 11.

[16] See footnote 13.

TABLE 10

World ocean-going merchant fleets as at 31 December 1969 and 31 December 1970; net additions during 1970
Seagoing steam and motor ships of 1,000 grt and over [a]

(In number of ships, thousand grt and thousand dwt)

Flags of registration in groups of countries[b]	*As at 31 December 1969*			*As at 31 December 1970*			*Net additions*[c] *during 1970*		
	Number	*grt*	*dwt*	*Number*	*grt*	*dwt*	*Number*	*grt*	*dwt*
Developed market-economy countries, excluding southern Europe	9,769	109,393	165,775	9,681	115,467	178,658	−88	6,074	12,883
Liberia, Panama[d]	2,317	35,730	60,776	2,469	40,313	70,132	152	4,583	9,356
Southern Europe	1,992	15,705	23,346	2,201	18,540	28,253	209	2,835	4,907
Socialist countries of eastern Europe and Asia	2,447	14,360	18,653	2,710	15,985	20,724	263	1,625	2,071
Developing countries, excluding Liberia, Panama	1,876	12,240	17,556	1,904	12,965	18,722	28	725	1,166
of which:									
in Africa	*196*	*991*	*1,376*	*217*	*1,140*	*1,595*	*21*	*149*	*219*
in Asia	*1,016*	*6,885*	*10,080*	*1,046*	*7,268*	*10,717*	*30*	*383*	*637*
in Latin America and the Caribbean	*662*	*4,358*	*6,091*	*637*	*4,531*	*6,381*	*−25*	*173*	*290*
in Oceania	*2*	*6*	*9*	*4*	*26*	*29*	*2*	*20*	*20*
Miscellaneous territories[e]	267	2,281	3,384	257	2,588	3,842	−10	307	459
WORLD TOTAL	18,668	189,709	289,489	19,222	205,858	320,331	554	16,149	30,842

Source: United States Department of Commerce, Maritime Administration, *Merchant Fleets of the World as at December 31, 1969* and *1970*.

[a] Excluding the United States Reserve fleet and ships operating exclusively on the Great Lakes and inland waterways and special types of vessels such as channel ships, icebreakers, etc., and merchant ships owned by any military force.

[b] Countries are grouped as shown in annex I, except as indicated under *e* below.

[c] Minus signs indicate deductions.

[d] These countries are shown separately since a considerable portion of tonnage under these flags is owned by non-residents.

[e] This grouping includes United Kingdom Colonies, which are shown by the source with combined tonnage under one entry.

TABLE 11

Changes [a] in the ocean-going merchant fleets of developing countries during 1970.
Acquisition of new and second-hand ships by type of vessel and country of construction or previous flag [b]
Ocean-going steam and motor ships of 1,000 grt and over

(In number of ships, thousand grt and thousand dwt)

	All ships			Of which:											
				Tankers			Bulk carriers			Freighters			Other ships		
	Number	grt	dwt	Number	grt	dwt	Number	grt	dwt	Number	grt	dwt	Number	grt	dwt
Additions	218	1,722	2,577	30	393	661	16	335	562	164	937	1,309	8	57	46
of which:															
New deliveries	58	746	1,194	7	178	328	6	230	402	45	337	464	—	—	—
of which in:															
Africa	3	23	32	—	—	—	—	—	—	3	23	32	—	—	—
Asia	29	422	706	3	159	302	3	103	179	23	160	225	—	—	—
Latin America and Caribbean	26	301	456	4	19	26	3	127	223	19	155	207	—	—	—
Oceania	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
acquired from:															
Developed countries and southern Europe	38	398	655	5	120	226	3	64	117	30	214	312	—	—	—
Socialist countries	7	137	221	2	58	102	1	46	75	4	34	44	—	—	—
Own yards	13	210	317	—	—	—	2	120	209	11	90	108	—	—	—
Flag changes	144	891	1,263	23	215	333	8	87	130	106	533	756	7	56	44
of which in:															
Africa	38	223	325	3	18	25	—	—	—	33	196	291	2	9	8
Asia	80	411	571	15	97	149	4	41	54	58	245	352	3	27	16
Latin America and Caribbean	24	237	347	5	100	158	4	46	76	13	92	113	—	—	—
Oceania	2	19	20	—	—	—	—	—	—	—	—	—	2	19	20
acquired from:															
Developed countries and southern Europe	134	854	1,213	23	215	333	8	87	130	96	496	706	7	56	44
Other developing countries	10	37	50	—	—	—	—	—	—	10	37	50	—	—	—
Other additions[c]	16	85	120	—	—	—	2	17	30	13	66	88	1	1	2
Deductions[d]	190	977	1,478	15	123	187	11	131	237	153	671	991	11	52	63
Net additions[e]	28	744	1,100	15	270	473	5	203	325	11	266	318	—3	5	—17
of which in:															
Africa	21	151	217	2	7	9	—	—	—	19	138	203	—	6	5
Asia	30	398	591	15	226	406	2	39	36	12	118	143	1	14	5
Latin America and Caribbean	—25	176	273	—2	36	58	3	164	289	—20	9	—28	—6	—34	—47
Oceania	2	19	20	—	—	—	—	—	—	—	—	—	2	19	20
Other net additions															
Liberia[f]	133	4,294	8,873	34	2,663	5,913	74	1,514	2,764	22	105	189	3	12	7
Panama[f]	19	289	483	3	49	137	9	185	299	5	38	41	2	17	6

Source: compiled from data on tonnage additions and deductions which were made available to the UNCTAD secretariat by the United States Department of Commerce, Maritime Administration.

[a] Minus signs indicate deductions.

[b] See notes *a* and *b* to table 10.

[c] Vessels acquired by the country concerned prior to 1970 but only reported as being in active ocean-going service during 1970.

[d] Including deductions from the fleets of developing countries as a result of transfers to flags of other developing countries, the total of which is also shown under "Flag changes; acquired from other developing countries".

[e] The tonnage figures given in this table show some discrepancies with those in table 10 which have not been reconciled.

[f] These countries are shown separately, since a considerable portion of tonnage under these flags is owned by non-residents.

concerned prior to 1970 but only reported as being in active ocean-going service during 1970 (shown in table 11 under "Other additions").

49. New deliveries in the various regional groupings of developing countries were as follows: Africa: 3 ships (23,000 grt; 32,000 dwt); Asia: 29 ships (422,000 grt; 706,000 dwt); Latin America and the Caribbean: 26 ships (301,000 grt; 456,000 dwt).

50. These new deliveries were acquired by the developing countries from the various groups of countries as follows: from developed market-economy countries and southern Europe: 38 ships (398,000 grt; 655,000 dwt); from socialist countries of eastern Europe and Asia: 7 ships (137,000 grt; 221,000 dwt); from own yards of developing countries: 13 ships (210,000 grt; 317,000 dwt).

51. Second-hand ships (see table 11, Flag changes) acquired by developing countries during 1970 totalled 144 (891,000 grt; 1,263,000 dwt) of which 38 (223,000 grt; 325,000 dwt) were registered in developing countries in Africa, 80 (411,000 grt; 571,000 dwt) in developing countries in Asia, 24 (237,000 grt; 347,000 dwt) in developing countries in Latin America and the Caribbean and 2 (19,000 grt; 20,000 dwt) in developing countries in Oceania.

52. These second-hand ships were acquired by the developing countries as follows: from developed market-economy countries and southern Europe: 134 ships (854,000 grt; 1,213,000 dwt); from other developing countries: 10 ships (37,000 grt; 50,000 dwt).

53. Table 11 also shows 16 ships (85,000 grt; 120,000 dwt) as added to the active ocean-going merchant fleet (ships of 1,000 grt and over) of developing countries during 1970 but which were acquired prior to 1970.

54. Deductions from the merchant fleets of developing countries amounted to 190 ships totalling 977,000 grt and 1,478,000 dwt; besides ships which were scrapped or reported as losses and casualties, these include ships were sold by developing countries to other countries of which 10 ships (37,000 grt; 50,000 dwt) were transfers between developing countries.

55. The net result of the changes commented upon above amounted to net additions to the merchant fleets of developing countries during 1970 of 28 ships totalling 744,000 grt and 1,100,000 dwt. The breakdown was as follows: 21 ships (151,000 grt; 217,000 dwt) were acquired by developing countries in Africa, 30 ships (398,000 grt; 591,000 dwt) by developing countries in Asia, 2 ships (19,000 grt; 20,000 dwt) by a developing country in Oceania while developing countries in Latin America and the Caribbean reduced their combined merchant fleet by 25 ships; the latter group of developing countries nevertheless increased their combined tonnage by 176,000 grt and 273,000 dwt.

56. The net additions to the merchant fleets of developing countries comprised 15 tankers (270,000 grt; 474,000 dwt), 5 bulk carriers (203,000 grt; 325,000 dwt) and 11 freighters (266,000 grt; 318,000 dwt). Further details regarding total additions and deductions and of the net additions resulting therefrom, per category of ship, may be found in table 11, by geographical area and in annex II, table IV, by country.

57. Net additions to the active ocean-going merchant fleet of Liberia amounted to 133 ships (4,294,000 grt; 8,873,000 dwt) and for Panama to 19 ships (289,000 grt; 483,000 dwt); these are shown separately in the table since it is known that a considerable portion of tonnage registered under these flags is owned by non-residents.

Chapter IV

THE PRODUCTIVITY OF SHIPPING SPACE

58. The profound changes which have taken place during the last decade in the size and speed of ships, as well as in the handling methods and equipment used for loading and unloading cargo, have had a considerable effect on the efficiency of the world fleet. The productivity of shipping space may be estimated by dividing ton/miles of cargo carried by the tonnage used measured in deadweight tons. Consequently, changes in vessel speed, turn-round and load factor will affect productivity. It must be borne in mind, however, that ton/mile transport performance per dwt is not an ideal measure of shipping productivity because it also varies with transport distance. In the last ten years there has been a considerable increase in the length of the average voyage which has reduced the proportion of port time to sea time.[17]

59. Table 12 relating to bulk carriers shows the increase in the ratio of ton miles per dwt employed for significant years between 1960 and 1970. During this period the average length of the voyages performed increased from 3,210 miles in 1960 to 3,850 miles in 1965 and 4,950 miles in 1970.[18] This element probably accounted for about 5 per cent of the observed increase in productivity from 1965 to 1970.

60. As to the productivity of tankers, it has been difficult to obtain the statistics for 1970 necessary to calculate the ton/miles to dwt ratio. In the sources previously used there has unfortunately been a change in unit for estimation of oil carried, from ton/miles per year to the number of standard size vessels (T.2 tankers) required to cover the annual movements of oil. This change makes it difficult to produce figures which are comparable with the time series in the previous *Review*. A further difficulty arises from the need to make allowance for the effect of combined carriers engaged in oil trade.

61. Depending on whether the combined carrier fleet is taken into account or not taken into account, a very rough estimate for 1970 gives an index for the productivity of tankers of about 140 and 147 respectively (1960 = 100). For 1969, neglecting the effect of combined vessels, the index was 137.

62. As soon as a continuous time series of comparable figures is available, this chapter will be restored in its full form.

TABLE 12

Bulk carriers: ton/miles per dwt of bulk commodities carried, 1960-1970

Year	*Thousand million ton/miles of bulk commodities carried in bulk carriers*[a] [b]	*World bulk carrier fleet in million dwt*[c]	*Thousand ton/miles of bulk commodities carried per dwt*	*Index (1960 = 100)*
1960 .	122	4.1	29.8	100
1965 .	678	18	37.7	127
1967 .	1,303	33.2	39.2	132
1970 .	2,475	62.2	39.8	134

Source: Fernley and Egers Chartering Co. Ltd., *Trades of World Bulk Carriers in 1970* (Oslo, 1971).

[a] Excluding bulk shipments in vessels of less than 18,000 dwt.

[b] Including oil cargoes in combined carriers from 1965.

[c] Vessels above 18,000 dwt, mid-year figures.

[17] The increase in the average voyage length is mainly caused by a change in the transportation pattern. For iron-ore and coal for instance, the increase in Japanese imports has been the main reason for the increase in the average shipping distance, the Japanese import distance for these commodities being higher than the average.

[18] Fernley and Egers Chartering Co. Ltd., *Trades of World Bulk Carriers in 1970* (Oslo, 1971).

Chapter V

TRENDS IN SHIPBUILDING

63. According to available statistics, most of the worlds' shipyards are today fully booked with contracts, which makes the placing of new orders for delivery before 1973/1974 virtually impossible. At the same time one can observe the apparently contradictory fact that the shipbuilding industry, especially in Europe but also in Japan, is showing far from encouraging financial results.

64. Since shipbuilding is a long-term process, it is necessary to go back two or three years and to look at the market conditions then prevailing in order to understand the reasons for the current drop in profits. At that time the placing of orders for new ships was just beginning its upward trend, and new buildings were, as has been the tradition, booked on a fixed-price basis. Under the then prevailing conditions shipbuilders with relatively empty order books were pleased at the prospect of emerging from the slump and to be fully employed for three or four years ahead. They were consequently neither in a position nor in a frame of mind to impose in contracts clauses which would protect them fully against future cost increases. When fixed prices were calculated, some allowance was naturally made for rising costs. The estimates were, however, based on historical figures which have proved to be far too low.

65. The inflationary trend in Europe and to a certain extent also in Japan in the last few years has resulted in higher prices for shipbuilding input factors such as labour, steel and equipment. The industry has therefore found itself tied to fixed contracts for the coming years, at prices which will at best cover only actual building costs and leave no margin for profit.

66. During most of 1970-1971, when demand was at a peak, shipbuilders, especially in Europe, accepted only contracts with escalation clauses, in order to avoid a similar development in the future. This is a measure taken in order to hedge against inflation. It calls for a certain, fairly high, percentage of the contract price to be increased in accordance with indices of labour costs and steel prices in the country where the vessel is to be built.

67. To some extent this made uncertainty regarding shipbuilding costs a problem for the shipowner rather than the shipbuilder and made shipping riskier. Nevertheless, shipowners, encouraged by the high freight rates, were, until about the summer of 1971, eager to place new orders. At the beginning of that year the spot market was still booming and owners were willing to place shipbuilding orders at high prices with escalation clauses, as long as the delivery date was favourable. The shipbuilders, seeing a possibility of recovering some of their losses on the existing fixed price contracts, took full advantage of this. It was a sellers' market.

68. However, as the spot market rates have dropped, the shipowners' desire to enter into new contracts has decreased accordingly. Also, in Japan the stagnation of the national economy has seriously affected the iron and steel industry, which has reduced the volume of its iron and coal purchases from overseas countries. This, in turn, has resulted in some decrease in the requirement for bulk carrier transport capacity in that part of the world. What is not so well known is that the economic situation in Japan has led to the cancellation of some of the existing contracts, the shipowners being willing to compensate the yards for the cancellation of orders by cash payment rather than have to take delivery of vessels for which they see no employment. As such cancellations are rarely recorded in the available statistics, the Japanese order book may seem more full than in fact it is. In Europe also there appears to be more possibility of placing new orders for early deliveries than is widely believed.

69. In spite of the sharp decline in the number of orders placed in the second half of 1971, the shipbuilders have been keeping contract prices high and insisting on escalation clauses. However, as long as the spot market is in its present slump, operators are not very interested in new contracts and the yards appear likely to have difficulty in securing new orders.

70. With the present inflationary trends in most developed countries it would perhaps be too strong a statement to say that the prices of newly built vessels will come down. It seems reasonable to conclude, however, that conditions may become relatively more favourable to the contractor in the coming years than they were in 1970/1971.

71. The slump in the freight market should also, inevitably, bring the price of second-hand vessels down. The present inactivity on the second-hand market may be taken as an indication of this.

72. For a shipowner who operates in such a way that he can time his placing of orders or second-hand purchases independently of spot market trends, favourable conditions for securing additional tonnage either by building or buying may be imminent.

73. Some developments in the principal types of vessels are discussed below. Statistical information concerning shipbuilding during 1971 and tonnage on order

will be found in chapter II, sections A and D, particularly in tables 8 and 9.

A. Oil tankers

74. The most significant trend in the building of tankers in the last decade has been the continuous increase in the size of these vessels. Today docks are being built or are planned for the construction of vessels of up to 1 million tons dwt and there appear to be no technical limitations on the constrnction of ships of this size. It is not, however, envisaged that large-scale production of tankers above say, 400,000 dwt will be common in the immediate future. Although the economies of scale related to the bigger vessels can easily be determined, there are practical and managerial problems involved in the operation of these vessels which seem to stabilize the growth in tanker size.

75. Among the many factors prohibiting future growth of tanker size, port facilities must be mentioned. There are not many ports in Japan, western Europe and the United States of America where vessels of 200,000-300,000 dwt can be accommodated. Another constraint is the fact that, in many cases, the ordinary seaway between an oil-producing country and a main consumption market does not allow the transit of vessels with considerable draught such as the biggest of the very large crude carriers (VLCC). Consequently, the big tankers are rather inflexible as to alternate trades, which naturally makes them less attractive for operations on the spot market.

76. Also the development of larger sizes may be arrested by the plan, put forward by the Inter-Governmental Maritime Consultative Organization (IMCO), to regulate the capacity of tankers' cargo tanks in order to limit pollution in case of accidents. Such a regulation would increase the number of tanks in an oil-carrying vessel and, compared with the rules of the classification societies in use today, this would mean more steelwork and consequently higher costs. The construction of the larger tankers would be particularly affected and this might lower optimum tanker size drastically. There is already a sharp increase in cost per deadweight ton for vessels above the 200,000-240,000 dwt mark.

77. The owner's risk increases with tanker size. When evaluating what size of tanker to order, the shipowner must take into account the fact that he may be able to obtain two or more smaller vessels for the price of one VLCC. Assuming that the probability of technical breakdown (off-hire) is more or less the same for a VLCC as for a smaller tanker, the risk of operating one large vessel is considerably greater than that of operating two or three smaller ones. There is also increasing concern about having so much capital tied up in a single vessel which could become a total loss. This is reflected in the progressive insurance premiums charged, which for a VLCC can account for about 60 per cent of the operating costs. By many owners this is in itself considered a constraint on the development of larger sizes. From the first half of 1967 to the end of 1970 the annual hull insurance premium for a 70,000 dwt tanker rose from $70,000 to $175,000; for a 250,000 dwt vessel the increase over the same period was from about $612,500 to $1.5 million.[19]

78. The price of new tanker tonnage has also risen considerably. During the first half of 1967 a 70,000 dwt vessel cost about $7 million while the same vessel at the end of 1970 was estimated to cost $14 million. The construction cost of a 250,000 dwt tanker more than doubled over this period from $17.5 million to $36.3 million.[19]

B. Bulk carriers and combined carriers

79. Although ore-carriers and single-deck tramp ships are not an innovation, the bulk carrier of over 10,000 dwt may be regarded as a new type of vessel developed since the late 1950s. It has taken over the greater part of the grain, coal and ore trade previously operated by ordinary tramp ships. Bulk carriers with removable car-decks are also engaged in the transport of new cars.

80. Combined carriers capable of transporting either oil or dry bulk cargoes had their great breakthrough in the 1960s and a great deal more tonnage of this kind is likely to be built in the years that lie ahead.

81. A study of ship size shows that, although the tonnage of the conventional bulk carrier is increasing slightly, it is the average size of the combined carrier which is growing rapidly. A distinction has to be made between OBO (ore/bulk/oil) vessels, whose size is generally between 75,000 and 150,000 dwt, and O/O (ore/oil) vessels which are now ordered between 150,000 and 250,000 dwt.

82. The flexibility of operation offered by combined carriers is of course their *raison d'être*. It gives the owner a possibility of choosing between the dry cargo and the oil market, if the one gives a higher return than the other, and, when he is operating mainly in one market, of reducing voyages in ballast by making return legs in the other market.

83. For bulk carriers, and especially for the combined vessels, a rise in construction costs similar to that for tankers has taken place.

C. General cargo and container vessels

84. The most characteristic trend in the development of this category of ships in the last decade has been the great attention paid to cargo handling. As it has been recognized that general cargo vessels may spend over one half of their lives in port, emphasis has been laid on reducing loading and unloading time—the unit load concept being the key for achieving this.

85. The unit load has been accepted as a means of reducing costs, not only in shipping but also in other links of a transportation chain where cargo handling is involved. Thus standard modules have evolved for shipment which may be transferred easily from one mode

[19] *Petroleum Press Service* (London, July 1971), p. 253.

of transportation to another. The transportation system of which shipping forms a part has become integrated.

86. The effects of this are seen in the construction of general cargo vessels in the introduction of improved cargo gear, side ports for palletized cargo, ramps for driving the cargo in and out of the ship combined with flush decks for forklift operations, wide hatches (open ships) and holds which are squared to accommodate the cargo units. The last innovation is best illustrated by a cellular container vessel in which the holds are exactly dimensioned to accommodate a fixed number of the standard units.

87. Of the vessels adapted for the transportation of cargo units, the container vessel has been the most popular and has attracted most capital. However, the question of its profitability is disputed.

88. Although container ships have replaced conventional liners and general-purpose ships on some routes, the acceptance of containerization is far from unanimous among shipowners. Many of them believe that break-bulk, bag and bulk shipping volume will be sufficient in the years to come to pay off conventional ships currently building. Their information is based on the number of ports which do not have sufficient draught or the sophisticated terminals necessary for handling large container vessels or even feeder ships.

89. For certain trades the container ship has a clear advantage. This, however, does not make the container system profitable globally and the extent to which the system should be implemented is today a major issue.

D. Liquefied-gas carriers

90. The term liquefied-gas carriers refers to ships capable of transporting liquefied natural gas (LNG) or liquefied petroleum gas (LPG) or other similar hydrocarbon and chemical products. As these products are transported in liquid form and have low boiling points, it is necessary to carry them either at pressures greater than atmosphere or at subambient temperature or a combination of both.

91. Natural gas cannot be transported as a liquid at ambient temperature, whatever the pressure, because of the low critical temperature of methane, —82° C (—116° F). Liquefied petroleum gases are hydrocarbons such as propane, propylene, butane or butylene or a mixture of these, which have been obtained from natural gas or petroleum refining operations. Since the critical temperature of these gases is above normal ambient temperatures, they can be carried as a liquid at low temperature and pressure or at ambient temperature under pressure.

92. Liquefied-gas carriers can be divided into four basic types which are briefly described below:

Type 1—Fully pressurized ships. These vessels are generally designed to carry LPG and anhydrous ammonia, but may also carry other hydrocarbons. They are simple in design with a maximum capacity of about 2,000 m^3. The working pressure is equal to the vapour pressure of the cargo at the maximum ambient temperature.

Type 2—Semi-pressurized ships. The general arrangement of these ships and the cargo they carry are similar to those of type 1, but their cargo capacities may range up to a normal maximum of about 5,000 m^3. The pressure vessels are designed for a maximum pressure of about 8 kp/cm^2 (113 lb/in^2) and are constructed of carbon steel suitable for a service temperature of about —5° C (23° F).

Type 3—Semi-pressurized/fully refrigerated tankers. These vessels are designed to carry the full range of LPG and similar chemical cargoes at a minimum service temperature of —45° C (—50° F) and pressures of the order of 5 to 8 kp/cm^2 (70 to 113 lb/in^2).

Type 4—Fully refrigerated at atmospheric pressure. In these vessels the cargo is liquefied by cooling only, the boiling point of the cargo determining the minimum temperature. Vessels for carriage of LPG usually may develop a minimum tank temperature of —50° C (—58° F) while ethylene tankers are designed for a minimum service temperature of —104° C (—156° F). LNG tankers are designed for a minimum service temperature of —164° C (—263° F) and may presently be of up to 75,000 m^3 capacity, with 120,000 m^3 vessels on order. The large LNG vessels have no cooling plant, the cargo being cooled by the evaporation of the liquid (boil off).

93. The possibility of an energy shortage in the United States of America has led to a considerable increase in demand for LNG-vessels (type 4), and the future of that country's energy market may have a significant influence on further development of this kind of ship. The Japanese and western European markets are also important. A major advantage of LNG as a fuel is that it leaves scarcely any detergent, which is important in a pollution-sensitive society. The expansion of the petrochemical industry, where hydrocarbons are used as input factors, may also increase the demand for LNG vessels and other types of liquefied gas carriers.

94. It must be emphasized that LNG vessels are about the most costly and technically sophisticated merchant ships afloat. During 1971 a common price asked for a 120,000 m^3 vessel was $60-$70 million.[20] Since LNG vessels are capital-intensive and their operation requires special skills, investment in them can best be undertaken by advanced owners who are able to take large risks. In evaluating the risk involved in ordering a 120,000 m^3 vessel it should be borne in mind that few vessels of this size have been built and that many of the carriers ordered are to be built by techniques not previously utilized on a large scale.

E. Marine propulsion

95. The world fleet is mainly powered by steam turbines and diesel engines. While the steam turbine was

[20] *Hansa* (Hamburg), September 1971.

previously found suitable for installation in almost any size of vessel, it is today chiefly propelling fast ships such as container vessels and large ships such as the biggest tankers and combined carriers, all of which require machinery with a high output. Of the 141 million dwt on order at the end of September 1971, 65 million dwt representing 2,411 units were to be propelled by motor engines while the corresponding figures for steam plants were 76 million dwt and 406 units.[21] It is clear from this that the steam turbine is predominant for the largest ships.

96. A new trend in recent years has been the use of gas turbines in fast merchant vessels. Generally, however, the gas turbine is not yet competitive with more conventional propulsion plants.

[21] *Ships on order*, supplement to *The Motor Ship* (London), September 1971.

Chapter VI

TRENDS IN PRICES OF NEW AND SECOND-HAND VESSELS

97. Developing countries wishing to acquire vessels in order to enter the field of shipping or to expand their merchant marines, have to decide whether it is preferable to do so by ordering new vessels or by purchasing ships in the second-hand market.[22] The general economic considerations which affect such decisions have been discussed in other reports by the UNCTAD secretariat.[23] This chapter will therefore be confined to a review of the development of shipbuilding prices and of the prices of immediately available new ships in the course of the last decade, and of movements of prices of second-hand vessels in recent years. The short-term changes in these prices are compared with the short-term movements of freight rates.

98. Reviewing the trends of ship prices presents considerable difficulties. First, important price details of the relevant transactions, whether concerning new building or the purchase of a ready new or a second-hand vessel, are not always available. Secondly, the prices at which vessels are stated to be built or sold are not always a precise indication of the final price, since other terms may be included in the contract, as a consequence of which the total cost of the vessel to the buyer may differ from the publicly known price quotation.[24] Thirdly, even when prices at which second-hand vessels have been sold are available, care should be exercised in their use for purposes of comparison over time, since differences in prices are due, apart from the general state of the market, to other factors such as the type of the vessels, their age and condition and the date when their next general survey is due.

99. The present review is based on the estimated prices for building ships or for purchasing immediately available new ships and on reports of sales of second-hand vessels, published in *Fairplay International Shipping Journal* (London).

100. The *Fairplay* data refer to a hypothetical closed shelter deck vessel, of a deadweight capacity of 11,000-13,000 tons, with a diesel engine and a speed of 15 knots. The prices for constructing this ship or for buying it readily available and new, as estimated by *Fairplay* at six-month intervals over the period 13 December 1961 to 30 June 1971, are given in table 13 below.

101. For purposes of illustration, the above prices expressed per ton dwt, are shown in graph 1 which also shows the course of the dry cargo voyage charter freight rates, as reflected in the *Norwegian Shipping News* Trip Charter Index. The annual average levels of this index between 1961 and 1970 are shown in table 14.

102. In the course of the period covered by the *Fairplay* data, shipbuilding prices have been rising constantly. However, in the first part of the period and up to June 1967 the rate of increase was relatively small; indeed one could say that the prices were fairly stable throughout the period. From June 1967 onwards, prices for construction of new ships have been rising at a much faster rate, accelerating even more after the middle of 1969.

103. A comparison of these price movements with the short-term movement of freight rates, as given in the *Norwegian Shipping News* Trip Charter Index, suggests that for the greater part of the period, the level and movement of freight rates did not have any substantial effect on the prices charged by shipyards. Such factors as the increasing prices of inputs of the shipbuilding industry appear to have been more important. This may be thought surprising, since the level of and expectations of future changes in freight rates are among the factors which influence shipowners' decisions to order new vessels, i.e. which influence demand for construction of new ships. However, that short-term movements of and short-term expectations regarding freight rates should not greatly influence shipbuilding prices is not really paradoxical if one considers the relatively long period necessary to construct a vessel. Speculators wishing to profit from a short-term rise in freight rates prefer to purchase a readily available vessel rather than place an order for a new one, as, with long delivery periods, there is a risk of the freight boom subsiding by the time the new vessel can enter into service.

104. Over the period covered by the *Fairplay* data, prices of readily available new ships have been fairly volatile. Here too, one can distinguish between the first part of the period, when prices have shown considerable fluctuations and the second part, beginning in 1967,

[22] Another possibility is to time-charter vessels on a long-term basis.

[23] See: *Establishment or expansion of merchant marines in developing countries* (United Nations publication, Sales No.: E.69.II.D.1); "Financing of the purchase of new and second-hand ships by developing countries: report by the UNCTAD secretariat" (TD/B/C.4/58 and Corr.1 and Add.1).
"Implementation of international development strategy in shipping and ports: report by the UNCTAD secretariat" (TD/103).

[24] For example, the use of escalation clauses in contracts for construction of vessels is an increasingly frequent occurrence. Such clauses stipulate that the price for construction of the vessel will be revised according to the movements of the prices of important inputs used in its construction, such as steel or labour. In the case of second-hand vessels purchased on credit terms, the ultimate cost to the buyer will depend on the rate of interest charged on the loan.

TABLE 13

Prices for new and ready dry cargo ships

Prices for constructing the vessel			*Prices for new readily-available vessel*		
	Price	*Per ton deadweight, closed shelterdecker*		*Price*	*Per ton deadweight, closed shelterdecker*
	£	£ s		£	£ s
31 Dec. 1961	1,015,000	78 0	31 Dec. 1961	900,000	69 5
30 June 1962	1,020,000	78 10	30 June 1962	875,000	67 5
31 Dec. 1962	1,025,000	79 0	31 Dec. 1962	825,000	63 10
30 June 1963	1,025,000	79 0	30 June 1963	850,000	65 5
31 Dec. 1963	1,035,000	79 10	31 Dec. 1963	975,000	75 0
30 June 1964	1,035,000	79 10	30 June 1964	975,000	75 0
31 Dec. 1964	1,040,000	80 0	31 Dec. 1964	850,000	65 5
30 June 1965	1,050,000	80 15	30 June 1965	900,000	69 5
31 Dec. 1965	1,060,000	81 10	31 Dec. 1965	900,000	69 5
30 June 1966	1,090,000	83 15	30 June 1966	900,000	69 5
31 Dec. 1966	1,095,500	84 5	31 Dec. 1966	940,000	72 5
30 June 1967	1,095,500	84 5	30 June 1967	940,000	72 5
31 Dec. 1967	1,160,000	89 10	30 June 1968	960,000	73 17
30 June 1968	1,165,000	89 12	30 June 1969	1,000,000	76 18
31 Dec. 1968	1,180,000	90 15	31 Dec. 1969	1,100,000	84 12
30 June 1969	1,200,000	92 2	30 June 1970	1,200,000	92 6
31 Dec. 1969	1,270,000	97 7	31 Dec. 1970	1,250,000	96 0
30 June 1970	1,350,000	100 16			
31 Dec. 1970	1,380,000	106 0			
30 June 1971	1,600,000	123	30 June 1971	1,300,000	100

Source: Fairplay International Shipping Journal (London), mid-year issue, 1 July 1971, No. 4584, p. 83.

TABLE 14

Norwegian Shipping News Trip Charter Index

	July 1965 - June 1966 = 100[a]
1961	93
1962	80
1963	91
1964	91
1965	101
1966	88
1967	94
1968	92
1969	85
1970	119

Source: Norwegian Shipping News (Oslo).

[a] Average for year, rounded off.

during which they have been constantly rising, although at different rates. Thus, after June 1969 they registered a steep rise, the rate of which began slowing down in June 1970.

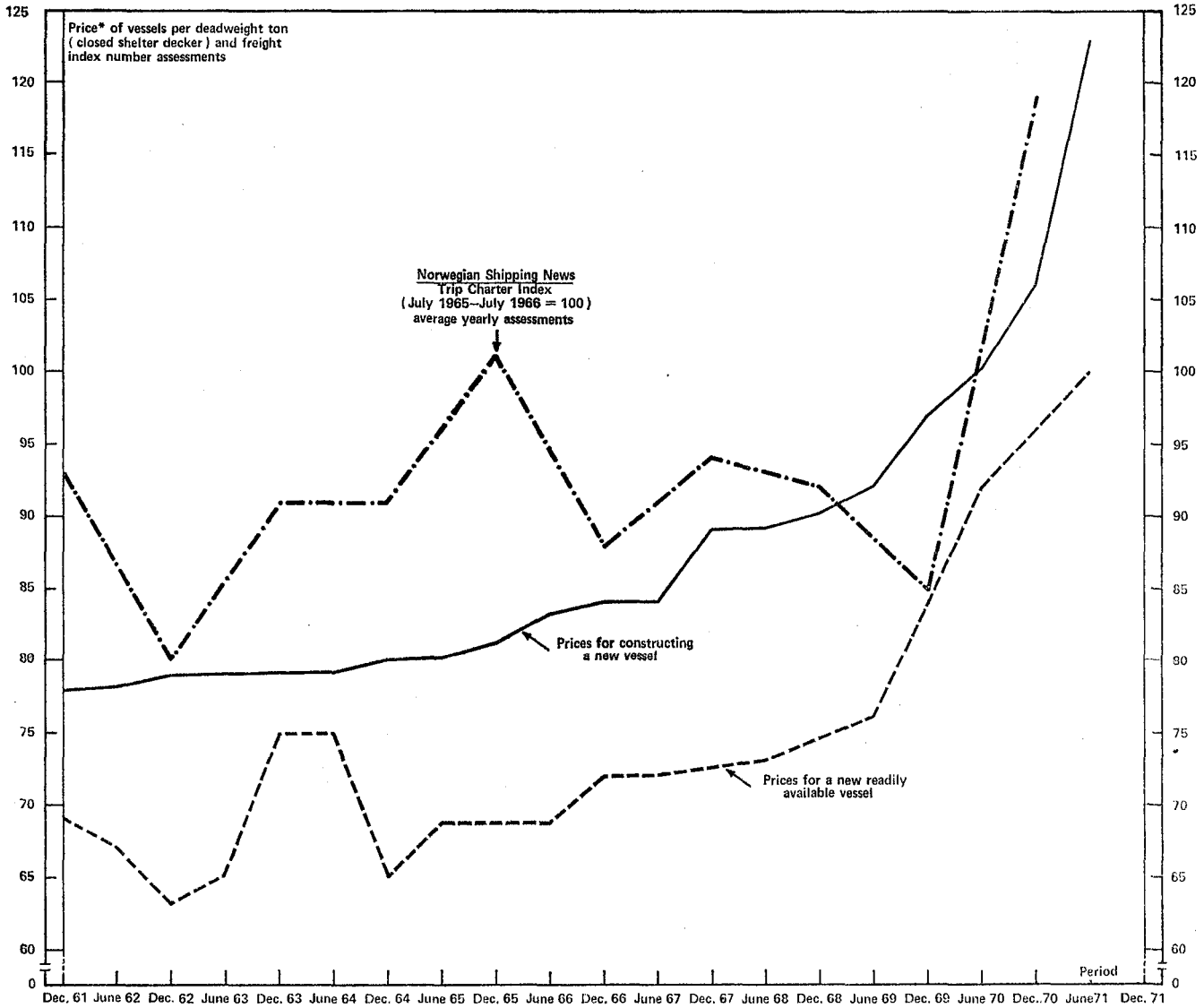
105. The prices of readily available new vessels registered movements paralleling those of the *Norwegian Shipping News* Trip Charter Index for the greater part of the period, indicate a close relation between the movement of freight rates and that of the prices of the vessels in question. Thus, when freight rates rose, the values of promptly available new ships also rose, and they fell when freight rates moved downward. At brief periods, the movements of the two variables have been in opposite directions, but this is accounted for by the fact that it is not only the actual level and movement of freight rates which affects demand and the prices of ships but also the expectations of shipowners regarding the future level and movement of freight rates. From 1968, the data suggest that the rising costs of shipbuilding began to exert a greater influence on values of readily available new vessels, than that exercized by freight rates.

106. The prices of modern second-hand vessels, i.e. post-war built ships, in good condition, but which cannot be classified as new, depend, as was mentioned above, on the type, the age, actual condition of the vessel, on whether a survey is due and whether the vessel is readily available or committed to a specific employment such as a time-charter or a contract for consecutive voyages. In addition, an important factor affecting the values of second-hand tonnage is the level of freight rates and the expectations of shipowners regarding their future trends. For purposes of illustration, the following paragraphs compare the movements of prices of second-hand vessels in selected recent years, for which meaningful information is available with the trends in freight rates in the same periods.[25]

[25] Owing to the heterogeneity of second-hand vessels, the compilation of an index number of their market values is not feasible. The information given is based on the *Journal of Commerce Annual Review*, 1967 to 1971, published by *The Journal of Commerce and Shipping Telegraph*, Liverpool, and the *Ship Sale and Purchase Market Report*, 1967 to September 1971, of Mullion and Co. (Shipping) Ltd., London.

GRAPH 1

Prices for new and ready dry cargo ships and trip charter index, December 1961 - June 1971



Source: tables 13 and 14.

* Prices are given in UK pounds and shillings up to December 1970. Subsequently prices are quoted in UK pounds and new pence.

107. Thus, in the first part of 1966, a year of declining freight rates,[26] a dry cargo motorship of 6,290 dwt, built in 1952, was offered for sale at £300,000. The same vessel was re-sold, according to unconfirmed reports, towards the end of 1966 for £216,000. Similarly, a dry cargo motorship of 9,920 dwt, built in 1950, was sold in the first quarter of 1966 for £230,000 while some months later, a sister ship was sold for £170,000. Similar declines in values were reported in sales of vessels of other types such as bulk carriers in 1966, a year in which freight rates fell by 13 per cent from the 1965 average level.

108. In 1967, the closure of the Suez Canal had important consequences for shipping and resulted in higher freight rates, especially in the tanker trades, and higher prices for second-hand tonnage. Thus, while before the closure of the Suez Canal a motor tanker of 25,732 dwt built in 1958 was sold for $1,200,000, another motor tanker, of 25,970 dwt built in 1958, was sold after June 1967 for $1,550,000. Prices of modern dry cargo ships also rose. Thus a motorship of 9,050 dwt built in 1951 realised £600,000, a sharp increase over the £170,000

[26] The annual average level of the *Norwegian Shipping News* Trip Charter Index dropped from 101 in 1965 to 88 in 1966.

which, as mentioned above, was paid in the previous year for a slightly larger vessel. Although differences in the condition of the vessels concerned may have contributed to the price differential, the general increase in freight rates recorded in 1967 must have also exerted a strong effect.

109. In 1968 and 1969 prices of second-hand vessels remained relatively firm. Thus, for example, in 1968, a dry cargo motor vessel of 9,560 dwt built in 1949 realised about £300,000 while a smaller motor vessel of 7,027 dwt built in 1952 was sold for about £287,000. In 1969 an 8,759 dwt motor vessel built in 1952 was sold for £240,000 and even a 20-year-old motor vessel of 8,350 dwt realised about £218,000.

110. In 1970, a year of rising freight rates, prices of second-hand vessels registered increases over the previous year. For example, a motor vessel of 14,480 dwt constructed in 1957 realised £600,000 in February 1970 while a sister ship was sold in the previous September for £540,000. Substantial increases were recorded in prices of tanker vessels. Thus, a motor tanker of 51,000 dwt built in 1960 was sold in 1970 with forward delivery, for about $5 million, and was reported re-sold with the same delivery, i.e. before being taken over by the first buyers, for $8 million. Although this deal may have been exceptional, it does show that values of second-hard tanker vessels have responded to the rising freight rates for tankers.[27]

111. Finally, in the first part of 1971, the reversal of the trend in freight rates in the charter markets resulted in a downward movement of the prices of second-hand vessels. An illustrative example is the sale of a vessel of 12,120 dwt built in 1958, which was originally put on the market in January 1971 for £600,000, but realised in the second quarter of the same year only £360,000.

[27] The *Norwegian Shipping News* Tanker Trip Charter Index stood at 117 in January 1970, rose to 203 in July and to 260 in October. See also *Review of Maritime Transport 1970* (United Nations publication, Sales No.: E.71.II.D.8), para. 117.

Chapter VII

FREIGHT MARKETS

A. General discussion

112. Following the slowing-down of chartering activities in the last quarter of 1970, the freight markets continued to weaken during the early part of 1971. In many trades, spot rates reached levels lower than any recorded since 1966.

113. In contrast, liner freight rates continued their upward movement. In 1970, a number of shipping conferences had given warning that, unless costs became stabilized in the near future, further rate increases would have to be expected in 1971. These rate increases have been made (see table 16). In explaining the reason for these increases, liner conferences generally cited the continuing increases in ship operating costs and in port costs.

114. Rising cost elements have undoubtedly been a feature of the shipping industry in 1971 and the shipping conferences insist that freight rate increases are unavoidable so long as costs rise. However, rises in cost elements do not in themselves necessarily mean a deterioration in the profitability of a liner shipping operation, since, for example, a change in the relative importance of specific elements in the over-all operating costs, an improvement in the utilization of cargo capacity of the conference vessels or a change in the cargo composition, if they had occurred, could all tend to offset rising money costs. Therefore, changes in cost factors can be used to justify changes in the levels of liner freight rates only if, and to the extent that, the entire profitability of liner operations has changed adversely, and then only to the extent that is needed to restore the cost/revenue relationship to a reasonable level.

115. With regard to developments in operating costs, the UNCTAD secretariat has begun collecting relevant information in connexion with the study of the relationship between changes in freight rates and changes in costs of maritime transport requested in resolutions 12 (IV)[28] and 16 (V)[29] of the Committee on Shipping. When completed, this study will throw further light on the important question of the relationship between rising costs and rising freight rates.

116. In spite of any rise in the operating costs of the carriers, freight rates in the dry and liquid bulk cargo trades have been at a much lower level in 1971 than they were in 1970. The reason for this has been that the supply of shipping, i.e., the volume of unfixed shipping seeking charters, has been throughout the year in excess of demand. This unbalanced demand/supply situation in 1971 can be explained by the slowing down of the rate of increase in world trade since 1970, at a time when, due to the typical lag in response of supply of tonnage to changes in demand, the extensive placing of orders in previous years has accelerated the pace of increase in tonnage supply. It is estimated that in 1971 the rate of growth of the world seaborne trade may have been less than 7 per cent,[30] as against increases of around 10 per cent per annum in each of the years 1968-1970.[31] This development is attributed to a sharp decline in Japan's rate of economic growth, coupled with a slowing-down in the rate of expansion in some other industrial countries. As against this development, the world fleet, in terms of deadweight tonnage, registered an increase of about 12 per cent between 1970 and 1971, and 13.2 per cent between 1969 and 1970, compared with 10 per cent between 1968 and 1969.[32]

117. The rapid fall in freight rates in the open market was halted in the second quarter of 1971. However, it appears that this was not so much the result of a significant expansion in the demand for tonnage as of the withdrawal of surplus tonnage from the market. By the end of September, 298 vessels totalling about 2,090,000 grt were already laid up, as compared with 31 vessels totalling 250,000 grt a year earlier. It is useful to note that the current market situation did not affect all categories of ships equally. More than 70 per cent of the laid up tonnage consisted of dry cargo vessels. On the other hand only seven out of 298 laid-up vessels were less than five years old and only seven vessels (two dry cargo and five tankers) of 20,000 grt and above were among those laid-up (for further information regarding laid-up tonnage see paragraphs 143 to 148 below). Clearly, large new vessels, which generally have lower operating costs and are also more attractive to charterers,

[28] See *Official Records of the Trade and Development Board, Tenth Session, Supplement No. 5* (TD/B/301-TD/B/C.4/73), annex I.

[29] *Ibid., Eleventh Session, Supplement No. 3* (TD/B/347-TD/B/C.4/89), annex I.

[30] See *Seatrade* (Colchester, England), October 1971; original source not given in publication.

[31] *Review of Maritime Transport, 1970*, op. cit., para. 3.

[32] The statistics of seaborne trade and shipping tonnage refer to all commodities and all types of ships, whereas the freight rates refer only to dry and liquid bulk cargoes. However, since these cargoes constitute over 80 per cent of the demand for shipping and the ships concerned make up about the same proportion of the world fleet, it can realistically be assumed that developments in volume of general cargo carried or in general cargo tonnage could not significantly affect the argument developed in this paragraph.

were able to obtain freight rates sufficient to retain them in operation.

118. In the fourth quarter of the year, chartering activity increased in both the dry cargo and tanker markets, but this trend may be seasonal in character.

B. Changes in freight rates in 1971

1. Dry cargo tramp market freight rates

(a) *Voyage charter freight rates*

119. The beginning of the year was marked by a substantial reduction in chartering. As a result, the downward trend of freight rates which started in October 1970 accelerated in the first half of the year.

120. The break in freight rates in the voyage charter market is reflected in the voyage charter freight index of *Norwegian Shipping News*. During the period October 1970 to July 1971, this index showed a sharp decline (see table 15) and, from 129 at the end of October 1970, its highest point during the year, dropped to 72 at the end of July 1971. Little change in rates occurred in the subsequent months while the immediate effect of the monetary crisis was to cause temporarily a practical halt in all chartering operations. In November, however, there was more chartering activity than in the previous months, particularly in the grain trades, and, although a strike of dockers in the Atlantic and Gulf ports of the United States of America caused a new setback in the market, the freight rates for transactions concluded during that month were higher than those in September.

121. For purposes of comparison, selected maximum and minimum tramp rates during 1970 and 1971 are shown in annex II, table V.

(b) *Time charter market rates*

122. During the last quarter of 1970, the high activity in the time-charter market noticed earlier in that year started to slow down. This weakening of the market increased to a sharp fall in 1971. This is illustrated by the index of time-charter rates (see table 15), published quarterly by the United Kingdom Chamber of Shipping. The index (1968 = 100), which stood at 206 at the end of September 1970 and at 176 at the end of December 1970, declined to 87 by the end of June and to 75 at the end of September 1971.

123. It can be seen from table 15 that the dry cargo time-charter index showed wider fluctuations in 1970 and 1971 than the dry cargo voyage charter index. This can possibly be explained by the fact that, while the spot voyage charter rates reflect the current supply and demand situation, the time charter rates are determined by longer-term considerations, (although transactions for a period of over one year are not usually recorded). Thus, the sharper fall of the time charter index than of the voyage charter index during the first six months of 1971 may have reflected expectations in the early part of the year of a further decline in freight rates.

124. The monetary crisis was particularly felt in this market. The uncertainty of the future of the monetary system lowered the incentive to enter into long-term commitments. However, in the latter part of 1971, some reactivation in the market was observed.

Table 15

Freight rate indices 1969-1971

Month	*Liner freight rates*[a] *(1965=100)*			*Dry cargo tramp time charter*[b] *(1968=100)*			*Dry cargo tramp voyage charter*[c] *(July 1965=June 1966=100)*			*Tanker freight rate index*[d]		
	1969	*1970*	*1971*	*1969*	*1970*	*1971*	*1969*	*1970*	*1971*	*1969*	*1970*	*1971*
January	108	112	121				88	99	107	83	(117) 129	207
February	108	113	122				88	112	96	73	(121) 134	155
March	110	113	124	95	148	135	88	120	88	75	(132) 145	140
April	110	113	125				81	121	87	60	(125) 137	110
May	108	113	125				80	124	83	66	(121) 133	104
June	109	113	125	97	193	87	84	122	75	72	(158) 173	80
July	109	114	126				82	120	72	81	(203) 223	69
August	109	114	127				81	127	74	81	(205) 226	81
September	110	115	128	99	206	75	84	128	75	(89) 99	(236) 259	71
October	110	115	130				89	129	74	(104) 115	(260) 286	75
November	110	117	131				88	111	75	(126) 139	281	87
December	111	117		111	176		91	111		(137) 150	226	
Yearly Average	109	114		101			85	119		(87)	196	

Note. — The indices in this table have been taken to the nearest round figure.

[a] Liner index compiled by the Ministry of Transport of the Federal Republic of Germany. Monthly weighted assessments of freight rates on cargoes loaded or discharged by liners of all flags at ports in the Antwerp/Hamburg range.

[b] As of 1970, compiled and published on a quarterly basis by the United Kingdom Chamber of Shipping.

[c] Compiled and published by *Norwegian Shipping News* (Oslo).

[d] As published by *Norwegian Shipping News* (Oslo). Intascale numbers to August 1969, thereafter Worldscale numbers. The equivalent Intascale numbers for the period September 1969 to December 1970 are shown in brackets.

2. Cargo liner freight rates

125. Liner freight rates rose sharply during 1971. This is shown in table 16 which shows liner freight rate increases announced in 1971 and their effective dates. In parallel, the liner freight rate index compiled by the Ministry of Transport of the Federal Republic of Germany (table 15) reached a level of 131 in November as compared with 121 at the beginning of 1971 and 114 in August 1970, when the acceleration of the upward movement started.

126. The most noticeable feature of the development of liner freight rates in the last quarter of 1970 and in 1971 is the accelerated pace of increase of these rates at a time when voyage charter and time charter freight rates in the open market fell sharply. While it is undoubtedly true that increases in the level of costs of liner shipping occurred in the period, the relationship between the cost increases and the freight rate increases is not known (see also paragraph 114 above). It has been noted that in the past liner rates have tended to follow open market rates, particularly in an upward direction, but with a time lag. Thus, the present pattern of a rise in liner rates occurring about a year after open market rates reach their peak is consistent with past observations.

127. It will also be noticed that further increases in liner freight rates were announced during the last months of 1971. The effect of these increases will be felt mostly in 1972. Furthermore, as a result of the *de facto* devaluation of the United States dollar in terms of other currencies in August 1971, many shipping conferences imposed "currency adjustment" surcharges (see paragraphs 133 to 142 below). Rising operating costs are given by the shipping conferences as the main reason behind the announced new liner freight rate increases. In this connexion, reference is again made to the discussion in paragraphs 112 to 118 above.

128. The UNCTAD secretariat has recorded 134 announcements of freight rate increases in 1971 (see table 16). This number appears to be considerably larger than the corresponding one recorded in 1970.[33] Table 16 may not be directly comparable with the corresponding list in the 1970 *Review,* since different sources were used in its compilation. However, even when full allowance is made for differences in coverage, it is probable that the number of freight rate increases made in 1971 has no precedent, at least since 1957. These increases affected almost all the major liner trades at a time when all the other freight markets were depressed. Only the future will show whether the large number of increases in 1971 was due solely to an exceptional increase in operating costs. It is possible that, as liner services become increasingly specialized, the freight policies of the shipping conferences are tending to become increasingly independent of the freight rate developments in other markets and that 1971 was the year in which this change in rating policies became overt.

129. Care is needed in interpreting the information given in table 16. The table is not a list of actual freight rate increases but of freight rate increase announcements. The actual increase may differ from the increase announced in one or more of several ways. First, between an announcement and the date when it becomes effective, consultation or negotiation may occur which results in the actual increase being smaller than that announced; indeed, in some cases the increase may even be abandoned. Secondly, a conference in making an announcement of a freight rate increase may apply differential rate increases or timing to different areas of their operations or to particular products and these details would naturally not always be recorded in the press. Thirdly, the conference may exempt, as a result of consultation and negotiation, particular products or particular areas from the proposed increase or may apply smaller increases to those products or areas. For all of these reasons, therefore, neither the size of the change nor its timing may accord with the original announcement.

130. Recent developments show that the "across the board" increases in liner freight rates can no longer be taken as the sole indicator of rate changes. The reason is that there appears to be a tendency to diversify and generalize the use of surcharges. For example, a bunker surcharge has been introduced by a number of conferences since 1970. Also, in some trades, post-shipment surcharges have been introduced by shipping conferences. As a result, a complex system of quoting rates has evolved. An example of the diversity of the system of quoting rates is provided by the Wittas conference. The trade from Haiti to Europe appears to be subject to the following surcharges as from 1 April 1971:[34]

(*a*) Port charge: $2.30 per freight ton.

(*b*) Wharfage charge: $2 per freight ton.

(*c*) Port improvement charge: $1 per freight ton.

(*d*) An outport surcharge of $1.50 per freight ton was imposed on shipments from Haitian ports (except Port-au-Prince) to Europe, owing to the comparatively small volume of cargo offered in Haitian ports.

As a result of the introduction of an increasing diversity of surcharges in addition to straight-forward rate increases, a comparison of the freight rate increases made by different conferences (see table 16) does not give a complete picture. One conference, for example, may increase rates by, say, 15 per cent, and impose no surcharges, while another makes a rate increase of only, say, 5 per cent, but introduces a number of surcharges so that, in practice, the effective increase made may be even larger. While freight rate increase are generally recorded in the Press, not all surcharges are recorded and, because of their diversity, their results are difficult to determine accurately. For these reasons, lists of surcharges are not included here.

[33] See the list in paragraph 107 of the *Review of Maritime Transport, 1970,* op. cit. The second foot-note to that paragraph states: "It is believed that the list, although not exhaustive, is representative of the increases announced during 1970".

[34] See *Journal pour le Transport international* (Basle), 15 February 1971, p. 179.

TABLE 16

Liner freight rates increase announcements—1971

	Name of Conference[a]	Date of implementing the increase	Percentage increase
1.	Red Sea and Gulf of Aden/U.S. Atlantic and Gulf Rate Agreement	1 January	15 approximately.
2	Accordo Noli Tirreno - Tunisia - Libya (AC.TI.TU.LI)	1 January (Libyan ports only)	10
3	Service maritime combiné franco-portugais (from Le Havre and Rouen to Portugal)	1 February	10
4*	Australia Northbound Shipping Conference (to Philippines, Hong Kong, Japan, Korea and other East Asiatic ports)	1 February	10
5	Conférence d'Indochine	1 February 1 July	10 5
6	Conférence export/import des lignes de navigation desservant Madagascar et dépendances, les Comores et l'île de la Réunion	1 February 1 February	15 15
7*	Far Eastern Freight Conferences	1 February	10
8	United States Great Lakes - Bordeaux/Hamburg Range Westbound Conference	1 March	10 approximately.
9*	Conference of Gibraltar and Morocco Steamship Companies	1 March	15
10	Comité de liaison France/Maroc	1 March	10
11	Mediterranean–Canada Westbound Freight Conference	1 March	5
12	Mediterranean–U.S.A. Great Lakes Westbound Freight Conference	1 March	10
13	Pacific–India Agreements	March	10-15
14*	Italian–West Africa Conference	1 March	5
15*	Canada–Mediterranean Freight Conference	1 March	15 per cent increase for rates below Canadian $ 30 10 per cent increase for rates from Canadian $ 30.25 to $ 40; 7.5 per cent increase for rates from Canadian $ 40.25 to $ 50; 5 per cent increase for rates over Canadian $ 50.25.
16	Australia to Europe Conference	Immediate (11 March)	7-10
17	Conférence d'Afrique du Sud et du Mozambique	15 March	10 approximately.
18	South Africa/Europe Conference Lines	15 March	6 approximately.
19	Italy–India–Pakistan Conference	15 March	15 average.
20	Conférence des Charentes (trade to India, Pakistan and Ceylon)	1 April	15
21*	New Zealand European Shipping Association	1 April	12.5 for packaged or frozen goods. 6.5 for bulk.
22	Conférence Centre Amérique	1 April	7.5.
23	Association of West India Trans-Atlantic Steamship Lines (WITASS)	1 April	$ 2 to $ 3.10 per ton - estimated 10 per cent at average.
24	The U.S. Atlantic and Gulf/ Australia New Zealand Conference	1 April	15
25	Entente de fret en sortie des ports du sud de la France sur Ceylan, l'Inde et le Pakistan	1 April	15
26	The U.K./Continent/Western Italy - Ceylon Conference	1 April	15
27*	Mauritius Outward Conference	1 April	10 approximately.
28	Western Canada–Europe Conference	4 April	15 average.
29	U.S. Pacific Coast European Conference	4 April	15
30	Western Canada–Europe Conference	4 April	15
31	Shipping lines operating between New Zealand and West Indies	1 April	12.5
32	Japan/Latin America/America Eastbound Freight Conference	10 April 1 December	10 15
33	Japan/Mexico Freight Conference	10 April 1 December	10 15

TABLE 16

Liner freight rates increase announcements—1971 *(continued)*

	Name of Conference[a]	Date of implementing the increase	Percentage increase
34	Japan/West coast of South America Freight	10 April 1 December	10 15
35	Pacific Coast - Australasian Tariff Bureau		Rates up to $ 40 a ton will be increased by $ 6 a ton. Rates between $ 40-$ 55 a ton will be increased by $ 7 a ton. Rates between $ 70-$ 85 a ton will be increased by $ 11 a ton. Rates over $ 85 a ton will be increased by $ 13 a ton.
36*	U.K./West Africa Lines Joint Service	1 May	Cement: £ 1.25 a ton. Sugar: 12.25 per cent approximately. Iron & steel: 7-14 per cent according to destination.
37	Ceylon Shipping Conference (to London)	1 May	15
38	India/Pakistan Conferences	1 June	15 reduced to 12.5
39*	East Africa Conference Lines	14 June	10
40	Pacific Westbound Conference	15 June	10-15
41	U.K. West Africa Lines Joint Service	1 July	12.5 (for logs). 15-20 (for sawn timber).
42*	Gulf European Freight Association (GEFA)	1 July	For cotton: $ 25 per 100 lb.
43	Associated Continental Middle East Lines	1 July	12.5
44	Associated Mediterranean Middle East Lines	1 July	12.5
45.	Accordo Merci Italia–Medio Oriente	1 July	12.5
46*	U.K./Spain Freight Association	1 July 1 December	7.5 10
47	Continent/West Africa Conference (COWAC)	1 July	15
48	West Italy/North Atlantic Conference	1 August	10
49	Mediterranean/Gulf Conference (not applicable to freight to Puerto-Rico)	1 August	10
50	Europe–Argentina Freight Conference (section 4, North-South)	1 August	8 approximately.
51	Conférence de fret Indonésie–Europe	1 August	5 approximately.
52	Outward Continental North Pacific Freight Conference (East coast U.S.A. to Belgium Netherlands, Germany)	1 August	10
53	North Atlantic–Continental Conference	1 August	10
54	North Atlantic–Baltic Conference	1 September	10
55	North Atlantic–French Atlantic Conference	1 September	10
56	North Atlantic–United Kingdom Conference	1 September	10
57	North Atlantic–Mediterranean Conference	10 August	10
58	Europe/Indonesia Freight Conference	1 August	7.5
59*	U.K./River Plate Conference	1 August	8
60	America/West Africa Freight Conference	1 August	12.5
61	Italian–West Africa Conference (outward trade)	1 August	10
62	Conference of Gibraltar and Morocco Steamship Companies	2 August	12.5 average.
63*	Conference of Malta and Alexandria Steamship Companies	2 August	12.5 average.
64	Levant Conference	2 August	12.5 average.
65	Continental–North Atlantic Westbound Freight Conference	2 August	10
66	French–North Atlantic Westbound Freight Conference	2 August	10
67	North Adriatic–North Atlantic Westbound Freight Conference	1 September	10
68	OTRAMA Conference (Traffic from French ports in the	2 August	15

	Mediterranean to West African ports from Mauritania to Angola)		
69	Marseilles North Atlantic U.S.A. Freight Conference	20 August	10
70	U.K./South African - Lobito Conferences	23 August	12.5
71	Accordo Agentil Mar Rosso e Golfo di Aden/Red Sea and Gulf of Aden Agents Agreement	1 September	$ 3 per ton for Djeddah, $ 2 per ton for other Red Sea ports and Gulf of Aden.
72	New Zealand Eastern Shipping Committee	1 September	20
73	Brazil/Mediterranean/Brazil Freight Conference	1 September	10 approximately.
74	Ceylon/U.K. and Eire Conference	1 September	15 for United Kingdom 12.5 for Continent.
75*	Australia, New Zealand and South Sea Islands Pacific Coast Conference	1 September	25 approximately.
76	Royal Interocean Lines, Blue Funnel Line, Ellerman and Bucknall and Shaw Savill Lines	1 September	15
77*	Liner Services between Australia and East Africa	1 September	15
78	Australia/U.S.A. and Gulf Conference	1 September	25 then reduced to 15 and then postponed because of U.S.A.freeze measures.
79	Italian–West Africa Conference	1 October	5
80	Trans-Pacific Freight Conference of Japan	1 October	20 approximately.
81	Trans-Pacific Freight Conference	1 October	17.5 to 22
82	Continental Canadian Westbound Freight Conference	1 October	10 approximately.
83	New Zealand European Shipping Association	1 October	12.5—wool only.
84	Western Italy North Atlantic Conference (increase deferred until 1 October)	1 October	10
85	Overseas Shipowners' Committee (New Zealand and Caribbean)	1 October	15
86*	Australia Northbound Shipping Conference (to Philippines, Hong Kong, Japan, Republic of Korea and other East Asiatic ports)—both directions	1 October	15
87	Turkey/U.S.A. Westbound Freight Conference	1 October	10 average.
88	Greece/U.S.A. Westbound Freight Conference	1 October	10 average.
89	British–New Zealand Lines (refrigerated cargo only)	1 October	28
90	Continent/West Africa Conference (COWAC) Northbound	1 October	15
91	East African Conference Lines	1 October	15 (in addition to 10 per cent increase that took effect on 14 June).
92	Japan/Atlantic and Gulf Freight Conference	1 October	17.5-22
93	Japan–West Canada Freight Conference	1 October	17.5
94	Japan–East Canada Freight Conference	1 October	17.5
95	Australia, New Zealand and South Sea Islands Pacific Coast Conference	1 October	10 (in addition to 25 per cent introduced on 1 September).
96	New Zealand and South and East Africa (Royal Interocean Lines)	1 October	15
97	Association maritime Nouvelle-Zélande/Europe	1 November	12.5
98	United Kingdom/River Plate Conference	1 November	6
99	Europe Argentine Freight Conference	1 November	6
100	Argentine–Europe Freight Conference	1 November	6
101	West Canada Freight Conference	1 November	20
102	Mauritius Outward Conference	1 November	10
103	Red Sea and Gulf of Aden Agents' Agreement	1 November	5
104	Japan/Philippines Freight Conference	1 November	10
105	New Zealand Conference	1 November	12.5
106	North Atlantic Westbound Freight Association	13 November	10
107	Gulf European Freight Agreement	14 November	Increase of $ 4 when freight rate is currently less than $ 25. Increase of $ 5.25 when freight rate is currently between $ 25-35. Increase of $ 6.50 when freight rate is currently higher than $ 35.

TABLE 16

Liner freight rates increase announcements—1971 *(concluded)*

	Name of Conference[a]	Date of implementing the increase	Percentage increase
108	Gulf European Freight Association (GEFA)	22 November 1971	Rates up to $ 24.99 W/M by $ 2.00 per F/T. Rates over $ 25 to $ 34.99 W/M by $ 2.75 per F/T. Rates over $ 35 W/M by $ 3.50 per F/T (Weight rates over $ 90 will be increased by 10 per cent).
109	Australian and New Zealand Eastern Shipping Conference	1 December 1971	15
110	U.K./Spain Freight Association	1 December 1971	10 approximately.
111	Japan–Latin America Eastbound Freight Conference	1 December 1971	15
112	Japan–Mexico Freight Conference	1 December 1971	15
113	Japan–West Coast South America Freight Conference	1 December 1971	15
114	U.K.–Israel Shipping Conference	1 January 1972	12.5
115	Canadian North Atlantic Westbound Freight Conference	1 January 1972	12 in general.
116	Hambourg–Brême–Londres	1 January 1972	15
117	Hambourg–Brême–Humber	1 January 1972	15
118	U.K. and Ireland and Canadian Maritime, St. Lawrence and Great Lakes ports	3 January 1972	12.5
119	Hong Kong/East Canada Freight Conference	1 February 1972	17.5
120	Convention Italie occidentale–Sicile	1 February 1972	To be announced.
121	Malabar–Australia Rate Agreement	1 February 1972 (delayed from 1 January 1972)	15
122	Continent–Near East–Continent Conference	1 February 1972 at the earliest	Unspecified tariff change..
123	Continent-Turkey–Continent Conference	1 February 1972 at the earliest	Unspecified tariff change..
124	Malaysia–Pacific Rate Agreement	1 February 1972	15
125	Entente de fret Marseille/Levant (from South of France to Greece, Turkey, Syria, Lebanon, Egypt, Cyprus)	1 February 1972	10 approximately.
126	Far Eastern Freight Conferences	21 February 1972 4 August 1972	15 2.5
127	Europe-Japan Freight Conference	21 February 1972 4 August 1972	15 2.5
128	Philippines–Europe Conference	21 February 1972 4 August 1972	15 2.5
129	Europe to the Philippines Conference	21 February 1972 4 August 1972	15 2.5
130	Indochina/U.K. Conference	21 February 1972 4 August 1972	15 2.5
131	Continent to Viet-Nam and Cambodia	21 February 1972 4 August 1972	15 2.5
132	Outward Continent Australia Conference	1 March 1972	14 approximately (up to 20 for some cargo).
133	Europe Indonesia Freight Conference	1 March 1972 followed by 1 September 1972	17.5 approximately. 5 approximately.
134	Mauritius Outward Conference	1 April 1972	10

Source: as announced by: (a) *Journal de la Marine marchande et de la Navigation aérienne* (Paris); (b) *Journal pour le Transport international* (Basle) various issues.

[a] Conferences which appear more than once in the list are marked with an asterisk the first time that they appear.

3. Tanker freight rates

131. The tanker market remained very strong until almost the end of 1970, but thereafter it also weakened and, during the first seven months of 1971, freight rates fell sharply in all tanker markets. This is shown by the tanker freight rates index, which registered a fall from 286 in October 1970 and 226 at the end of December 1970 to 69 in July 1971. After a temporary recovery in August, the index again fell back to 71 in September. It appears that the opening of the Transarabian Pipeline and the resumption of normal supplies from North Africa, together with a sharp decline in demand for tanker tonnage on the part of Japanese importers were the major factors which affected the market.

132. There were, at this time, two contradictory factors in the market. On the one hand, a large number of ore/oil carriers on longer term contracts in Japan, which were found surplus to requirements, were placed in the market for re-letting. According to press reports, the tonnage of re-let ships available up to 15 October 1971 amounted to 1.4 million dwt, making the tonnage unfixed approximately 3 million dwt. On the other hand, the indications were that with the approach of the winter season in the northern hemisphere, the underlying tone of the market tended to be strengthened. In November and December 1971 the tanker markets were re-activated and this contributed to raising the freight rates to higher levels than those recorded in the third quarter of the year.

4. The effect of the monetary crisis

(a) *General*

133. Any change in exchange rates between currencies creates certain problems. For instance, the size of the increase (or decrease) in shipowners' costs or the size of the corresponding reduction (or increase) in freight rates is influenced by the extent to which other currencies follow or do not follow the devaluation or revaluation resulting from either a specific change in the parity or the floating of a currency in which freight rates are quoted.

134. The combination of two factors, namely, a market which was already under strong downward pressures and the uncertainty created by the monetary crisis, stopped, for a time, all activity in chartering and selling of ships, since neither shipowners nor charterers had sufficient confidence in the likely future relationships between currencies, to be prepared to enter any transactions. Another effect of the crisis has been that shipowners who completed chartering transactions in United States dollars before 15 August 1971 suffered losses of revenue, in the absence of any escalation clause. On the other hand, because of the volume of new tonnage on order, the prices of which were frequently fixed in dollars without escalation or currency adjustment clauses, many shipowners will have made a capital gain from the devaluation. Also, shipowners who borrowed to construct ships, which is the usual method of financing new building, now find that the repayment of their loans costs less in terms of non-dollar currencies. Japanese shipbuilders, for example, estimated that they might lose up to $500 million in the case of a 10 per cent revaluation of the yen, because of their U.S. dollar claims outstanding at the time when the yen was allowed to float.[35]

135. It is not possible to identify and appraise all the effects of the monetary crises on the short-term demand for shipping services and on the market, the major reason being that the crisis occurred at a period when the market was already depressed because of other factors. It is, however, reasonable to suppose that the crisis further accentuated the depressed conditions already existing in the market.

136. The demand for shipping will also be affected by the changes in the parities of currencies arising from the solution of the monetary crisis. The effects of the revaluation of the yen, substantially greater with respect to the U.S. dollar than with respect to other major currencies, may be quite serious.[36] This revaluation may be expected to cut Japan's exports and, hence, affect requirements of raw materials and fuels, such as coal, ore and crude oil.[37] This effect may be compensated, at least in part, by rising exports and, subsequently, rising import requirements of other countries, particularly the United States of America. However, the over-all effect of such a change in the orientation of the trade, particularly of the trade in raw materials and fuels, is very likely to influence the average distances over which cargo is carried and, hence, the demand for shipping services. This is because the ocean voyage between most of the major sources of raw material supply and the United States of America or Europe is shorter than that to Japan. Seen from this angle, the effects of the monetary crisis may be more important for the shipping industry in the few years after its settlement than immediately after the crisis which occurred in August 1971.

(b) *Particular effect on liner conference freight rates*

137. In order to avoid a repetition of the losses which shipowners suffered after the devaluation of sterling in 1967, there was a switch from sterling to the United States dollar as the currency in which rates were fixed. The dollar thus having become the currency in which freight rates were expressed, its *de facto* devaluation in August 1971 immediately revived the problems the industry had faced in 1967. The revenue of liner companies, whose freight rates were expressed in dollars, declined in terms of other major currencies.

138. The mechanism of adjustment to the modified monetary situation took three main forms:

[35] *Source: Zosen*, (Tokyo), vol. XVI, No. 6, September 1971. Presumably the actual revaluation of the yen vis-à-vis the United States dollar, will increase the losses proportionally.

[36] According to the Japanese Economic Planning Agency, the industrial production of Japan in the fiscal year ending March 1972 is expected to register an increase of 3.5 per cent as against the original estimate of 11.8 per cent. (*Source: Zosen* (Tokyo), vol. XVI, No. 8, November 1971).

[37] "Depending upon how low Japan's economic growth rate for the next few years is set, the target of the Japanese merchant fleet should be rather drastically revised...". Quoted from *Zosen* (Tokyo), op. cit., p. 5.

(*a*) For freight rates quoted in dollars, a "currency adjustment" surcharge was imposed.

(*b*) Some conferences, while continuing to quote rates in dollars, allowed member lines to convert freight rates from dollars to their own currency at the parity rate which existed prior to 15 August.

(*c*) Other conferences preferred to switch to another generally acceptable international currency (the Swiss franc, for example).

139. During the period 15 August to 10 December 1971 several conferences announced "currency adjustment" surcharges. These varied in size between 2 per cent and 7 per cent. The variations can be partly explained by the fact that the costs of liner companies were affected differently according to the extent to which the dollar depreciated relative to the currencies of the countries in which the costs were incurred. For example, a liner company that incurred most of its costs in certain continental ports of western Europe is likely to have incurred greater cost increases than a liner company incurring most of its costs in the United Kingdom. On the other hand, costs incurred in the United States of America, or in any of the countries whose currency is still tied to the United States dollar, remained unaffected. It is worth noting in this connexion that, in the United States, all freight rate increases and adjustments were at first postponed because of the 90-day price freeze which was ordered. This was soon relaxed and the price freeze did not become applicable in the case of shipping.

140. "Currency adjustment" surcharges that were added to freight rates quoted in dollars adversely affected countries which maintained their parity with the dollar because these countries were required to pay more in dollars for shipment of their cargos. This is particularly true for the great majority of developing countries. It may be added that, generally, ship-owning countries have been affected less than other countries by the freight rate adjustments because their losses as shippers have been offset, in part at least, by their gains as shipowners.

141. Any change in foreign exchange parities between currencies, widening of margins around fixed parities, or floating of currencies, adversely affects the interests of either the carriers or the shippers, and this problem cannot be resolved by quoting freight rates in terms of any acceptable international currency. The legitimate interests of each of the parties concerned could be protected only if an effective mechanism were created to determine objectively the size of the freight rate increase to be adopted following a *de facto* devaluation, or the freight rate reduction to be applied following a *de facto* revaluation of the currency in which the freight rate is quoted.[38]

[38] In this connexion, reference is made to joint recommendation No. 11 on "Currencies—Devaluation, Revaluation, Rates of Exchange" which was adopted in June 1971 by the Committee of European National Shipowners' Associations (CENSA) and the European Shippers' Councils, and also to paragraphs 202 to 211 of the report by the UNCTAD secretariat: *The Regulation of Liner Conferences (A Code of Conduct for the Liner Conference System)* (United Nations publication, Sales No.: E.72.II.D.13) where suggestions are made for the handling of this particular problem.

142. This question is now of greater importance because developments regarding the recent monetary crisis have led to a greater degree of floating of international currencies than before, the support margins around the mid-point parities having been widened. It may be noted that subsequent to the determination of the new parities, several conferences had, before the end of 1971, announced new currency adjustment surcharges.

5. The level of freight rates, laying up and scrapping

143. The relationship between changes in freight rates and short-term adjustments in the supply of tonnage can be followed by observing the development of freight rate indices, laying up and scrapping tonnage. Graphs 2 and 3 show, respectively, dry cargo voyage charter and tanker freight rate indices during the period 1965 to 1971 (right hand axis) in relation to the changes in laid up and scrapped tonnage as a percentage of world tonnage (left hand axis). If the whole period is considered, there appear to be systematic relationships between these two sets of variables, particularly in the relationship of movements in freight rates to laid-up tonnage.

144. Both laid-up and scrapped tonnage follow the movement of freight rates, but with a time-lag. This time-lag arises from a number of causes:

(*a*) Ships can be laid up only after all charters have been concluded.

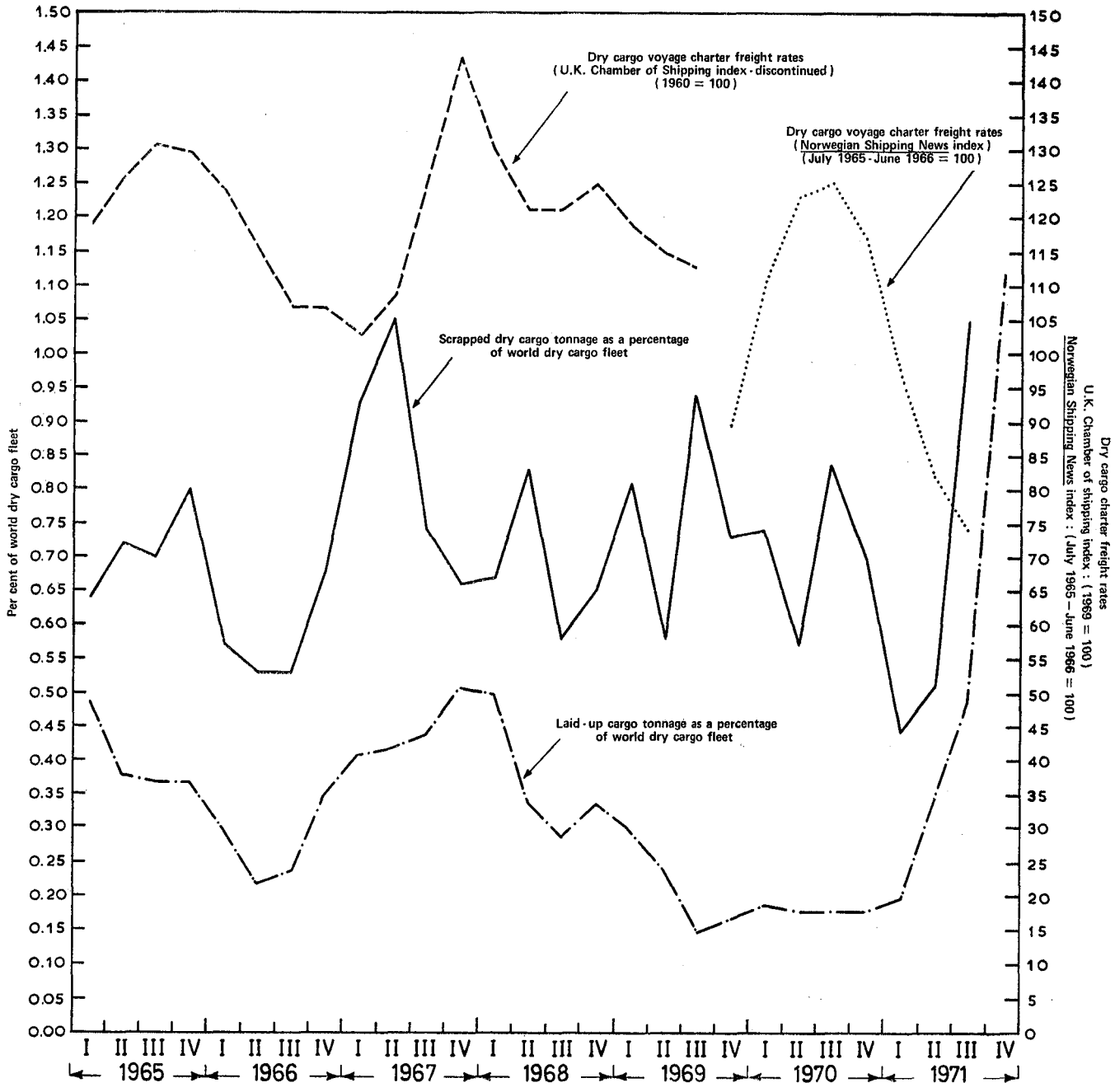
(*b*) The process of adjustment of tonnage capacity through laying up of vessels is gradual. If the pattern of the market supply of tonnage is considered, several stages can be distinguished. While freight rates are declining, they may still provide marginal operators with revenue higher than vessel operating costs minus laying up costs. Under such conditions there is no inducement to lay up tonnage. If freight rates continue to fall, the revenue of marginal operators is insufficient to cover vessel operating costs minus laid-up costs, with the result that the laying up of tonnage begins, first with tonnage with the highest operating costs. As further falls in rates reduce revenue to a level equal to operating costs minus laid-up costs of operators of more economical tonnage, the amount of laying up will tend to increase sharply, although in this situation the market prospects will play an important role. This point is discussed further in sub-paragraph (*c*) below.

Initially, therefore, the market is characterized by a sharp fall in freight rates while laid-up tonnage increases only slightly (see graphs 2 and 3). At a later stage, even after the decline in freight rates has been checked, an accelerated increase in laid-up tonnage may be noticed.

(*c*) The level of scrapping and laying-up of tonnage depends on both current and expected future market developments. If current rates are low but prospects are encouraging, little increase in scrapping and laying up of tonnage can be expected. For example, if the net loss from a voyage in terms of out-of-pocket expenditure equals the laying-up costs, so that the owner is indifferent as between laying-up or keeping the vessel in service, the

GRAPH 2

The course of freight rates, laying-up [a] and scrapping,[b] 1965-1971: Dry cargo vessels



Sources: freight rates: table 15.

Laid-up tonnage: calculated by the Secretariat from statistics of laid-up tonnage supplied by the United Kingdom Chamber of Shipping and from statistics of world fleet supplied by the Institute of Shipping Economics, Bremen.

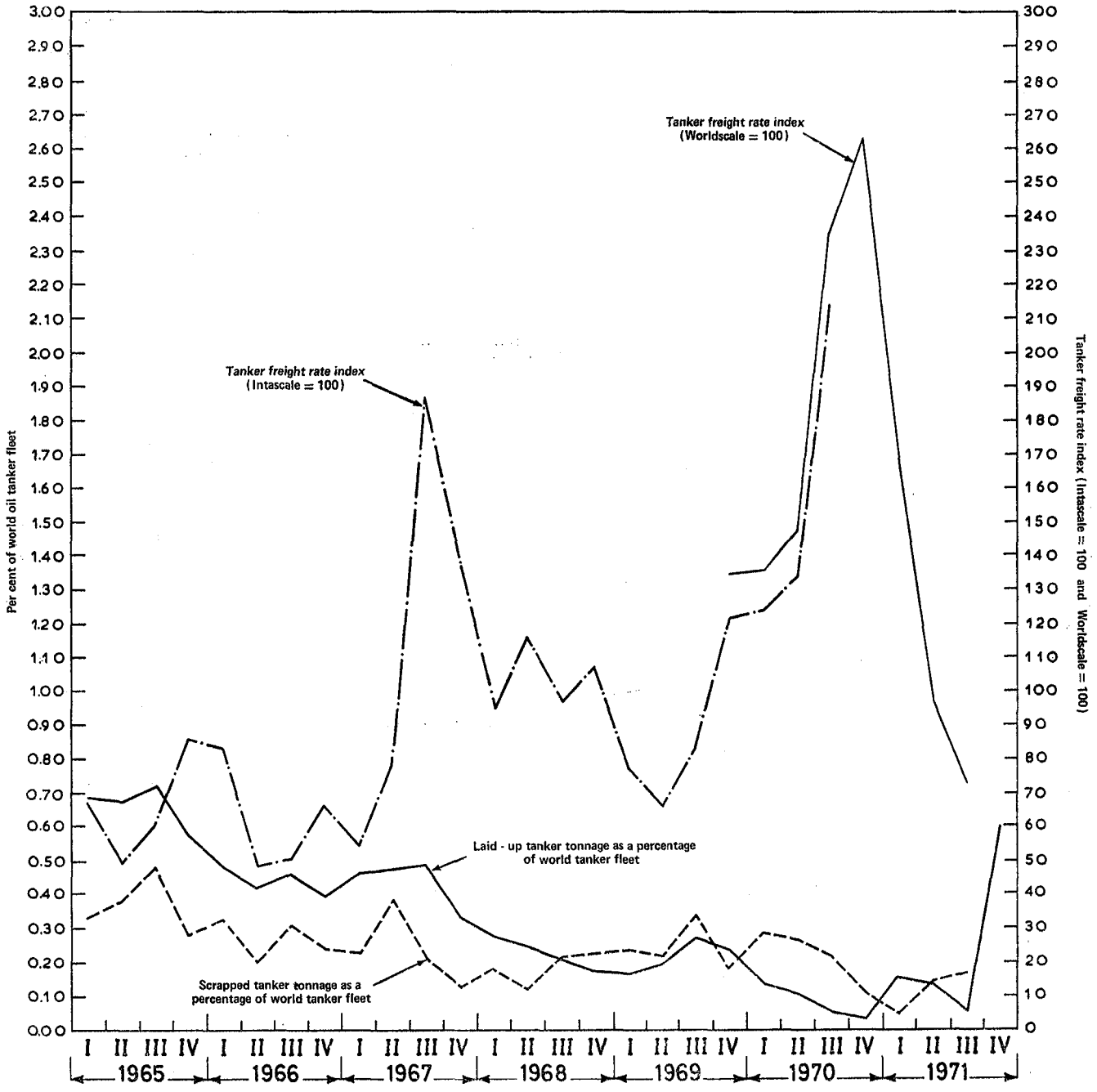
Tonnage scrapped: calculated by the Secretariat from statistics supplied by Institute of Shipping Economics, Bremen.

[a] Tonnage laid up at the beginning of each quarter, expressed as a percentage of the world dry cargo fleet tonnage.

[b] Tonnage scrapped during each quarter expressed as a percentage of world fleet.

GRAPH 3

The course of freight rates, laying-up,[a] and scrapping,[b] 1965-1971: Oil tankers



Sources: freight rates: table 15.

Laid-up tonnage: calculated by the Secretariat from statistics of tonnage laid up compiled by the United Kingdom Chamber of Shipping and of world fleet compiled by the Intitute of Shipping Economics, Bremen.

Tonnage scrapped: calculated by the Secretariat from statistics compiled by the Institute of Shipping Economics, Bremen.

[a] Tonnage laid up at the beginning of each quarter, expressed as a percentage of the world tanker fleet tonnage.

[b] Tonnage scrapped during each quarter, expressed as a percentage of world fleet.

decision to lay up will be influenced by the immediate prospects of market developments. Accordingly, it is only when the discounted value of the expected future revenue is smaller than the relevant costs that substantial laying-up or scrapping will occur.

145. As will be seen from graphs 2 and 3, in a given market situation, changes in the volume of tonnage scrapped tend to follow changes in freight rates with a greater time-lag than is the case with changes in the volume of laid-up tonnage. This can be partly explained by the fact that a decision to scrap is likely to be taken more slowly than a decision to lay up tonnage, scrapping being an irrevocable action. Moreover, in the case of an old laid-up ship, all money borrowed for its purchase will normally have been repaid, so that retaining the vessel does not involve any significant cash outflow. An old vessel which is nearing the end of its useful life may be laid up without any attempt to maintain it in condition, since its value for scrap will not significantly deteriorate because of lack of maintenance. Laying-up then being virtually costless, the vessel can be retained against either future improvement in freight rates or a rise in scrap value. The latter point may be important because prices of vessels sold for breaking-up are likely to be low in periods of depression in the freight markets. It appears, therefore that scrapping depends to a greater extent than laid up tonnage on factors other than freight rates.

146. The developments in 1970-1971 generally confirm the pattern described above. For example, the lag in the response of laid-up dry cargo tonnage to changes in freight rates was clearly shown, since the dry cargo voyage charter freight rates began to decline in October 1970, while laid-up tonnage began to rise substantially in February 1971. The volume of laid-up dry cargo tonnage always responds to market developments. On the other hand, the supply of tonnage in the tanker market appears to adjust more quickly to changes in freight rates. However, the tonnage of tankers laid up showed fluctuations during the twelve-month period ending in October 1971, while tanker freight rates declined continuously over the period (except during August 1971).

147. The changes in laid-up dry cargo and tanker tonnage as a percentage of the corresponding total world tonnages since the end of the third quarter of 1970 are shown below:

End of :	*Dry cargo Percentage*	*Tanker Percentage*
September 1970	0.18	0.03
December 1970	0.20	0.15
March 1971	0.35	0.13
June 1971	0.49	0.12
September 1971	1.12	0.60

148. It can be seen from the above figures that a much smaller proportion of tanker tonnage than of dry cargo tonnage was laid-up at the end of September 1971. The situation as regards tonnage scrapped was the same. In the twelve-month period ending October 1971, the tanker tonnage scrapped accounted for 0.4 per cent of world tanker tonnage whereas in the case of dry cargo tonnage the corresponding figure was 2.6 per cent. This can possibly be explained by the relative age composition of the two fleets. Only about 6 per cent of the world tanker tonnage is 20 or more years old, while 20 per cent of the world dry cargo tonnage is of this age.

149. The relationship between scrapping and freight rates during 1971 is not very marked in either the dry cargo or the tanker markets. This confirms the observation made above that short-term movements of scrapping depend to a greater extent than those of laying up on factors other than freight rate movements. An important qualification, however, should be mentioned. While the statistics used to indicate the size of the world fleet do not include the United States reserve fleet, statistics of scrapping include this fleet. Generally, this will tend to bias upwards the percentage of scrapped tonnage. Particularly, a change in the United States reserve fleet tonnage scrapped may have an impact which is sufficient to distort the short-term relationship between percentage of tonnage scrapped and freight rates, because the United States flag scrapped tonnage accounts for a large percentage of the total tonnage broken up. In 1970, for example, it amounted to 45 per cent of this total.

C. Liner freight rates increases, 1968-1970 in selected trades to and from developing countries

150. Changes in liner freight rates do not always affect equally the inbound and outbound liner trades of a region or a country. In view of the special importance of the level of freight rates to developing countries, particularly those relating to their export trades, 34 conferences covering selected trades to and from developing countries were asked by the secretariat to provide information regarding freight rate changes during the period 1968 to 1970.

151. Substantive replies were received from 21 conferences, and, on the basis of these replies, it was possible to establish the freight rate changes on both legs of 17 trades as shown in table 17. The position in these 17 trades is described below:

In six trades, freight rate increases were more frequent and/or higher in the inbound trades of developing countries than in the outbound trades from developing countries.

In five trades, freight rate increases were more frequent and/or greater in the outgoing trades from developing countries than in the corresponding inbound trades.

In another trade a rate increase was introduced in the outbound trade from developing countries four months earlier than in the inbound leg.

In four trades, freight rate increases seem generally to have been similar on the inbound and outbound trades. One of these four trades is divided into several sectors and, although certain differences exist in individual sectors, the over-all situation seems to have been similar in the outbound and inbound legs of the trade. In another one of these trades, the freight rate changes

TABLE 17

Liner freight rate increases [a] in the period 1968-1970 in selected trades to and from developing countries

Trade routes	*Date*	*Outbound (from developing countries)*	*Inbound (to developing countries)*
1	1 January 1968	10 per cent general rate increase.	5.5 per cent general rate increase.
	1 April 1970		5 per cent general rate increase.
2	1 February 1969	—	5 per cent general rate increase. Tariff converted to metric basis.
3	1 April 1968	10 per cent general rate increase.	—
	1 April 1970	10 per cent general rate increase.	—
4	1 January 1969	7½ per cent general rate increase (with some exceptions and specific rates for certain commodities).	—
	1 April 1969	—	7½ per cent general rate increase.
	1 July 1970	12½ per cent general tariff rate increase (with some exceptions and special rates for certain commodities).	12½ per cent general rate increase.
5	1 April 1970	—	7.5 per cent general rate increase.
6	January 1968	10 per cent general rate increase.	7 per cent general rate increase.
	June 1970	12.5 per cent general rate increase.	12.5 per cent general rate increase.
7	1 February 1968	—	Incorporation of 12.5 per cent sterling devaluation surcharge.
	1 March 1968	Incorporation of 12.5 per cent sterling devaluation surcharge.	—
	1 December 1969	9 per cent general rate increase, concurrent reduction of 10 per cent Suez surcharge to 7.5 per cent.	9 per cent general rate increase, concurrent reduction of 10 per cent Suez surcharge to 7.5 per cent.
	1 February 1970	10 per cent general rate increase[b].	10 per cent general rate increase.
8	August 1968	—	5 per cent general rate increase.
	March 1970	9 per cent general rate increase. Suez surcharge reduced from 10 per cent to 9 per cent.	9 per cent general rate increase. Suez surcharge reduced from 10 per cent to 9 per cent.
9	18 December 1967	—	8 per cent devaluation surcharge.
	1 January 1968	8 per cent sterling devaluation surcharge.	—
	1 September 1969	—	Sterling devaluation surcharge incorporated. This resulted in an effective 2 per cent increase.
	1 October 1969	5 per cent general rate increase.	—
	1 February 1970		3 per cent general rate increase.
		Section 1	
10	1 September 1969	5 per cent general rate increase.	5 per cent general rate increase.
		Section 2	
	This section has only recently been officially established and for the time being the same rates (and increases) have applied to Section 2 and Section 3. Section 2 is to introduce its own tariff as from 1 January 1972.		
		Section 3 — A and B	
	1 September 1969	A and B approximately. 5 per cent general rate increase.	A and B approximately. 5 per cent general rate increase.
		Section 4	
	1 January 1968	Sterling devaluation surcharge 8 per cent.	10 per cent general increase.
	1 March 1968	Sterling devaluation surcharge incorporated into freight rates and increased by a further 8 per cent, thus making a total increase of 16 per cent.	
	1 September 1969	Approximately 5 per cent general over-all increase	The 8 per cent devaluation surcharge which had been introduced on 15 December 1967 was incorporated in the freight rates and the total then increased by a further 10 per cent.
		Section 5	
	1 September 1969	5 per cent general rate increase.	5 per cent general rate increase.
11	1 March 1968		12½ per cent devaluation surcharge incorporated into tariff rates.

TABLE 17 *(continued)*

Trade routes	*Date*	*Outbound (from developing countries)*	*Inbound (to developing countries)*
11 *(continued)*	16 June 1968	Change-over to US. dollar basis and consolidation of existing tariff rates including 9 per cent devaluation surcharge.	
	15 July 1970		General increase 15 per cent but reduction of Suez Canal surcharge from 15 per cent to 13½ per cent.
	1 September 1970	12.5 per cent general rate increase (with some exceptions) Reduction of Suez Canal surcharge from 15 per cent to 13½ per cent net.	
12	—	No increase.	No increase.
13	1 January 1968	*From section (X1)* —15s. per ton with certain exceptions.	
	1 February 1968		*To section (X1)*—Rate increases: for rates below 297/6: plus 25s. for rates 297/6 to 392/6: plus 30s. for rates over 392/6: plus 25s.
	1 April 1969	*From section (X2)*—Rate increases: for rates up to $40: plus $2.50 for rates over $40: plus $3.50	*To section (X2)*—Rate increases: for rates up to $30: plus $2 for rates over $30: plus $3
	1 February 1970	*From section (X1) and (X3)*—Rate increases by $1 net or $1.10 gross. Sterling devaluation surcharge which came into effect on 1 January 1968 incorporated into new U.K. rates.	
	1 March 1970		*To section (X1) and (X2)*—Rate increase of 7½ per cent (with exceptions). Sterling devaluation surcharge which came into effect in January 1968 incorporated into new U.K. rates.
	15 August 1970	*From section (X2)*—Rate increases: Rates up to $20: plus $1.50 Rates $20 to $40: plus $2 Rates $40 to $90: plus $3 Rates over $90: no increase	*To section (X2)*—Rate increases: Rates up to $20: plus $1.50 Rates $20 to $30: plus $2 Rates $30 to $60: plus $3 Rates $60 to $90: no increase
14	1 January 1968	10 per cent general rate increase (with certain exceptions).	—
	1 April 1970	—	5 per cent general rate increase
15	1 March 1968		12½ per cent sterling devaluation surcharge incorporated into tariff rates.
	1 May 1968	12½ per cent sterling devaluation surcharge incorporated into tariff rates.	
	15 May 1970	12.5 per cent general rate increase. The Suez Canal surcharge reduced from 15 per cent to 13½ per cent.	15 per cent general rate increase. The Suez Canal surcharge reduced from 15 per cent to 13½ per cent.
16	1 October 1970		5 per cent general rate increase
17	1 June 1966	8 per cent approximately.	
	1 October 1966		8 per cent approximately.
	1 July 1970	10 per cent approximately (with some exceptions)	
	11 July 1970		10 per cent approximately (with some exceptions).

Source: compiled on the basis of information communicated to the UNCTAD secretariat by shipping conferences.

[a] With the exception of sterling devaluation surcharge, and Suez surcharge, no surcharges are included.

[b] Not applicable in the trade from one of the developing countries served to Europe.

TABLE 18

The ratio of liner freight rates to prices of selected commodities, 1963-1970

Commodity	Route	Freight rate as a percentage of price[a, b]							
		1963	1964	1965	1966	1967	1968	1969	1970
Rubber	Singapore/Malaysia-Europe	7.5	8	7.8	8.8	11.4	10.9	8.2	10.5
Tin	Singapore/Malaysia-Europe	1.7	1.2	1.2	1.6	1.9	1.4	1.3	1.2
Copra	Philippines-Europe	9.6	11	9	13	9.8	10.8	12.2	14.0[c]
Hemp	Philippines-Europe	22.6	20.7	25.4	33.2	35.3	38.3	29.5	33.2
Jute	East Pakistan-Europe	8.7	8.7	8.1	7.3	10.9	12.4	11.1	12.1[c]
Sisal hemp	East Africa-Europe	7.6	8.4	13.3	14.6	17	19.7	18.9	19.5
Cocoa beans	Ghana-Europe	3.3	3.1	4	2.9	2.8	2.1	1.7	2.4[c]
Coconut oil	Ceylon-Europe	11.2	8.8	7.2	8.5	8.7	7.6	8.7	8.9
Tea	Ceylon-Europe	5.8	6.5	6.3	6.9	7.7	8.8	9.6	9.5
Coffee	Brazil-Europe	6.5	4.9	4.7	5.5	6.2	6.2	6.4	5.2[c]
Palm kernels	Nigeria-Europe	7.8	9.5	7.3	8.7	9.6	7.7	9.5	8.8[c]
Coffee	Colombia (Atlantic ports)-Europe	5.1	4.2[c]	4.5	4.6	5.1	5	5.1	4.2[c]
Cocoa beans	Brazil-Europe	6.4	8.6	12.9	8	7.5	6.4	4.4	7.4[c]
Coffee	Colombia (Pacific ports)-Europe	5.5	4.5[c]	4.8	4.9	5.5	5.4	5.4	4.5

NOTE. — Because of some differences in the prices data and the commodities selected, this table is not comparable with table 22 in the *Review of Maritime Transport, 1969* (United Nations publication, Sales No.: E.70.II.D.5).

Source: The Royal Netherlands Shipowners' Association.

[a] C.i.f. prices were quoted for rubber (London-RSSI), tin, copra, jute (UK-pwc grade), sisal hemp, cocoa beans (Ghana-Europe), palm kernels. For cocoa beans (Brazil-Eurode trade), coffee (Colombia-Europe), coffee (Brazil-Europe), unit value of exports were quoted. Prices of the remaining commodities are quoted on f.o.b. terms.

[b] Freight rates include Suez Canal varying surcharges, when applicable. Whenever a conversion of freight rates to other currencies has been necessary, this was based on currency parities as published in IMF statistics.

[c] Annual freight rates were calculated by taking a weighted average of various freight rates quoted during the year, weighted by their period of duration.

are not always comparable, but when they are, they seem to have been similar.

In one trade, there were no freight rate increases at all, either inbound or outbound, during the period 1968 to 1970.

152. While the evidence does not generally support the allegation that conferences raise freight rates in the export trades of developing countries more than in their import trades, it cannot be regarded as conclusive since the sample is relatively small. Further, of the five cases where freight rates were raised more in the outward than in the inward trades of developing countries, four relate to one continent where, in general, the organization of shippers' councils is weak.

D. Liner freight rates as percentage of prices of selected commodities, 1963-1970

153. The level of transport costs, measured in terms of a "freight ratio", that is, in terms of freight rate as a percentage of export price, is of particular importance for developing countries.[39] Exports from developing countries are typically low in value and the "freight ratio" therefore tends to be relatively high in their case. The trend of the "freight ratio" is determined by the development of freight rates together with the trend of the unit value of commodities and, while it has been observed[40] that liner freight rates show a long-term upward trend, existing evidence suggests that unit values of a number of the primary commodities, which constitute the major part of the exports from developing countries, have shown a long-term downward trend.[41] Any increase in freight rates on exports not compensated by an increase in the price obtained for the product concerned clearly has an important effect on the economy of the exporting country. The fact that the c.i.f. prices of many of the exports of developing countries do not increase when freight rates increase occurs because the elasticities of demand and supply of the goods concerned are adverse.[42]

154. Table 18 shows changes in the ratio of freight rates to market prices for fourteen selected primary commodities exported from developing countries for the period 1963-1970. From the table, the following groups of commodities can be distinguished:

[39] The price figures in table 18 are in some cases f.o.b. but in others c.i.f. or statistical unit values. See note *a* to the table.

[40] See paragraphs 125 to 130 above, also *Review of Maritime Transport, 1970*, op. cit., table 17.

[41] See in this connexion: (*a*) "Ocean shipping and freight rates and developing countries in *Proceedings of the United Nations Conference on Trade and Development*, Geneva, 23 March-16 June 1964. vol. V., *Financing and invisibles—Institutional arrangements* (United Nations publication, Sales No.: 64.II.B.15). (*b*) *Commodity Survey, 1968* (United Nations publication, Sales No.: E.69.II.D.5). (*c*) *Review of International Trade and Development, 1969* (United Nations publication, Sales No.: E.70.II.D.4). (*d*) *FAO Commodity Review and Outlook—1968-1969* (FAO, Rome). (*e*) *The Maritime Transportation of Natural Rubber* (United Nations publication, Sales No.: E.70.II.D.11). (*f*) "The Maritime Transportation of Jute"—report by the secretariat of UNCTAD (TD/B/C.4/85 and Corr.1).

[42] See in this connexion the report by the secretariat of UNCTAD: *Freight Markets and the Level and Structure of Freight Rates* (United Nations publication, Sales No.: E.69.II.D.13) and also *The Maritime Transportation of Natural Rubber*, op. cit. and "The Maritime Transportation of Jute", op. cit.

(*a*) Commodities of which the freight ratio has shown a significant increase. These are divided into two classes: (i) those with a decline in price and an upward trend of freight rates: rubber, sisal hemp and tea are included in this category; (ii) those which exhibit an upward trend of both price and freight rates but where the freight rates increased more than the prices: copra, jute, hemp and palm kernels fall into this group.

(*b*) Commodities for which the freight ratio has shown a relatively slow upward trend and where this development was characterized by commodity price fluctuations, while freight rates were moving slowly upwards: coffee exported from Brazil to Europe falls in this category.

(*c*) Commodities for which the freight ratio is relatively constant, because in their case both freight rates and prices show a similar upward trend: coconut oil, coffee exported from Colombia (Pacific ports) to Europe and coffee exported from Colombia (Atlantic ports) to Europe, followed this pattern.

(*d*) Commodities for which the freight ratio declined over the period, because the rate of increase of prices was faster than the rise in freight rates: cocoa beans exported from Ghana to Europe and tin followed this pattern, while in the case of cocoa beans exported from Brazil to Europe, the "freight ratio", which had declined between 1965 and 1969 rose sharply in 1970 to a higher percentage than in 1963 because of a simultaneous decline in price and a steep increase in the freight rate.

155. On the whole, freight rates relative to the price of commodities increased for most of the fourteen commodities studied, and this was particularly felt by commodities which experienced a decline in price during the period.

Chapter VIII

UNITIZATION

A. Container services

1. Expansion of containerization

156. More than five years have elapsed since the first container services were introduced in the spring of 1966 in the trans-Atlantic trade. By the end of 1971, with the inauguration of container services between the Far East and countries of north-western Europe,[43] most of the major trade routes connecting developed market economy countries will have become containerized.

157. A further expansion of container services is planned for the future. Thus, a group of six shipping companies of France, Italy and Japan will introduce jointly as from September 1972 a container service between the western Mediterranean and the Far East,[44] while a round-the-world container service is scheduled for the second half of 1972 by United Kingdom and Australian operators who will combine their container services between United Kingdom/Europe and Australia with services they operate between Australia, New Zealand and the east coast of North America.[45] Finally, a five-year plan drawn up by the members of the Council for Mutual Economic Assistance, envisages the establishment of a co-ordinated sea-rail-road network of container services between all west and east European container ports and Pacific Ocean ports of the USSR.[46]

158. The containerized ocean trade routes served by full container ships as at the end of June 1971 are summarized in table 19, which indicates that 124 container vessels totalling about 2,140,000 dwt, with a capacity of 104,200 twenty-foot containers were in service on eight major trade routes at that date. Approximately 112 further full container ships with a total capacity of 150,200 twenty-foot containers are planned to be commissioned before the end of 1974 for service on these already containerized ocean trade routes, as well as in trade between western Europe and the Far East, including Japan (see tables 20 and 21).

159. Although the number of container ships and their service area are still growing, it appears opportune, at this moment, to appraise the existing services and to review various problems based on experience accumulated in the containerized trades.

160. Container service means essentially door-to-door through transportation which comprises not only the ocean carriage and the terminal operation but also inland transportation. The following paragraphs deal firstly with the problems of container services in each segment of the through transportation and, secondly, the problems which relate directly to the integration of the individual services.

2. Ocean transportation and feeder services

161. The advantages of container service with mechanized cargo handling in reducing the time spent by vessels in ports cannot be disputed. The time saved should lead to cost savings, although in practice these have not been realized. It is not clear, however, whether this situation has arisen because the inflationary tendency of various cost items has offset the expected savings or whether the cost savings expected were higher than those which could be realized in practice.

162. It was reported that a 60 per cent rise in costs in two years has forced British liner operators to abandon their original plans for a direct container service between the United Kingdom and New Zealand which has been scheduled to start in 1973.[47] The costs of feeder services between main ports and outports are also increasing and they amount to a significant portion of the total cost. The imbalance of the volume of the container cargo between outward and inward trade in each port has led to an uneconomic transport of empty containers and

[43] At the Far East end of the route the service will initially be confined to ports in Japan, and later be extended to Singapore and Hong Kong. Eventually, other ports in the Far East will be served. The vessels which will operate this service are the largest container vessels constructed so far. They are of 58,000 grt, capable of carrying over 2,000 twenty-foot containers at a service speed of 26 knots. The route of this service will be via the Panama Canal. *Journal of Commerce* (Liverpool) 29 June 1971, and 23 September 1971.) Parallel to this service, through container transport between western Europe and Japan by way of a land bridge using the Trans-Siberian railway is being developed. See *Lloyd's List and Shipping Gazette*, 17 July 1971 and *Journal of Commerce* (Liverpool), 1 August 1971.

[44] See *Lloyd's List and Shipping Gazette* (London), 3 November 1971.

[45] See *Fairplay International Shipping Journal* (London), 18 November 1971.

[46] See *Seatrade* (Colchester, England), October 1971, pp. 29-31.

[47] See *Lloyds List and Shipping Gazette* (London), 19 May 1971. New Zealand will however be served by container vessels, as a link in the round-the-world container service referred to in paragraph 157 above.

TABLE 19

Container services by full container ships as at end of June 1971

Route	Number of operators	Vessels		Container capacity (20 ft. equivalent)	Number of sailings per week	Year of inauguration
		Number	dwt			
East Coast of United States and Canada[a] to western Europe[b]	12	67	1,040,000	47,000	15.5	1966
East Coast of United States and Canada to Australia and New Zealand	1	1	24,000	1,200	0.2	1971
East Coast of United States to Japan, Far East	2	11	214,000	11,000	1.5	1970
West Coast of United States and Canada to Japan, Far East	15	22	308,000	18,000	10.6	1968
West Coast of United States and Canada to Australia and New Zealand	1	1	26,000	1,200	0.3	1971
West Coast of United States and Canada to western Europe	1	1	14,000	900	0.5	1970
Western Europe to Australia	6	13	379,000	18,100	1.5	1969
Japan to Australia	7	8	134,000	6,800	1.7	1969
TOTAL	45	124	2,139,000	104,200	31.8	

Source: estimates by UNCTAD secretariat based on published data.

[a] Great Lakes ports are included.

[b] Mediterranean ports are included.

TABLE 20

Container services by full container ships planned for the period 1971 (second half)—1974

Route	Number of operators	Vessels		Container capacity (20 ft. equivalent)
		Number	dwt	
East coast of United States and Canada[a] to western Europe[b]	8	24	408,000	28,600
East coast of United States and Canada to Australia and New Zealand	3	11	248,000	11,500
East coast of United States to Japan and Far East	8	22	486,000	26,700
West coast of United States and Canada to Japan and Far East	10	16	346,000	18,300
West coast of United States and Canada to Australia and New Zealand	2	4	100,000	4,400
West coast of United States and Canada to western Europe	1	3	50,000	2,600
Western Europe to Australia	4	6	130,000	8,300
Western Europe to Japan and Far East	10	26	960,000	49,800
TOTAL	46	112	2,728,000	150,200

Source: estimates by UNCTAD secretariat based on published data.

[a] Great Lakes and Gulf ports are included.

[b] Mediterranean ports are included.

has also increased the turn-round time of the containers.[48]

TABLE 21

Full container ships planned for the period 1971 (second half)—1974

Year	Vessels		Container capacity (20 ft. equivalent)
	No.	dwt	
1971 (second half)	24	578,000	28,000
1972	64	1,606,000	87,000
1973	20	456,000	30,000
1974	4	88,000	5,200
TOTAL	112	2,728,000	150,200

Source: estimates by UNCTAD secretariat based on published data.

163. Under-utilization of container ships has led to freight rate cutting in the transatlantic trade, which has induced container ship operators in that trade to establish a pooling agreement on container cargoes, in an effort to stabilize freight rates which have been reduced to uneconomic levels. This agreement, which must conform to the United States anti-trust laws, is, at the time of writing (end November 1971), awaiting the approval of the United States Federal Maritime Commission.

3. TERMINAL OPERATION

164. The costs of packing and unpacking of cargo into or out of containers at freight service stations has also increased. Labour problems have frequently resulted in the stoppage of container handling at some ports, and some container ship operators have been obliged to change to other ports of call where less disturbance is expected to take place. Such a decision by operators has imposed a serious problem both on the major ports and on the Governments concerned, which have already invested enormous amounts of capital in container port facilities in competition with other ports.

165. A container vessel which offers a considerable degree of independence as far as ports of call are concerned in the "Tarros" class, designed to be able to berth and handle cargo at any location in a port, without need for expensive shore container handling equipment and installations. These vessels, especially suitable for feeder or intermediate container services, can receive container-carrying trucks from ashore through a stern door, at hatch-top level. A shipboard gantry crane handles the containers from or on to the trucks. Although this system is basically similar to the roll-on/roll-off system, an advantage claimed for the "Tarros" vessels is that their cost of construction is much lower than that of a roll-on/roll-off vessel of the same capacity.[49]

4. INLAND TRANSPORTATION

166. The container ship operators in ocean trades have provided their own containers in an attempt to secure cargoes. With a prolonged turn-round of containers in inland transportation, however, the transport cost savings secured by a quick turn-round of container ships in ports may well be offset by the increased cost of the inland movement of containers.

167. Direct or indirect control of containers has enabled container ship operators to exert an influence on the freight rates of inland transportation. As a result, competition among container ship operators has extended into inland transportation and to this extent the ocean freight rates of conference tariffs are less significant than formerly as far as competition in terms of through freight rates is concerned.

168. The competition between means of inland transport has intensified as a result of the through routing of containers. For example, the traditional routing of cargo for inland points of the United States through United States Atlantic ports and using the United States railway system is being replaced to some extent by a new routing which uses Canadian Atlantic ports and the Canadian railways.[50]

5. OBSTACLES TO THROUGH TRANSPORTATION

169. The development of intermodal through transportation by containers appears to have been hindered, to some extent, by existing institutional frameworks, which were established in the day of the conventional ship. International efforts are being made to ensure a smooth flow of container and containerized cargoes in international combined transport by drafting several conventions which cover such matters as customs clearance procedure and carrier's liability. These draft conventions are expected to be finalized at the Conference on International Container Traffic convened jointly by the United Nations and IMCO for November 1972.

170. In some countries, the conflict of jurisdiction between governmental agencies, each separately responsible for sea, land and air transport, is raising difficult problems for the combined transport operators in performing their intermodal services under through freight rates. At the request of the Economic and Social Council of the United Nations, a study is being prepared on the possible impact of the proposed Convention on the International Combined Transport of Goods (TCM) on the trade and transport of the developing countries. By decision of the Trade and Development Board, the Committee on Shipping of UNCTAD will consider this subject at a special session in July 1972.

[48] In the case of the container service between Australia and Japan, 45 per cent of the southbound containers are discharged at Sydney, whereas only 20 per cent of the total containers are used in the northbound trade. On the other hand, in Melbourne and Brisbane the numbers of the packed containers in the northbound trade far exceed those in the southbound trade. Thus the container ship operators are incurring needless costs by transporting vacant containers between these ports. H. Tomokuni, "Containerization in Japan/Australia trade" in *The Containerization*, No. 30, Japan Container Association, p. 56.

[49] See *Journal of Commerce* (Liverpool), 19 October 1971, and *MacGregor News*, third quarter 1971, No. 59, p. 6 (published by MacGregor International Organization, England).

[50] See *Journal of Commerce* (New York), 23 April 1971, and *Ports and Terminals/International Freighting* (London), 5 August 1970.

6. Concentration of operators and institutional developments

171. The operation of container services under a consortium or co-operative agreement between individual liner operators has been a frequent phenomenon on all the containerized trade routes but has not led, so far, to insitutional changes, such as the formation of new or the merger of existing maritime conferences.

172. On the Australia-Japan route, three shipping companies, including the Australian National Line, have formed a consortium to operate their container service, known as the "Australia-Japan Conference Line", in joint service with a number of Japanese shipowners.[51]

173. On the Australia-Europe route a number of United Kingdom companies grouped into two consortia, have formed, together with the Australian National Line and shipping companies of the Federal Republic of Germany, the Netherlands, France and Italy, the "Australia-Europe Container Service", a consortium aiming to co-ordinate the operation of their container vessels and the future development of these services.[52] Parallel to the above group, three Scandinavian companies have established a joint company known as "Scandinavian Australia Carriers Ltd." (Scanaustral) to operate unitized services based on composite ships with both container and roll-on/roll-off capacity and adequate space for unit-load shipments in the Australia-Europe trade.[53]

174. On the Australia-West Coast of U.S.A. and Canada route a group of Australian, United Kingdom and Swedish shipping companies jointly operate the Pacific Australia Direct Line (PAD Line) with specially designed drive-on/drive-off container vessels having their own handling equipment, including straddle carriers and forklift trucks[54] and an angled stern ramp to enable the vessels to operate from any wharf where there is sufficient depth of water. Each of the three ships has 1.8 million cubic feet of cargo space, more than twice the space aboard a conventional ship of the same deadweight capacity. Each ship, fully equipped, costs about $17 million.

175. Similarly, container services between the Far East and countries of western Europe will be operated by two consortia independently. One of these consortia consists of shipping companies of the United Kingdom, the Federal Republic of Germany and Japan and is known as the "Trio consortium",[55] while the other consists of shipping companies of Scandinavia and the Netherlands.[56]

[51] Shipping consultants A/S, *Container Ship Register 1971* (Oslo), *Journal of Commeree* (New York), 1 December 1969.

[52] *Lloyd's List and Shipping Gazette*, 28 October 1969.

[53] *Journal of Commerce* (Liverpool), 30 October 1969.

[54] *Seatrade* (Colchester, England,) February 1971, *Container Ship Register*, 1971 (Oslo), and *Journal of Commerce* (Liverpool), 3 November 1971.

[55] *Journal of Commerce* (Liverpool), 17 September 1971.

[56] The agreement among the members of this consortium envisages co-operation also in respect of their services with conventional vessels on this route and will also cover the trade between Indonesia and western Europe. See *Journal pour le transport international* (Basle) (8 October 1971) p. 4951.

176. The proposed chartering agreement between United States Lines and Sealand Services Inc. whereby Sealand would charter the former's twenty container ships has not yet been implemented owing to legal problems in the United States of America. Meanwhile, R. J. Reynolds, the holding company of Sealand Service Inc., is planning to purchase shares of United States Lines from their parent company, Walter Kidde and Co.[57] Although the outcome is still to be seen at the time of writing this report, the effect of the merger on world-wide container services would be profound if it were put into effect.

177. In the course of the expansion of their container ship fleets and service areas, some operators or consortia may wish to withdraw from their existing joint operation agreements as soon as their fleet and areas reach a size which enables them to secure an economy of scale under an independent and more flexible world-wide operation.[58] Although it is difficult to predict the future pattern of deep-sea containerization at such an early stage of development, competition among the members of consortia or between a small number of the major operators or consortia may well intensify both in and outside the conferences in the foreseeable future. Alternatively, organizational forms leading to increased cartelization of shipping and greater economic power for shipowners may be created.

B. Barge-carrying vessels

178. Following the introduction of the first barge-carrying (LASH) vessel in the trade between United States Atlantic ports and Western European countries in the autumn of 1969, the number of such vessels has increased throughout the world. At the end of June 1971, five barge-carrying vessels were operated by two operators on two transatlantic trade routes (see table 22), and a further 27 vessels are under construction or scheduled to commence operations on various trade routes, including those serving developing countries (see table 23). When these ships are in service, seven shipping companies will be involved in the operation of barge-carrying vessels.

179. A United States liner operator, who started a LASH service between United States north Pacific ports and Far East ports in July 1971, will eventually replace 11 conventional ships by six LASH type vessels.[59] Another type of barge-carrying vessel called "Seabee" is scheduled to be introduced in the transatlantic trade early in 1972. It will be followed by two additional vessels of the same type.[60]

180. In the trade between United States Atlantic and Gulf ports and ports of the east coast of South America,

[57] See W. S. Rukeyser, "Walter Kidde's Stormy Voyage with U.S. Lines" in *Fortune* (New York), July 1971.

[58] The Associated Container Transportation (ACT) consortium will withdraw from the Australia Europe Container Service referred to in paragraph 173 above. Source: *Seatrade* (Colchester, England), November 1971 and *The Times* (London), 1 November 1971.

[59] See *Pacific Shipper* (San Francisco), 12 April 1971.

[60] *Ibid.*, 12 July 1971.

TABLE 22

Barge-carrying vessels in operation as at end of June 1971

Route	Number of operators	Vessels		Container capacity (20 ft. equivalent)	Year of inauguration
		Number	dwt		
United States Gulf coast to western Europe	1	2	87,000	3,000	1969
United States Atlantic coast to Mediterranean ports	1	3	57,000	4,500	1970
TOTAL	2	5	144,000	7,500	

Source: estimates by UNCTAD secretariat based on published data.

TABLE 23

Barge-carrying vessels planned for the period 1971 (second half)—1973

Route	Number of operators	Vessels		Container capacity (20 ft. equivalent)	Year of inauguration
		Number	dwt		
United States Gulf coast to western Europe	2	8	249,000	10,800	1971
United States Atlantic coast to Mediterranean ports	1	2	38,000	3,000	1972
United States Atlantic coast to Caribbean and South American ports	1	6	113,000	7,200	1973
United States Atlantic coast to India, Pakistan and Red Sea ports	2	5	195,000	5,000	1973
West Coast of United States to Japan and Far East	1	6	113,000	7,200	1971
TOTAL	7	27	708,000	33,200	

Source: estimates by UNCTAD secretariat based on published data.

a service by three new container/barge-carrying vessels of 38,500 dwt is planned for 1973 by a United States liner operator. Similar services are projected in the trade between the United States Atlantic coast and India, Pakistan and Red Sea ports. These vessels require strengthened berths providing adequate surface for handling the containers and are designed to carry, in addition to barges and containers, dry and liquid bulk cargoes, as well as heavy-lift and long-length cargoes.[61]

[61] See *Fairplay International Shipping Journal* (London), 24 June 1971, p. 23.

C. Palletization

181. The palletization of cargo is steadily growing on ocean trade routes between developed and developing countries. Pallet services are usually offered by multi-purpose vessels which can accommodate not only pre-palletized cargo and break-bulk cargo, but also containers, heavy lifts and long-length pieces. They are also designed to cater for dry bulk cargo, as well as liquid chemicals and oils in deep tanks.[62]

[62] A Netherlands liner operator, together with two national lines of Venezuela and Colombia, introduced in June 1971, liner services, using a multi-purpose vessel, in the trade between their countries. See *Journal of Commerce* (New York), 18 June 1971.

Chapter IX

OTHER TOPICS

A. The economic effects of the closure of the Suez Canal[63]

1. Introduction

182. While not exhaustive, this section discusses the principal ways in which the closure of the Suez Canal in June 1967 has affected world shipping, the economies of countries whose imports or exports were shipped via the Canal, and the operations of ports at which ships no longer call because they follow alternative routes. It also discusses the economic impact on the countries lying along alternative routes, and mainly along the Cape of Good Hope route, as a result of heavier sea traffic owing to the closure of the Canal. Reference is also made to the impact of the closing of the Suez Canal on technological developments in shipping, especially the construction of giant tankers.

2. The importance of the Suez Canal as an international sea route

183. The importance of the Suez Canal to world shipping lies in the fact that it constitutes a link between the Red Sea and the Mediterranean and thus provides a valuable short cut for ships plying between ports, of the Red Sea, the Persian Gulf, the Arabian Sea, the Bay of Bengal and of south-east Asia and the Far East, on the one hand, and ports on the Eastern Seaboard of North America, in Europe, North Africa and the Middle East, on the other hand. The usual alternative sea route around the Cape of Good Hope is substantially longer for nearly all the trades concerned, the additional distance involved varying according to the geographical location of the ports concerned. Table 24 illustrates the differences in distance between a number of ports according to the route taken.

Table 24

Examples of maritime distances between ports east and west of the Suez Canal via the Canal and around the Cape of Good Hope

Journey	*Distance (nautical miles)*	
	Via Suez	*Round the Cape of Good Hope*
Bombay—Odessa	4,174	11,814
Abadan—London	6,500	11,300
Yokohama—Rotterdam	11,114	14,450
Sydney—London	11,529	12,962

Source: World Wide Marine Distance Tables, published by BP Tanker Company, Ltd., London, 1958.

184. The Suez Canal has been very important because of the volume of trade passing through it. Table 25 gives relevant data for total cargoes moving through the Canal in 1966, broken down into dry and liquid cargoes. For purposes of comparison, the corresponding figures for world international seaborne trade are also given.

185. Thus, the total volume of cargo moving through the Canal during 1966 amounted to nearly 14 per cent of total world international seaborne trade. For liquid cargoes the proportion was nearly 18.5 per cent, while for dry cargoes it was 8 per cent. It is worth noting that, while the bulk of cargoes moving southwards through the Canal consisted of dry cargoes, in northbound traffic the greater part were liquid cargoes. The volume of

Table 25

Volume of cargoes moving through the Suez Canal and of world international seaborne trade, 1966

Cargoes	*Cargoes carried through the Suez Canal[a] (million metric tons)*			*World international seaborne trade[b] (million metric tons)*
	Total	*Southbound*	*Northbound*	
Liquid cargoes	175.7	8.9	166.7	950
Dry cargoes	66.2	38.8	27.4	820
Total	241.9	47.7	194.1	1,770

[a] See Suez Canal Authority, United Arab Republic, *Suez Canal Report, 1966*.

[b] See *Review of Maritime Transport, 1969* (United Nations publication, Sales No.: E.70.II.D.5), table I.

[63] This section is based largely on a preliminary note (E/CN.14/UNCTAD III/PM/3) prepared by the UNCTAD secretariat and made available to the ECE/OAU African Ministerial Meeting preparatory to the third session of the United Nations Conference on Trade and Development, which took place in Addis Ababa, between 8 and 14 October 1971. The subject will be dealt with more fully in a special study of the economic consequences for African and other countries of the closure of the Suez Canal which the UNCTAD secretariat is carrying out, in consultation with the secretariat of ECA, and hopes to submit to the Committee on Shipping of UNCTAD at its sixth session. This study is being made in response to a recommendation made by the sixth ECA/OAU Joint Meeting on Trade and Development, which was held in Geneva from 12 to 23 August 1971 (see E/CN.14/WP1/45, annex I) and in the light of the understanding reached by the Trade and Development Board at its eleventh session. (See report of the Trade and Development Board, Eleventh Session, *Official Records of the General Assembly, Twenty-Sixth Session, Supplement No. 15*, chap. IV, section D.)

TABLE 26

Northbound traffic in crude oil and petroleum products through the Suez Canal, 1966

(In thousands of tons)

Loading areas	
Arabian Gulf countries	158,849
Others	7,869
TOTAL	166,718
Unloading areas:	
European countries	153,500
Countries in the Americas	10,700
African countries	1,882
Other areas	636
TOTAL	166,718

Source: Suez Canal Report, 1966, op.cit.

northbound traffic in crude oil and petroleum products through the Suez Canal in 1966, by loading and unloading areas, is shown in table 26.

186. In terms of vessels, 21,250 ships from many countries of the world, with a total net registered tonnage[64] of 274,250,000 tons transited the Suez Canal in 1966. Of these, 4,964 vessels, with a total net tonnage of 24,096,000 tons, were under the flag of developing countries, including Liberia and Panama. If vessels with flags of these two countries are excluded, the figures for developing countries become 1,593 vessels totalling 9,886,000 tons net tonnage. A total of 16,286 vessels with a total net tonnage of 250,154 tons were owned for the most part in the traditional maritime countries. Thus developing countries excluding Liberia and Panama owned only 3.6 per cent of the tonnage using the Suez Canal in 1966, while their share of the world fleet stood, at that time, at 7.8 per cent.

3. THE EFFECTS OF THE CLOSURE OF THE SUEZ CANAL ON FREIGHT RATES

187. The closing of the Suez Canal has resulted in many sea routes which are important for international trade being substantially lengthened.[65] As a consequence, the total cost incurred at sea by vessels serving these routes has also increased, which has resulted in higher freight rates.

188. Furthermore, the total time taken by vessels serving these routes is lengthened and more shipping space is needed in order to carry round the Cape of Good Hope cargoes normally transported through the Suez Canal. In other words, the closure of the Canal increased the demand for shipping space with the result that until the supply of vessels was adjusted to the higher level of demand, there was a substantial increase in freight rates. Even when the supply of shipping had adjusted to the increased demand for ton miles, the fact that extra time was spent on many voyages increased costs, so that freight rates remained higher than they otherwise would have.[66]

189. Throughout the entire shipping market, substantial increases in freight rates took place after the closure of the Canal. The following paragraphs examine briefly the increases recorded in liner shipping, in the dry cargo tramp market, in the tanker market for voyage charters and in the time-charter market. These increases varied according to route, and were larger in the trades directly affected by the closure.[67]

(a) *Liner trades*

190. Immediately after the closure of the Canal, individual lines and conferences whose vessels were affected by the closure, imposed a special deviation surcharge, which varied according to destination. This surcharge was applicable to all commodities, was calculated on gross freight, and was not subject to any rebate. Table 27 gives some examples of surcharges imposed by liner companies serving routes between United Kingdom/Continent ports, and countries east of Suez. Individual lines and conferences serving trades between the United States and the Middle East, or other destinations which necessitated by-passing the Suez Canal, imposed surcharges amounting in most cases to 25 per cent of the existing gross tariffs.

191. As mentioned above, in addition to the deviation surcharges imposed by lines serving trades directly affected by the closure, many lines, including lines not directly affected by the closure of the Canal, imposed special fuel surcharges during the third quarter of 1967 to cover the increased price of bunker fuel caused, in part, by the disruption of supplies when the Canal was closed. For example, conferences serving destinations between the Americas and Europe or west Africa imposed a fuel surcharge of 2.5 to 3 per cent.

192. The deviation surcharges referred to in paragraph 190 above are in general still in force, although in some cases subsequent reductions were made. These re-

[64] Net registered tonnage is a measurement of the cubic capacity of a vessel, expressed in tons of 100 cubic feet, and is arrived at after deducting from the entire cubic capacity of a vessel (i.e. its gross registered tons), certain non-cargo spaces. The net registered tonnage is normally used to assess dues a vessel must pay in ports or when transiting canals. (The authorities of the Suez and Panama Canals each employ their own regulations regarding tonnage measurement). The gross and net registered tonnage does not indicate the cargo carrying capacity of a vessel which is measured by the deadweight tonnage. (Based on S. R. Bross; *Ocean Shipping*, Cornell Maritime Press, Cambridge, Maryland, 1956.)

[65] The additional sailing time required varies according to the extra distance and the speed of the vessel. For example, in the Europe-Far East routes, sailing round the Cape adds between six and ten days to a single voyage, depending on the speed of the vessel.

[66] This depends, of course, on the level of dues which would have been levied on ships using the Canal. If dues before closure were at such a level that the savings in costs through reduced voyage times by using the Canal were almost completely absorbed in dues, then the longer sea routes taken following the closure of the Canal would not have raised costs significantly.

[67] Relatively minor increases were made also in the form of fuel surcharges in liner tariffs in trades not depending on the Suez Canal, owing to the higher cost of bunkers, which arose, among other factors, from the closure of the Canal. These surcharges were in addition to general increases in tariffs which may have been made in these trades for other reasons.

TABLE 27

Suez surcharge imposed on tariffs applying to trades between United Kingdom/Continent ports and selected other areas

	Percentage increase on gross tariffs
India, Pakistan and Ceylon	17.5
Persian Gulf	25
Aden	35
Djibouti, Assab, Massawa	40
Jiddah	45
Port Sudan	50
Far East	10
Aqaba	50
Burma	17.5
East Africa	15
Madagascar, Comores, Réunion, Mauritius	15
Red Sea[a]	20
Indonesia	10
Australia	5

Source: Journal pour le transport international (Basle), 16 June 1967, p. 2485.
[a] From the port of Genoa.

ductions were mostly of a token nature and did not therefore lead to any substantial decrease in the extra cost of transport of the imports and exports of the countries whose trades had been affected. For example, in September 1967, the Suez surcharge applying to tariffs between United Kingdom/Continent ports and India and Pakistan was reduced from 17.5 per cent to 15 per cent. In October 1967, the lines serving United Kingdom/Continent ports and the Persian Gulf reduced the surcharge from 25 per cent to 17.5 per cent. In some cases, although the surcharge was reduced, the gross freight rate was increased by an equivalent amount. For example, the conference serving United Kingdom/Continent ports and Madagascar and Réunion, reduced the Suez surcharge from 15 per cent to 8 per cent, but applied a new increase of 7 per cent on the gross freight.

(b) *Dry cargo tramp market*

193. The closure of the Suez Canal had important effects also on the dry cargo tramp market, where rates increased generally and not only in trades using the Canal.[68] It has not been possible to collect data showing the precise impact of the closure on dry cargo tramp freight rates. A partial indication, however, can be obtained from the upward movement of various tramp freight index numbers for dry cargoes after June 1967, the greatest part of which can be safely attributed to the disruption of navigation through the Canal.

194. The United Kingdom Chamber of Shipping index number of freight rates for dry cargo voyage charters, averaged for the third quarter of 1967, registered an increase of 18 per cent over the same period in 1966; over the same period, the *Norwegian Shipping News* index number of trip charter for dry cargoes rose by 29 per cent, while the dry cargo tramp index number published by the Ministry of Transport of the Federal Republic of Germany rose by 15 per cent.[69] The impact of the closure of the Canal on dry cargo tramp freights in general, and on tramp freight rates for individual dry cargo tramp commodities in particular, is also reflected in the increase registered for the months of June and July 1967 by the United Kingdom Chamber of Shipping freight index number for voyage charters. The monthly movement of this index number in 1967 and of the commodity sub-indices which are used for its compilation, is given in table 28.

195. It should be noted that because of the averaging of different freight rates which takes place when freight indices are compiled and because of the different weights applied to different trades,[70] the impact on the tramp freight applying on the individual trades directly affected by the closure of the Canal may not be fully reflected in these index numbers. It is therefore, possible that the rise in freight rates in these trades was much greater than is indicated by the above index numbers.

(c) *Tanker market*

196. The greatest effect of the closure of the Suez Canal, so far as freight rates are concerned, was shown in the tanker voyage charter market, where rates rose sharply immediately after June 1967. An indication of the sharp response of voyage charter freight rates for tankers is given in table 29, which shows montly movements of the *Norwegian Shipping News* tanker freight index during 1967. It will be seen that the index rose from 49 in May to 145 in June, reaching 191 in September.[71] The yearly average of this index number for 1966, 1967 and 1968 was 62, 114 and 104 respectively.

(d) *Time-charter market*

197. Finally, substantial increases were also recorded following the closure of the Suez Canal in rates for time charters. The movement of the index numbers of tramp-time-charter rates in the months following June 1967 compiled by the United Kingdom Chamber of Shipping and *Norwegian Shipping News* and shown in table 30 reflect these increases.

(e) *Impact of the closure of the Suez Canal on transport and other costs of international trade*

198. It is not possible, on the basis of the statistical information at present available to the UNCTAD secretariat, to assess the additional cost to world trade in general and to the trades of individual countries in particular, caused by the closure of the Suez Canal. It is

[68] The major movements of dry-cargo tramps passing through the Canal involved vessels carrying grain from United States ports to India and ores from India to European ports.

[69] See also "Review of recent developments and long-term trends in world shipping", *Proceedings of the United Nations Conference on Trade and Development, Second Session*, vol. I and Corr.1 and 3 and Add.1 and 2, *Report and Annexes* (United Nations publication, Sales No.: E.68.II.D.14), annex VII, chap. I.

[70] See foot-note *a* to table 28.

[71] The index is expressed in terms of Intascale = 100. For an explanation of the rate schedule "Intascale", see *Freight Markets and the Level and Structure of Freight Rates: report by the secretariat of UNCTAD* (United Nations publication, Sales No.: E.69.II.D.13.), paras. 96 and 97.

TABLE 28

Index numbers of tramp shipping freights (1960 = 100) voyage charter 1967

Month	Commodities							
	Coal	*Grain*	*Sugar*	*Ore*	*Fertilisers*	*Timber*	*Sulphur*	*All items*[a]
January	75.1	108.9	86.6	77.2	132.6	107.6	—	100.5
February	81.4	103.7	92.9	—	136.8	101.2	100.2	103.1
March	81.5	118.7	93	68.9	145.4	106.9	—	106.2
April	77.4	113.7	93.8	67.1	146.6	104.1	—	103.7
May	82	113.8	99.9	—	140.8	107.1	—	109.8
June	93.4	131.7	98.4	—	—	106.3	—	113.5
July	110.4	133.8	105.2	—	242.5	106.3	143.8	138
August	—	126.5	97.4	—	—	95.9	130.8	113.2
September	117.3	147.5	103.7	—	—	104.6	139.8	125.8
October	144.4	141.8	105.5	115.3	240.9	118.7	—	139.8
November	117	144.2	108.5	—	242.8	126.3	—	146.3
December	112.1	150.5	104.6	—	237.5	121.9	—	145.8
Average year 1967	96.5	127.9	99.1	82.1	185.1	108.9	128.7	120.5

Source: Chamber of Shipping of the United Kingdom, *Annual Report 1967-1968.*

[a] The relative weights attached to each commodity in the compilation of the over-all index number of "All Items" are as follows: coal 125; grain 316; sugar 150; ore 112; fertilisers 132; timber 135; sulphur 30; total all items 1,000.

TABLE 29

Norwegian Shipping News tanker freight index, 1967

Month	
January	62
February	50
March	49
April	39
May	49
June	145
July	184
August	187
September	191
October	161
November	140
December	107
Yearly average	114

Source: Norwegian Shipping News.

TABLE 30

Time-charter rate index numbers, 1967

	United Kingdom Chamber of Shipping[a]	*Norwegian Shipping News*[b]
January	118	77
February	115	80
March	119	81
April	121	77
May	128	76
June	121	82
July	133	94
August	130	95
September	147	104
October	147	103
November	149	99
December	138	99
Yearly average	130	89

Source: Chamber of Shipping of the United Kingdom, op. cit., and *Norwegian Shipping News* (Oslo).

[a] Based on average rates for fixtures of motor vessels reported each month (1960 = 100).

[b] Based on average rates for all fixtures for oil-fired ships and motor vessels in the 10,000-24,999 dwt range, excluding charters of more than a year (July 1965-June 1966 = 100).

clear, however, that the rise in freight rates which, as was seen in previous paragraphs, followed the closure of the Canal, has meant higher total transport costs for the trades which have had to be diverted from the Canal. Furthermore, as such increases have permeated through the whole shipping market, they have involved higher costs for non-Suez trades also. The additional burden resulting from higher transport costs and delays has been heavier for countries whose trade has had to be carried along substantially longer sea routes because of the closure of the Canal. Among these are a large number of developing countries of the Middle East, Africa and Asia. Some of these countries are among the least developed ones.

199. Apart from the extra costs due to higher freight rates, the closure of the Suez Canal has also raised the total cost of commercial credit for that part of international trade which must by-pass the Canal. The lengthening of the sailing time required between ports of loading and discharging means that goods remain longer in sea transit. Consequently, expenses, such as total interest payable on credit necessary to finance this trade, are higher.

200. Further, a number of countries may have been obliged to raise the minimum stock levels of imports, the supply of which has been affected by the closure of the Suez Canal. These countries must have incurred considerable additional expenses in financing, storing and insuring the larger stocks required.

(f) *Impact of the closure of the Suez Canal on international trade*

201. The closure of the Suez Canal has meant that the regularity of supplies of essential goods to certain countries has been disrupted. This disruption of supplies may have been temporary, restricted to a short period immediately after the closure. Insufficient information is available at present on the extent and the consequences of such disruptions. It is known, however, that supplies of fuel oil to some European countries, which obtain a large part of their fuel oil requirements mainly from sources in the Persian Gulf, have been affected, although not to an extent that would necessitate rationing. There may also have been cases where supplies of vital products to developing countries became difficult immediately after the closure of the Canal. Disruption of the smooth flow of the trade of some countries may have also been experienced in cases where the frequency of liner shipping services, or the availability of space on tramp vessels, was reduced as a result of the closure of the Canal.

202. Another important consequence of the closure of the Canal is that the higher transport costs, to the extent that they have affected market prices, and the longer delivery dates involved in sailing round the Cape of Good Hope have caused a loss of competitiveness of commodities which, in order to reach export markets, must now by-pass Suez. As a result, the share in certain export markets of some commodities of the countries which formally used the Canal has been reduced to the benefit of other suppliers, who are closer to the markets.[72]

203. Apart from the effects on the volume of their exports, countries formerly using the Canal may also have suffered losses due to a decline in the profitability of their exports, if, in order to maintain the relative position of the latter in foreign markets, they preferred to absorb wholly or in part the extra costs involved in taking the Cape of Good Hope route rather than pass it on to their customers. Loss of competitiveness and adjustments of sources of supply appear to have affected exports of primary commodities from Eastern African countries to Europe, of oil from sources of supply east of Suez to Europe and North America, of minerals from India to European markets, as well as exports of European countries to markets east of Suez.

[72] Higher prices of commodities resulting, among other factors, from the closure of the Suez Canal, may have also made economically possible the substitution of other commodities. For example, atomic energy may have been substituted for fuel oil in some of its uses.

(g) *Impact of the closure of the Suez Canal on development and balance of payments*

204. For developing countries whose external trade has faced higher costs, or whose exports have become uncompetitive in foreign markets, the closure of the Suez Canal has also implications for their economic development and their balance of payments. Thus, any reduction of the export earnings of these countries, through loss of export markets or reduced profitability of their exports, aggravates the shortage of foreign exchange from which they usually suffer. Apart from the deterioration of the position of their balance of payments, the reduction of foreign exchange earnings also diminishes their ability to pay for imports necessary for their economic development. The price of such imports has increased due to higher transport costs as a result of the closure of the Canal.

205. The closure of the Suez Canal and the consequential increases in transport costs and delays has put an extra burden on the balance of payments and in general on the economies of developed countries also. Countries of western Europe which depended to a considerable extent on sources of supplies east of Suez for vital import commodities (in particular oil) have been especially affected.

206. An additional loss of foreign exchange earnings is suffered by those countries whose ports are now bypassed by vessels which, prior to the closure of the Suez Canal, used to call in order to load or discharge cargoes, or for bunkering, victualling or repairs. These ports, especially those on the Red Sea and eastern Mediterranean, have seen a general decline in their economic activity. On the other hand, the economies of countries lying along the Cape of Good Hope route, and especially South Africa, must have benefited from the increase in economic activity and the higher earnings of their ports visited by vessels by-passing the Suez Canal.

207. For Egypt in particular, closure of the Suez Canal has meant an end of the revenues from dues paid by vessels transiting the Canal. These revenues totalized $224.1 million during the twelve months up to June 1967.[73]

208. Furthermore, the continued closure of the Canal may lead to its physical deterioration through silting and through the installations remaining idle. To reopen the Canal, therefore, will necessitate heavy expenditure, which may be heavier the longer the Canal remains unused.

(h) *The closure of the Suez Canal and technological developments in shipping*

209. The closure of the Suez Canal has stimulated technological developments in shipping. In particular, it has contributed to an acceleration of the tendency of tanker owners to reduce their dependence on the Canal by constructing tankers of large deadweight capacity. Owing to the economies of scale which such vessels enjoy, the cost per ton/mile of transporting oil in large

[73] *Source:* "Options for the Suez Canal" in *Westinform Shipping Report* No. 290 (Westinform Service, London), p. 4.

tankers is reduced. For example, it is more economical to transport oil from the Persian Gulf to Europe in a vessel of 250,000 dwt, which goes round the Cape of Good Hope, than in one of 75,000 dwt, which transits the Suez Canal. Increases in the size of dry cargo bulk carriers, especially of oil-bulk-ore combination carriers, have also taken place, but they have not been as important as the increases in the size of tankers.

210. The tendency to increase the deadweight capacity of tankers was already observable after the brief closure of the Canal in 1956, but has acquired a completely new dimension since June 1967. There are at present about 130 tankers of the 200,000 dwt class in service, most of which have been ordered since 1967, while as big as 477,000 dwt are on order.

211. The increase in the size and draught of tankers has serious implications for the future trade in oil through the Suez Canal. In June 1967, the maximum permissible draught for vessels transiting the Canal was 38 feet. Such draughts do not allow vessels of deadweight capacity exceeding 60,000 tons to transit fully loaded, whereas about 60 per cent of the world tanker fleet now exceeds this size. Consequently, if the Canal is reopened and restored to only its pre-1967 draught, many tankers will be unable to pass through it fully loaded and the largest units probably will not be able to use it even in ballast. In view of this, the Suez Canal Authority has prepared plans to deepen the channels of the Canal, when reopened, to a maximum draught of 67 feet, which would allow tankers of up to about 260,000 dwt to transit fully loaded and tankers of about 300,000 dwt to transit partly loaded.

B. Air traffic

212. Each year is marked by events of an economic, political and social nature which affect the development of civil air transport either favourably or unfavourably. It appears that in 1970 negative factors, in particular a general softening of the economy in the United States of America and an increasing inflationary trend in many countries of the world, played a greater determining role than in recent years, in the development of air transport as a whole and, in particular, in the development of air freight. The international airlines operating scheduled services are reported to be in a difficult financial position, which results mainly from two sets of contributing factors. On the one hand, profitless growth, a slowing down of traffic growth, declining load factors, escalating costs and environmental problems have led to unsatisfactory financial operating results. On the other hand, these airlines going through a phase of re-equipment with a new generation of wide-bodied high-capacity aircraft. About 100 Boeing 747s were already delivered during 1970, while deliveries of the DC-10 and Lockheed 1011 (combined orders for both types amounting to about 400) started during 1971: each of these aircraft types has a capacity of 300 to 400 passengers. At the same time, a considerable increase in capacity (particularly as far as passengers are concerned) in certain areas by non-scheduled carriers also had a serious impact on scheduled airline profitability.

213. Although the total passenger-kilometres and ton-kilometres carried on all scheduled services of the States members[74] of the International Civil Aviation Organization (ICAO) were greater during 1970 than in any other year, the percentage increases over the preceding year for both categories of traffic were the lowest experienced for several years. Indeed the percentage increase in passenger-kilometres in 1970 (over 1969) was 9.5 per cent, while for freight (including excess baggage and mail) it amounted to 8 per cent.[75] These two percentage increases may be compared with those for the preceding four years, i.e. 1966 to 1969: 16, 19, 14 and 13 per cent respectively for passenger-kilometres and 19, 16, 19 and 18 per cent respectively for freight ton-kilometres.[76] The total freight traffic in 1970 of 15,300 million ton-kilometres represented about 27 per cent of the total activity, expressed in ton-kilometres, of the airlines of the 120 States members of ICAO.

214. The IATA air cargo traffic conference held in Singapore in May-June 1971 established new cargo package rates for most regions of the world which were to come into effect on 1 October 1971. The conference failed to finalize agreement on north and central Pacific and north Atlantic routes, and subsequently one of the principal all-cargo carriers, which is a leading advocate of the concept of carriage by air of bulk cargo as opposed to the single-package concept advocated by the mixed passenger/freight carriers, resigned from IATA. The crisis in passenger fares in 1971 was of even greater magnitude and an open-rate passenger fare situation on the North Atlantic also appeared imminent and was only averted late in the year after intensive negotiation among IATA member airlines.

215. Development flight testing continued with two types of supersonic transport aircraft, the Anglo-French Concorde and the USSR TU-144. Production plans for the Boeing 2707-300 did not materialize after the United States Congress and Senate refused the further allocation of development funds for the aircraft. It was reported that commercial services of the Concorde would begin in 1974 and that by the end of 1978 150 Concorde aircraft would be off the production line.[77]

216. With respect to new modes of cargo transport, it was reported that the first prototype freight airship[78] could be flying in three years' time.[79] There is also a project for a 1,000-ton flying boat, which would be able to carry 300 tons of cargo over distances of more than 3,000 miles at a speed of 500 m.p.h.[80] and it was sug-

[74] Now at a total of 120 with the inclusion of the USSR since 14 November 1970.

[75] The figures relate to international and domestic traffic combined and include data (officially published or estimated by ICAO) for the USSR.

[76] All tons referred to in this section are metric tons.

[77] *Lloyd's List and Shipping Gazette* (London), 28 July 1971.

[78] See *Review of Maritime Transport, 1970* (United Nations publication, Sales No.: E.71.II.D.8), para. 144.

[79] *Journal of Commerce* (New York), 6 August 1971.

[80] *Fairplay International Shipping Journal* (London), 15 July 1971.

gested that flying-boat freighters would be able to provide a high-density, heavy load, low cost service—e.g. among scattered islands in the Pacific—without the necessity for extensive port development.

C. Cruising

217. With the airlines attracting most of the transatlantic passengers and for that matter most customers on all intercontinental routes, the operators of passenger vessels have, in the last 20 years, found themselves in a rapidly shrinking market. For a while this was compensated by sailing the regular passenger liner vessels on long cruises during the slack seasons. However, the vessels were not specially designed for this activity and their economic performance was therefore not optimal. Secondly, the market for these high-priced cruises was rather limited. The reduction of the demand for passenger vessels in their liner form could therefore be offset only to a limited extent by employing the vessels in cruising. Many of these vessels therefore had to be taken out of operation to be scrapped.

218. Nevertheless, cruising has become, in recent years, an expanding field of the shipping business and the cruise offered today is quite different from what it was traditionally. Marketing is the key to the success of the present cruise operators. In search for new opportunities they have cast their eyes on the booming leisure spending potential in the populations of the United States of America, western Europe and, to a certain extent, Australia and Japan. With the objective of capturing a part of this market, cruising is being sold with a new marketing strategy. Relatively cheap cruises with a duration ranging from one week to one month are being offered to customers in the middle- and lower-income levels. The policy with this type of cruise is that the low level of the fares is compensated by the large number of passengers carried per year, which ensures an adequate return on the capital invested. To make it possible to attract customers from a wide geographical area the sea cruise is often combined with a flight to and from the starting point of sailing and of termination of the voyage—thus has emerged the so-called "fly/cruise", which may be of particular interest for the developing countries.

219. In addition to introducing these highly successful low-cost cruises which have brought cruising within the financial reach of a large part of the population, cruise operators have also further developed the more traditional high-cost cruises of longer duration aimed at those in the high income brackets. The marketing segmentation thus covers most of the population.

220. In their marketing mix the operators have also into account the fact that the size of the vessel, the number of cabins and beds, the catering facilities, etc., must be related to the price and length of the voyage. In order to make the business profitable they do their utmost to satisfy the customer and are at the same time maximizing the income from the use of their vessels.

221. At present the major geographical areas for cruising activity are the Caribbean and the Mediterranean.

222. In the United States of America the traffic growth has been confined to the Florida ports of Miami and nearby Port Everglades. Cruise activity in other major United States passenger ports—New York, San Francisco and the ports in the Los Angeles area—has remained stagnant. Miami appears to be becoming an increasingly popular resort and many tourists combine a Florida vacation with a short cruise.

223. The number of cruise passengers departing from United States ports has increased tenfold in the last 20 years, reaching about 600,000[81] in 1970. For that year total cruise revenue can be estimated at almost $300 million, which would suggest that the average passenger pays $500 for his cruise. However, the conclusion is misleading because of the great variety of ships and cruises available. There are three-day weekend cruises costing a minimum of $80 and there are three-month cruises with a "de luxe" state-room costing $8,000 or more. The bulk of passenger volume is obtained from short cruises of less than two weeks' duration, but the small number of expensive long cruises greatly influences the over-all revenue figure.

224. Perhaps the most common cruise on the east coast of the United States is of seven days' duration, leaving on a Saturday afternoon or evening and returning the following Saturday morning. For such trips the average fare is about $325. There is, however, a certain difference in fares between New York- and Florida-based ships.

225. The Californian ports are more of a national gateway to the Pacific than an outlet for local demand. A relatively high proportion of the passengers embarking through San Francisco and the ports of the Los Angeles area are from other parts of the United States. Cruises from this area are mainly long and expensive and there is little demand for short duration cruises. Travel from Californian ports includes cruise-like voyages to the Far East.

226. On the European market the main cruises offered involve Mediterranean voyages. Here, the fly/cruise combination has become widely used. By cheap air travel the customer is quickly taken to and from the cruising area, thereby being able to spend most of his holiday in the sun. As an indication of how popular this kind of vacation has become, it is worth mentioning that fly/cruise berths from the Continent have more than doubled in each of the last three years while demand for the conventional embarkation cruises has been stagnant.

227. A feature of the Mediterranean cruise market is the large number of refurbished passenger vessels in operation. Because of the drastic decline in passenger

[81] The figure cannot be very accurate as the definition of a cruise passenger is not clear-cut.

liner services, many passenger vessels have been and are considering their condition and original cost. There is no on the second-hand market at prices which are very low market for them for liner service and their value may sometimes be reduced to scrap levels. Some operators have taken advantage of this, seeing the possibility of converting such vessels for cruising. Accepting only hulls of the highest class, stripping them and fitting them with as many cabins as possible together with room for stores, water etc., these entrepreneurs thus obtain tonnage with maximum space for passengers at a very reasonable price.

228. Combined with flights at the present relatively low air fares, cruising can be marketed over a wide geographical area. The paradox is that the rather cheap air travel, the predominant reason for the decline in passenger liner service, is a necessity for the operation.

229. When setting up an operation of the kind described above it is vitally important for the service offered to be marketed in the best way. In this connexion, the travel agencies are a useful link between the operator and the customer. These agencies can also provide information about customer needs which may be useful to the operator during the planning stage. A satisfactory connexion with travel agencies can therefore be considered a must for a cruise operator.

230. In order to make the fly/cruise feasible, an airline must also be included in the operation. This prerequisite is already available to some developing countries, many of which have national airlines operating with relatively low load factors. As the aircraft are already there, and a flight network already exists, the marginal cost of filling the empty seats is low. In other words, if the seat utilization factor is increased at a fare anything above marginal cost, the profitability will improve.

231. At the same time, many of the sea-coast developing countries have the basic requirements for setting up cruising operations along their shores. During most of the year they can offer sun and a climate which is sought by the cruise passenger and also unspoiled nature with its attractions. For developing countries so located that the right combination of flying time from developed countries and cruising leisure can be found, the implementation of the fly/cruise idea should be feasible.

232. One characteristic of the modern cruise is the high frequency of port calls during the voyage. Trips ashore break the monotony of the life on board for those who wish to take them. From an economic viewpoint this can have beneficial effects for the countries concerned, as the passengers will spend money ashore and thus contribute more to the country than their direct expenditure for the cruise. Under the right conditions it may also be expected that the tourist will start or terminate his cruise with a longer stay ashore.

233. Cruise customers can be attracted mainly from countries with a high *per capita* income. The United States of America, western Europe and Australia will therefore be the market with the greatest potential. In the future, Japan could also develop into a market for cruising.

234. The operation of cruise ships is labour-intensive. A cruise ship requires not only the ordinary complement of officers and crew necessary for navigation, but also an even larger staff to provide adequate service to the passengers. In this connexion it is quite significant that some of the cruise operators in high-cost countries have to recruit all personnel, except officers and seamen, from countries with cheap labour. With their abundance of cheap labour, the developing countries should therefore have an asset in manning cruise vessels.

235. It should also be mentioned that there is some risk involved in an operation of this kind and that the conversion of old vessels into cruise ships calls for special managerial skills if it is to be performed successfully. Serious accidents have occurred with old passenger vessels and converted cruise ships after which the safety of the vessel involved has been questioned. Today the strict rules laid down by the United States Coast Guard for the operation of cruise vessels in United States waters are one of the main reasons why many old vessels have been withdrawn from service in this area.

236. When planning the construction or conversion of a cruise ship the number of passengers to be accommodated and the size of the passenger service staff will be determined on the basis of the length of the cruises to be undertaken and the standard of service to be offered on board. All other parameters being equal, one can naturally plan to take more passengers on a given ship, the shorter the cruises it makes; for a ship of a given size, more passenger space will be provided on cheaper cruises than on luxury cruises.

237. In the case of the new vessels operating from United States coastal ports, it is usual that, with respect to a cruise of one week's duration which requires less cubic space to be sacrificed for bunkers, stores and particular items necessary for long-range operations one passenger is accommodated per 20-25 grt. For longer cruises lasting from two to three weeks, this ratio goes down to one passenger per 30-40 grt. The level for an ordinary passenger liner is about one passenger per 50 grt. Some of the converted cruise ships operating in the Mediterranean have exceptional ratios of one passenger per 15-20 grt. As for the size of the crew, this will be influenced primarily by the quality of the service to be provided on board. The new vessels putting to sea from United States ports have a ratio of total crew to passengers ranging from 1 : 3 to 1 : 1.5. A vessel of about 20,000 grt thus normally has a total crew of about 300 and facilities for 500 to 900 passengers.

238. The demand for leisure activities must be regarded as having a high income elasticity and cruise business trends are therefore likely to be closely correlated to the fluctuations in the economies of the industrialized countries. If the economic expansion which has taken place in these countries in the last 20 years or so continues, then the long-term outlook for cruising should be favourable.

D. UNCTAD training course in shipping economics and management

239. The desirability of training personnel from developing countries in the economics and management of shipping was recognized at the second session of the United Nations Conference on Trade and Development in New Delhi in 1968. With financial assistance from the United Nations Development Programme in New York, the first course began in Geneva in May and concluded in December 1971.

240. The course was attended by 30 participants from the developing world, one each from; Algeria, Argentina, Burma, Ceylon, Colombia, Cuba, Dahomey, Ethiopia, Ghana, Guatemala, Kenya, India, Indonesia, Malaysia, Mauritius, Mexico, Nepal, Nigeria, Pakistan, Peru, Philippines, Republic of Korea, Saudi Arabia, Taiwan, Thailand, Egypt, United Republic of Tanzania, Venezuela, Yugoslavia, Zambia.

241. The first 18 weeks were occupied with a programme of 185 lectures and 74 seminars in Geneva undertaken by the staff of UNCTAD's Division for Invisibles together with seven experts on shipping practice and policy from academic institutions and business enterprises. In addition, a number of experts in the shipping world contributed single lectures on their organization's work. The regular programme of lectures were delivered under the following heads:

1. *International trade and shipping,* A. Trade flow; B. Financial aspects of trade and shipping.
2. *The shipping industry,* C. Supply conditions; D. Demand conditions and pricing; E. Competition and combination.
3. *Management of a shipping enterprise,* F. Objectives in shipping; G. Choice of ship; H. Chartering and brokerage; I. Quantitative methods; J. Technological changes; K. Investment Analysis.
4. *Policy and external relations,* L. National merchant marines and government shipping policy; M. Maritime law; N. Port economics; O. Labour questions; P. Conciliation and consultation in shipping.

242. In support of the classroom programme, a number of instructional films relating to shipping and ports were borrowed from shipping companies and government departments and shown to the participants.

243. In mid-September, the trainees dispersed in western Europe for practical training with shipping companies, port authorities and other organizations concerned with international transportation. The following countries and orgnizations acted as hosts:

Denmark—The East Asiatic Company (Copenhagen);

France—Direction des Affaires Maritimes en Méditerranée (Marseilles);

Federal Republic of Germany—Hapag-Lloyd (Hamburg and Bremen), Seereederei "Frigga" (Hamburg), Deutsche Shell Tanker GmbH (Hamburg), Deutsche Dampfschiffahfrtsgesellschaft "Hansa" (Bremen);

Netherlands—Koninklijke Nederlandsche Stoomboot—Maatschappij N.V. (Amsterdam), Phs. van Ommeren (Rotterdam), Koninklijke Nedlloyd N.V. (Rotterdam);

Norway—W. Wilhelmsen (Oslo), L. Hoegh and Co. A.S. (Oslo), Christian Haaland (Hangesund);

Sweden—Tirfing Steamship Co., (Gothenburg);

United Kingdom—Athel Line (London); J. and J. Denholm (Management) Ltd. (Glasgow); London and Overseas Freighters Ltd. (London); Ocean Steam-Ship Co. Ltd. (Liverpool); Overseas Containers Ltd. (London); Peninsular and Oriental Steamship Company Ltd. (London).

244. In November, a two-week study tour was undertaken. The first week was spent in London, with visits to the Baltic Exchange, Felixstowe container port, the National Ports Council, Lloyd's, and Tilbury container terminal. The second week was spent in Poland with visits to the Morski Institute and the Transport Economics Faculty of the University of Gdansk in Sopot, and to Polfracht and the port of Gdynia.

245. During the last week of the course, held in Geneva, the participants engaged in a series of discussions designed to pool their experiences in in-service training in Europe.

BIBLIOGRAPHY

The annotated list below (which is based on the publications obtained by the ECE/UNCTAD Joint Reference Unit in 1971) is limited to a few important books and reports on the economic aspects of maritime transport and related subjects.

The notes against each item in the list include a brief description, but no attempt is made at a qualitative assessment or critical review of the publications listed.

Lord Chorley and O. C. Giles, *Shipping Law* (Sir Isaac Pitman and Sons Limited, London). "Chorley and Giles", as the book itself is frequently dubbed, has been well known for many years for its clear and concise guidance to the law in relation to shipping generally. The contents of this seventh edition include the ship as property; construction, maintenance and equipment; master and crew; the contract of passage; the contract of affreightment; ancillary contracts and liabilities; contingencies; and marine insurance. There are seven appendices dealing with the bill of lading, charter party, specimen slip, Lloyd's marine insurance policy, Institute cargo clauses, British Carriage of Goods by Sea Act, 1924, and the British Merchant Shipping Act, 1970.

I. M. Datz, *Planning Tools for Ocean Transportation* (Cornell Maritime Press, Cambridge, Maryland). Today's highly competitive environment, taken in conjunction with the rapidly changing technological and geopolitical climate, places unusual stress upon the managerial function within the maritime industry. The complexity of problems associated with maintaining a viable enterprise are such that the shipowner is surely in need of a body of readily usable objective-type tools and techniques to assist him in the decision-making process. This 168-page book addresses itself to this crucial need.

Patric Finlay, *Jane's Freight Containers, 1970-71* (Sampson Low, Marston and Company Limited, London). In its third edition this 680-page volume provides a complete guide to the expanding world of containers and containerization. The scope of the book can be seen from the list of items in the contents: ports and inland transport; ship operators; non-vessel-operating carriers; equipment leasing companies and ship charterers; container manufacturers; container handling equipment manufacturers; air freight; international standards; and trends for the future. A fuller general index, together with a ship index, has been provided.

W. A. Flère, *Handy guide to stowage* (Imray, Norie and Wilson Limited, London). The book is divided into the following ten sections: notes on cargo stowage (general, bulk solids, bulk liquids, refrigerated, deck and timber, and citrus fruits); hazardous and dangerous cargoes, alphabetical list of merchandise; shipping terms and abbreviations; shipping weights and measures; specific gravities of certain substances; notes on the 1934 United Kingdom Docks Regulations; fires in certain hazardous cargoes; cargo and tackle calculations; and meteorological and tidal information.

K. M. Johnsen and H. C. Garnett, *The Economics of Containerization* (London, George Allen and Unwin Limited). The authors claim that their book is "the first comprehensive study based upon experience already gained by operators and users of containers, both inland and for overseas trade". Early chapters deal with ports and shipping and the implication of containerization for firms' distributing policies. The succeeding four chapters cover inland container transport and a final chapter deals with planning for container transport. The over-enthusiasm of the early years of the "container revolution" is clearly demonstrated.

P. Lorange and V. Norman, *Risk preference and strategic decision-making in large Scandinavian shipping enterprises* (Institute for Shipping Research, Bergen 1971). The main items covered in this publication can be summarized as follows: A conceptual framework of the process whereby business strategy is formulated and executed in the shipping industry; an explicit consideration of the decision-making process based in part on verbal responses to questions asked in the course of risk preference interviews with Norwegian owners; the apparatus developed is then used to formulate specific hypotheses regarding the relationship between strategy and risk preference.

B. N. Metaxas, *The Economics of Tramp Shipping* (University of London, 1971). A study of the tramp shipping business which pays attention to the types of ships which increasingly compete with tramps: bulk carriers and tankers. Separate sections deal with tonnage measurement, the supply of tramps, the size and elasticity of total demand for them, the measurement of operating costs, flags of convenience, how and why freight rates fluctuate, and the progress of tonnage stabilization schemes.

W. Rzepecki, *Współzależności economiczne w transporcie morskim (Economic Interdependencies in Sea Transport)* (Wydawnictwo Morskie, Gdansk, 1970). A book showing the essential economic interdependency between the particular branches of maritime

transport. The world merchant fleet, ports and their efficiency, shipbuilding capacity and supply and demand for tonnage are discussed as basic factors for an analysis of maritime transport.

Lev Sychrava and Marian Bush, *Forecasting Ship Demand* (Lambert Brothers, London). This largely statistical paper consists primarily of an attempt to bring up to date, and in some respects to refine, a study on the long- and medium-term development of the shipbuilding market completed in 1969 by a working group of the EEC shipbuilding committee. The paper examines the relationships between trade and economic growth and between trade and the world fleet, and the ways in which the interaction between these factors provides pointers to fleet replacement and the demand for construction of new vessels between mid-1970 and mid-1975.

"The Prosaic General Cargo Ship ... Perish or Prosper" (article in *Surveyor,* August 1971, a quarterly publication of the American Bureau of Shipping). The future of the general cargo ship is discussed, particularly in relation to container vessels. The over-all conclusion is that there will be a need for the general cargo vessel in its more conventional form.

The Carnegie Endowment for International Peace, International Conciliation, No. 582, March 1971, *Shipping and Developing Countries.* This booklet contains four articles related to shipping in the developing countries dealing with the following topics:

1. "Trade and shipping needs of developing countries": the objectives of developing countries; the share of developing countries in seaborne trade and shipping; freight rates and maritime transport costs; the expansion of merchant marines.

2. "The Participation of developing countries in shipping": the participation of developing countries in maritime transport; access to shipping markets.

3. "Technological change and the future of shipping in developing countries": technological change; the effect of technological change on shipping in general; the significance of technological change for developing countries; possible attitudes of developing countries to technological change; the future of shipping.

4. "Toward a change in the international distribution of shipping activity": the growing concern of the developing countries; changes in the shipping scene; international action in shipping.

ANNEXES

Annex I

CLASSIFICATION OF COUNTRIES AND TERRITORIES

Notes

Note 1

This classification is used in the statistical analysis of merchant fleets and seaborne trade. Seaborne trade is recorded at ports of loading and unloading. The trade of the ports of a country or territory may therefore include goods originating in or destined for another country or territory, such as a neighbouring land-locked country or territory. The trade of land-locked countries or territories cannot be identified in seaborne trade statistics, and these countries or territories are not explicitly included in the trade classification. However, when the classification is applied to registered merchant fleets, land-locked countries or territories possessing merchant fleets are included in the appropriate geographical groups of countries or territories.

Note 2

The groups of countries or territories used for presenting statistics in this review are made up as follows:

Developed market-economy countries or territories, excluding southern Europe: Codes 1, 2, 3, 4, and 10.4.

Southern Europe: Code 5.

Socialist countries or territories of eastern Europe and Asia: Codes 6, 7 and 8.

Developing countries or territories, total: Codes 9, 10 (excluding 10.4), 11 and 12.

Of which:

in Africa: Codes 10.1, 10.2 and 10.3.

in Asia: Codes 9.1 and 9.2.

in Latin America and the Caribbean: Codes 11.1, 11.2, 11.3, 11.4, 11.5.

in Oceania: Code 12..

Note 3

In tables showing statistics of shipping tonnage, however, Liberia and Panama have been excluded from the appropriate groups and shown separately, since a large part of the fleets registered in these two countries is owned by residents of developed market-economy countries.

Note 4

The description and classification of countries and territories should not be considered to imply any judgement by the Secretariat of the United Nations regarding the legal status of any country or territory, or in respect of the delineation of its boundaries, or regarding its economic system or degree of development. Inclusion of a particular country or territory in any economic or geographical grouping (or its exclusion) has been dictated by economic and statistical considerations.

Classification of countries and territories*

Code. 1—North America

Bermuda
Canada
Greenland
St. Pierre et Miquelon
United States of America

Code 2—Japan

Code 3—Australia and New Zealand

Code 4—Northern and Western Europe

(Austria)
Belgium
Denmark
Faeroe Islands
Federal Republic of Germany
Finland
France
Iceland
Ireland
Italy
Monaco
Netherlands
Norway
Sweden
(Switzerland)
United Kingdom of Great Britain and Northern Ireland

Code 5—Southern Europe

Cyprus
Gibraltar
Greece
Malta
Portugal
Spain
Turkey
Yugoslavia

Code 6—Central and eastern Europe (excluding Union of Soviet Socialist Republics)

Albania
Bulgaria
(Czechoslovakia)
German Democratic Republic
(Hungary)
Poland
Romania

Code 7—Union of Soviet Socialist Republics

Code 8—Democratic People's Republic of Korea, Democratic Republic of Viet-Nam, People's Republic of China

Code 9—Asia, n.e.s.

9.1 *Western Asia*

Bahrain
Iran
Iraq
Israel
Jordan
People's Democratic Republic of Yemen
Qatar
Saudi Arabia
Syrian Arab Republic

* Countries or territories shown in parentheses are land-locked countries or territories with merchant fleets (see note 1 above).

Kuwait
Lebanon
Oman
Trucial Oman**
Yemen

9.2 *Southern and eastern Asia*

Bhutan
Brunei
Burma
Ceylon
Hong Kong
India
Indonesia
Khmer Republic
Macao
Malaysia
Maldives
Pakistan
Philippines
Portuguese Timor
Republic of Korea
Ryukyu Islands
Singapore
Taiwan
Thailand
Viet-Nam (Republic of)

Code 10—Africa

10.1 *Northern Africa*

Algeria
Canary Islands
Ceuta
Egypt
Ifni
Libya
Melilla
Morocco
Tunisia

10.2 *Western Africa*

Angola
Cameroon
Cape Verde Islands
Congo (The)
Dahomey
Equatorial Guinea
Gabon
Gambia, The
Ghana
Guinea
Ivory Coast
Liberia
Mauritania
Nigeria
Portuguese Guinea
St. Helena Island
São Tomé and Principe Islands
Senegal
Sierra Leone
Spanish Sahara
Togo
Zaïre

10.3 *Eastern Africa*

(Burundi)
Comoro Islands
Ethiopia
French Somaliland
Kenya
Madagascar [Malagasy Republic]
Mauritius
Mozambique
Réunion Island
Seychelles Islands
Somalia
Sudan (The)
(Uganda)
United Republic of Tanzania
(Zambia)

10.4 *Southern Africa*

South Africa

Code 11—Latin America

11.1 *Caribbean*

Antigua
Bahamas
Barbados
Cayman Islands
Cuba
Dominica
Dominican Republic
Grenada
Guadeloupe
Haiti
Jamaica
Martinique
Montserrat
St. Kitts-Nevis-Anguilla
St. Lucia
St. Vincent
Turks and Caiços Islands
Virgin Islands

11.2 *Central America*

British Honduras
Canal Zone
Costa Rica
El Salvador
Guatemala
Honduras
Mexico
Nicaragua
Panama

11.3 *South America—Northern seaboard*

Guyana
French Guiana
Netherlands Antilles
Surinam
Trinidad and Tobago
Venezuela

11.4 *South America—Western seaboard*

Chile
Colombia
Ecuador
Peru

11.5 *South America—Eastern seaboard*

Argentina
Brazil
Falkland Islands [Islas Malvinas]
(Paraguay)
Uruguay

Code 12—Oceania, n.e.s.

American Samoa
Christmas Island
Fiji Islands
French Polynesia
Guam
Nauru
New Caledonia
New Guinea
New Hebrides
Ocean Island [Gilbert Islands]
Papua
Solomon Islands
Tonga
Wake Island
Western Samoa

** Six of the seven Emirates of former Trucial Oman merged into the United Arab Emirates which were admitted to membership of the United Nations on 9 December 1971, pursuant to General Assembly resolution 2794 (XXVI).

Annex II

TABLES

TABLE I

World seaborne trade according to geographical areas, 1965, 1968 and 1969 [a, b]

(Million metric tons)

Area		Goods loaded				Goods unloaded			
		Crude petroleum	*Petroleum products*	*Dry cargo*	*Total all goods*	*Crude petroleum*	*Petroleum products*	*Dry cargo*	*Total all good*
1 North America	1965	0.1	3.4	190.7	194.2	73.7	67.9	115.2	256.8
	1968	0.3	4.7	215.5	220.5	85.7	79.6	129.6	294.9
	1969	0.2	4.1	210.6	214.9	75.5	96.1	125	296.5
2 Japan	1965	—	0.8	22	22.8	69.7	14	115	198.7
	1968	—	0.5	29.9	30.4	120.3	20.8	179.4	320.5
	1969	—	0.7	39.8	40.6	143.9	22.2	204.5	370.5
3 Australia and New Zealand	1965	—	1.2	25.2	26.5	18.7	2	13.8	34.4
	1968	—	1.1	51.4	52.5	22.6	1.3	15.8	39.7
	1969	—	0.8	72.3	73.2	23.1	2.5	15.6	41.2
4 Northern and Western Europe	1965	0.3	50	165.2	215.5	308.2	85.3	323.3	716.8
	1968	3.9	59.3	207	270.2	433.2	82.3	363.8	879.3
	1969	6.3	67.8	213.3	287.3	495.2	86.6	386.5	968.3
5 Southern Europe	1965	—	0.8	18.6	19.4	15.8	4.4	33.1	53.3
	1968	—	6.3	20.8	27.1	32.9	4.7	31.2	68.8
	1969	—	5.6	25.2	30.7	32.8	8.6	38.9	80.3
6 Central and eastern Europe (excluding USSR)	1965	0.4	3.6	22.1	26.1	2.4	1.9	22.6	26.9
	1968	0.3	5	30.2	35.5	4.4	2.8	23.2	30.4
	1969	0.1	3.6	31.9	35.6	8	3	23.4	34.5
7 USSR	1965	28.3	18	32.8	79.1	—	—	12.7	12.8
	1968	34.2	23.2	43.4	100.8	0.1	—	10.9	11
	1969	36.1	21.7	47.2	105	1.5	—	9.6	11.1
8 Democratic People's Republic of Korea, Democratic Republic of Viet-Nam, People's Republic of China	1965	—	—	7.6	7.6	0.2	0.3	11.8	12.2
	1968	—	—	8.6	8.6	—	0.5	12.6	13.1
	1969	—	—	8.8	8.8	0.2	0.4	14	14.6
9.1 Western Asia	1965	348.7	43.3	5.5	397.5	10.9	1.9	13	25.9
	1968	477	50.7	5.4	533.1	7.6	1.6	16.6	25.8
	1969	528.9	56.3	6	591.2	9.1	2.5	17.9	29.5
9.2 Southern and eastern Asia n.e.s.	1965	14.6	13.1	65.5	93.3	23.3	17	58.2	98.5
	1968	23.2	19.9	76.4	119.5	44.6	21.8	69.8	136.2
	1969	29.3	18.8	84.5	132.5	51.8	23.1	67.8	142.7
10.1 Northern Africa	1965	84.6	3.4	29.2	117.2	10.9	3.9	16.3	31.1
	1968	169.8	1.8	27.9	199.5	10.2	4.4	15	29.6
	1969	202.9	6.7	28.5	238.1	10.3	5.6	16.9	32.8
10.2 Western Africa	1965	14.7	0.3	41.1	56.1	1.5	4.6	9.9	15.9
	1968	11	1.2	50.7	62.9	2.7	4.6	10.6	17.9
	1969	32.9	1.4	56.5	90.8	3.5	4.3	12.1	19.9
10.3 Eastern Africa	1965	—	0.5	11	11.5	3.5	3	6.7	13.2
	1968	—	1	14.9	15.9	4.9	2.5	7.2	14.6
	1969	—	0.8	14.8	15.7	5.1	2.8	7	14.9

TABLE I *(continued)*

Area		Goods loaded				Goods unloaded			
		Crude petroleum	*Petroleum products*	*Dry cargo*	*Total all goods*	*Crude petroleum*	*Petroleum products*	*Dry cargo*	*Total all goods*
10.4 Southern Africa	1965	—	0.3	8.3	8.5	4.7	1.5	6.2	12.4
	1968	—	0.1	14.2	14.3	7.5	2.6	4	14.1
	1969	—	0.1	12.1	12.2	7.7	2.4	4.2	14.3
11.1 Caribbean	1965	—	0.2	20.4	20.6	4.8	3.9	7.2	15.9
	1968	—	0.2	20.8	21.0	5.8	4	7.9	17.7
	1969	—	0.2	22.0	22.3	6.3	4	7.6	17.9
11.2 Central America	1965	1	2.6	9.9	13.5	3.5	3.4	4.1	10.9
	1968	—	2	12.5	14.5	4.9	4.6	4.5	14
	1969	—	2.7	12	14.8	5.9	4.7	5.5	16
11.3 South America, northern seaboard	1965	123.3	99.2	27.7	250.2	53.9	3	4.7	61.6
	1968	131.5	99	28.3	258.8	53.3	3.6	5.9	62.8
	1969	132.3	102.7	33.6	268.5	57	4.1	5.9	67
11.4 South America, western seaboard	1965	6	0.8	25.9	32.7	1.1	1.5	5.1	7.7
	1968	4.4	1.5	29.5	35.4	3.1	1	7.2	11.3
	1969	5.4	1.7	28.4	35.6	4	1	6.4	11.3
11.5 South America, eastern seaboard	1965	—	0.8	34.4	35.3	15.4	1.4	13.1	29.8
	1968	0.2	0.9	34.6	35.7	15.8	2	15.6	33.4
	1969	—	0.2	43.2	43.4	17.1	1.8	17.7	36.6
12 Oceania, n.e.s.	1965	—	—	5.6	5.6	—	0.9	1.7	2.5
	1968	—	—	7.9	7.9	—	1.6	1.9	3.5
	1969	—	—	8.7	8.7	—	1.4	2.1	3.5
World total	1965	622	242.3	768.6	1,632.9	622	221.7	793.5	1,637.2
	1968	855.8	278.4	929.9	2,064.4	859.6	246.3	932.7	2,038.6
	1969	974.5	296	999.3	2,269.8	957.8	277.4	988.5	2,223.7

Source: United Nations estimated data: the world totals do not correspond exactly to the rounded total in table 1 in the text.

[a] Excluding international cargoes loaded at ports of the Great Lakes and St. Lawrence system for unloading at ports of the same system. Including petroleum imports into Netherlands Antilles and Trinidad for refining and re-export. Great Lakes and St. Lawrence trade (in dry cargo) amounted to 37 million tons in 1965, 36 million tons in 1968, 37 million tons in 1969 and 42 million tons in 1970.

[b] See annex I for the composition of these groups.

TABLE II

Distribution of world tonnage by flag of registration,[a] and type of ship, in order of size of fleets, as at 1 July 1971

(In grt and dwt)[b]

Flag of registration[c]	*Total tonnage*[d]	*of which:*				
		Tankers	*Bulk carriers*[e]	*General cargo*[f]	*Container ships*	*Other ships*
1 Liberia	38,552,240 (69,121,359)	22,312,977 (41,409,725)	12,138,838 (21,858,211)	3,592,246	79,858	428,321
2 Japan	30,509,280 (47,475,601)	10,722,900 (19,006,515)	9,646,398 (15,542,968)	7,145,704	353,690	2,640,588
3 United Kingdom of Great Britain and Northern Ireland	27,334,695 (41,639,025)	13,431,732 (23,909,615)	4,343,174 (6,910,098)	6,786,505	627,448	2,145,836
(29) Bermuda	814,017 (1,373,341)	589,837 (1,051,098)	145,162 (205,146)	55,778	—	23,240
(37) Hong Kong	572,243 (843,081)	42,660 (67,137)	244,230 (392,679)	268,121	—	17,232
(49) Bahamas	357,845 (423,330)	131,171 (209,488)	56,680 (87,156)	70,899	—	99,095
(78) Cayman Islands	26,643 (40,956)	—	—	25,978	—	665
(79) Gibraltar	27,413 (40,198)	—	19,355 (28,288)	7,711	—	347

TABLE II *(continued)*

Flag of registration[c]	*Total tonnage*[d]	*of which:*				
		Tankers	*Bulk carriers*[e]	*General cargo*[f]	*Container ships*	*Other ships*
(107) Falkland Islands	9,848	—	—	2,100	—	7,748
	(5,903)					
(113) New Hebrides	3,883	—	—	3,263	—	620
	(4,817)					
(118) Turk Islands	1,575	—	—	1,326	—	249
	(2,160)					
(122) Montserrat	711	—	—	711	—	—
	(1,000)					
(123) St. Vincent	664	—	—	664	—	—
	(935)					
(125) Gilbert and Ellice Islands	2,193	—	—	1,333	—	860
	(868)					
(126) Grenada	534	—	—	534	—	—
	(815)					
(127) British Honduras	620	—	—	620	—	—
	(800)					
(128) Virgin Islands	713	—	—	415	—	298
	(725)					
(130) St. Lucia	517	—	—	517	—	—
	(650)					
(132) Solomon Islands	629	—	—	629	—	—
	(483)					
(135) Seychelles Islands	306	—	—	192	—	114
	(300)					
4 Norway	21,720,202	10,276,789	7,672,507	2,535,991	69,133	1,165,782
	(35,970,035)	(18,689,317)	(12,590,014)			
5 Greece	13,065,930	4,645,043	2,680,329	5,244,082	—	496,476
	(20,870,571)	(8,166,902)	(4,494,621)			
6 Union of Soviet Socialist Republics	16,194,326	3,613,932	221,784	6,201,897	—	6,156,713
	(16,523,059)	(5,145,022)	(157,281)			
7 United States of America: estimated active sea-going fleet	9,565,669	4,425,780	372,172	2,923,196	1,067,468	777,053
	(14,515,057)	(7,596,103)	(687,345)			
8 Federal Republic of Germany	8,678,584	1,848,492	1,767,569	4,258,840	326,030	477,653
	(13,673,638)	(3,285,262)	(2,905,767)			
9 Italy	8,138,521	3,027,008	2,455,270	1,444,572	—	1,211,671
	(11,696,036)	(5,062,535)	(4,053,026)			
10 France	7,011,476	3,934,599	803,241	1,614,561	26,437	632,638
	(10,569,644)	(6,919,266)	(1,218,960)			
11 Panama	6,262,264	3,244,128	653,226	1,947,099	—	417,811
	(9,816,013)	(5,602,501)	(1,062,147)			
12 Netherlands	5,269,145	2,003,378	466,556	2,400,378	38,949	359,884
	(7,636,436)	(3,399,845)	(722,819)			
13 Sweden	4,978,278	1,561,796	1,657,221	1,311,097	64,799	383,365
	(7,514,124)	(2,808,037)	(2,732,894)			
14 Spain	3,934,129	1,723,508	503,152	1,011,090	9,564	686,815
	(5,521,292)	(2,907,329)	(849,667)			
15 Denmark	3,520,021	1,490,001	445,661	1,244,033	15,810	324,516
	(5,460,098)	(2,705,473)	(743,892)			
(92) Faeroe Islands	40,626	—	—	4,888	—	35,738
	(18,571)	—	—			
16 India	2,478,031	288,690	870,021	1,209,361	—	109,959
	(3,906,258)	(496,195)	(1,471,178)			
17 Brazil	1,730,877	538,937	253,339	874,688	—	63,913
	(2,521,106)	(852,944)	(428,305)			
18 Poland	1,760,397	55,200	409,635	1,014,631	—	280,931
	(2,422,480)	(81,930)	(609,612)			
19 Yugoslavia	1,543,149	247,903	319,796	933,678	—	41,772
	(2,265,641)	(416,950)	(519,535)			
20 Cyprus	1,498,114	109,321	56,679	1,282,973	—	49,141
	(2,185,507)	(169,495)	(83,829)			
21 Finland	1,470,825	701,756	77,000	542,639	3,895	145,535
	(2,124,220)	(1,147,950)	(105,700)			

TABLE II *(continued)*

Flag of registration[c]	*Total tonnage*[d]	*of which:*				
		Tankers	*Bulk carriers*[e]	*General cargo*[f]	*Container ships*	*Other ships*
22 Taiwan	1,321,758	287,845	281,606	710,123	—	42,184
	(1,956,635)	(510,239)	(460,371)			
23 Belgium	1,183,081	312,718	381,021	361,080	31,611	96,651
	(1,700,317)	(503,271)	(634,727)			
24 Argentina	1,311,874	497,192	124,855	576,403	—	113,424
	(1,690,028)	(720,114)	(192,883)			
25 Republic of Korea	940,009	373,184	144,465	339,982	—	82,378
	(1,459,865)	(657,022)	(238,638)			
26 People's Republic of China	1,022,256	171,236	—	817,490	—	33,530
	(1,452,957)	(258,875)	—			
27 Australia	1,105,236	232,655	411,332	233,649	60,645	166,955
	(1,451,447)	(375,658)	(625,885)			
(85) New Guinea	24,779	254	—	21,071	—	3,454
	(31,627)	(165)	—			
28 German Democratic Republic	1,016,205	177,852	166,652	473,907	—	197,794
	(1,421,636)	(289,314)	(237,806)			
30 Philippines	945,508	167,425	90,534	652,496	—	35,053
	(1,338,297)	(280,846)	(147,660)			
31 Portugal	925,793	235,779	45,458	392,793	—	251,763
	(1,070,565)	(383,735)	(69,654)			
32 Kuwait	646,548	423,740	—	191,848	—	30,960
	(1,056,574)	(787,551)	—			
33 Bulgaria	703,878	166,461	158,247	292,243	—	86,927
	(972,197)	(256,820)	(193,252)			
34 Israel	645,585	368	266,019	350,011	—	29,187
	(927,411)	(642)	(417,458)			
35 Somalia	592,664	123,969	—	468,695	—	—
	(892,448)	(198,408)	—			
36 Turkey	713,767	176,278	21,176	378,636	—	138,677
	(870,914)	(272,515)	(28,409)			
38 Pakistan	581,753	11,299	11,950	506,989	—	51,515
	(800,435)	(15,801)	(17,250)			
39 Singapore	581,777	93,061	53,202	428,191	—	7,323
	(770,602)	(139,696)	(75,345)			
40 Indonesia	618,805	74,917	—	464,355	—	79,533
	(727,301)	(109,162)	—			
41 South Africa	538,493	646	24,114	332,138	—	181,595
	(619,066)	(1,000)	(36,421)			
42 Chile	387,810	86,905	63,968	219,721	—	17,216
	(563,377)	(141,806)	(104,520)			
43 Venezuela	411,696	257,778	—	96,047	—	57,871
	(559,160)	(389,304)	—			
44 Mexico	400,665	224,450	32,105	84,392	—	59,718
	(558,783)	(352,165)	(50,760)			
45 Romania	363,996	69,314	161,529	89,608	—	43,544
	(538,917)	(108,873)	(241,360)			
46 Canada (excluding Great Lakes)	831,118	156,673	42,417	145,366	—	486,662
	(529,122)	(207,925)	(54,763)			
47 Cuba	384,885	41,094	—	264,799	—	78,992
	(506,436)	(61,526)	—			
48 Peru	420,656	90,937	11,946	207,637	—	110,136
	(450,283)	(138,752)	(17,220)			
50 Switzerland	199,591	—	49,673	149,175	—	743
	(304,476)	—	(73,353)			
51 Egypt	241,429	69,160	—	136,359	—	35,910
	(287,605)	(106,796)	—			
52 Colombia	208,837	14,392	—	188,208	—	6,237
	(257,484)	(21,865)	—			
53 Uruguay	162,774	92,757	—	62,423	—	7,594
	(238,956)	(147,387)	—			
54 Ireland	174,459	4,172	81,503	57,319	5,344	26,121
	(232,631)	(5,621)	(127,164)			
55 Lebanon	127,325	—	—	126,765	—	560
	(191,991)	—	—			

TABLE II *(continued)*

Flag of registration[c]	*Total tonnage*[d]	*of which:*				
		Tankers	*Bulk carriers*[e]	*General cargo*[f]	*Container ships*	*Other ships*
56 New Zealand	181,046	—	—	138,609	—	42,437
	(191,055)	—	—			
57 Ghana	165,748	—	—	115,152	—	50,596
	(177,342)					
58 Iran	131,667	44,449	—	73,309	—	13,909
	(173,231)	(70,052)	—			
59 Czechoslovakia	82,731	—	41,086	41,645	—	—
	(138,838)	—	(66,853)			
60 Nigeria	95,938	676	—	85,487	—	9,775
	(128,582)	(1,200)	—			
61 Thailand	86,222	18,524	—	54,776	—	12,922
	(114,937)	(25,892)	—			
62 Algeria	94,838	32,451	—	26,425	—	35,962
	(107,899)	(50,610)	—			
63 Malaysia	85,473	7,275	—	65,816	—	12,382
	(91,817)	(10,420)	—			
64 Iceland	125,912	5,232	—	52,548	—	68,132
	(87,876)	(7,055)	—			
65 Albania	56,523	—	—	56,523	—	—
	(79,780)	—	—			
66 Honduras	69,683	1,857	—	64,201	—	3,625
	(72,769)	(2,726)	—			
67 Burma	54,617	1,478	—	45,449	—	7,690
	(72,591)	(1,709)	—			
68 Morocco	55,585	11,527	—	35,994	—	8,064
	(70,365)	(16,545)	—			
69 Ethiopia	46,307	23,937	—	21,146	—	1,224
	(66,715)	(37,055)	—			
70 Maldives	48,707	—	—	48,707	—	—
	(62,637)	—	—			
71 Saudi Arabia	45,492	17,098	—	25,348	—	3,046
	(59,207)	(27,975)	—			
72 Ecuador	45,451	5,546	—	39,235	—	670
	(51,693)	(8,157)	—			
73 Ivory Coast	42,156	166	—	36,309	—	5,681
	(49,617)	(100)	—			
74 Malta	34,500	—	19,359	11,715	—	3,426
	(48,494)	—	(30,525)			
75 Republic of Viet-Nam	32,333	3,652	—	27,185	—	1,496
	(46,468)	(6.177)	—			
76 Zaire	39,317	—	—	38,855	—	462
	(46,171)	—	—			
77 Hungary	33,061	—	—	33,061	—	—
	(45,038)	—	—			
80 Iraq	46,435	560	—	19,129	—	26,746
	(39,736)	(900)	—			
81 Democratic People's Republic of Korea	50,556	—	—	9,266	—	41,290
	(39,648)	—	—			
82 Mauritius	26,177	—	—	24,522	—	1,655
	(38,280)	—	—			
83 Tunisia	27,933	6,500	—	14,926	—	6,507
	(36,380)	(10,000)	—			
84 Madagascar	21,424	1,995	—	17,288	—	2,141
	(35,570)	(2,376)	—			
86 Kenya	22,658	3,197	—	11,641	—	7,820
	(31,395)	(5,054)	—			
87 Sudan	23,560	—	—	22,440	—	1,120
	(29,335)	—	—			
88 Nauru	23,761	—	—	23,761	—	—
	(25,618)	—	—			
89 Paraguay	21,884	2,935	—	15,520	—	3,429
	(25,570)	(4,114)	—			

TABLE II *(continued)*

Flag of registration[g]	*Total tonnage*[d]	*of which:*				
		Tankers	*Bulk carriers*[e]	*General cargo*[f]	*Container ships*	*Other ships*
90 Monaco	17,541	12,704	—	4,837	—	—
	(24,495)	(19,721)	—			
91 United Republic of Tanzania	18,218	239	—	15,575	—	2,404
	(23,966)	(261)	—			
93 Trucial States	12,047	2,658	—	8,860	—	529
	(18,560)	(3,609)	—			
94 Trinidad	21,263	4,863	—	8,351	—	8,049
	(18,517)	(6.640)	—			
95 Nicaragua	10,877	259	—	10,618	—	—
	(16,990)	(360)	—			
96 Austria	11,387	—	—	11,387	—	—
	(16,666)	—	—			
97 Guinea	12,468	—	10,764	1,062	—	642
	(16,644)	—	(15,290)			
98 Senegal	13,685	3,560	—	4,840	—	5,285
	(14,436)	(5,304)	—			
99 Guyana	13,647	793	—	9,242	—	3,612
	(14,180)	(952)	—			
100 Bahrain Islands	10,126	433	—	8,525	—	1,168
	(12,240)	(575)	—			
101 Dominican Republic	8,881	674	—	7,970	—	237
	(11,864)	(1,609)	—			
102 Jamaica	12,899	—	—	12,253	—	646
	(11,296)	—	—			
103 Uganda	5,510	—	—	5,510	—	—
	(9,115)	—	—			
104 Zambia	5,513	—	—	5,513	—	—
	(9,110)	—	—			
105 Fiji	6,380	254	—	5,525	—	601
	(7,160)	(400)	—			
106 Democratic Republic of Viet-Nam	5,002	314	—	3,981	—	707
	(6,252)	(500)	—			
108 Congo (The)	4,649	—	—	—	—	4,649
	(5,500)	—	—			
109 Guatemala	3,629	—	—	3,629	—	—
	(5,272)	—	—			
110 Libyan Arab Republic	4,692	—	—	3,454	—	1,238
	(5,102)	—	—			
111 El Salvador	4,259	—	—	—	—	4,259
	(..)	—	—			
112 Khmer Republic	4,230	—	—	1,880	—	2,350
	(5,025)	—	—			
114 Yemen	2,844	—	—	2,844	—	—
	(4,415)	—	—			
115 Costa Rica	3,107	—	—	2,948	—	159
	(4,200)	—	—			
116 Ceylon	10,039	1,158	—	242	—	8,639
	(3,907)	(1,649)	—			
117 Tonga	2,502	—	—	1,658	—	844
	(2,475)	—	—			
119 Barbados	1,384	100	—	831	—	453
	(1,544)	(150)	—			
120 People's Democratic Republic of Yemen	1,417	—	—	713	—	704
	(1,162)	—	—			
121 Syrian Arab Republic	1,020	—	—	672	—	348
	(1,003)	—	—			
124 Gabon	1,307	347	—	425	—	535
	(902)	(258)	—			
129 Mauritania	1,959	—	—	—	—	1,959
	(668)	—	—			
131 Qatar	803	200	—	—	—	603
	(525)	(350)	—			

TABLE II *(concluded)*

Flag of registration[c]	*Total tonnage*[d]	*of which:*				
		Tankers	*Bulk carriers*[e]	*General cargo*[f]	*Container ships*	*Other ships*
133 Gambia (The)	1,135	—	—	—	—	1,135
	(315)	—	—			
134 Cameroon	1,399	—	—	—	—	1,399
	(311)	—	—			
WORLD TOTAL[g]	238,967,577	95,818,825	50,973,976	67,224,192	2,780,681	22,169,903
	(365,174,582)	(168,880,093)	(84,618,705)			

Source: Lloyd's Register of Shipping Statistical Tables 1971 and supplementary data regarding the Great Lakes fleets of the United States of America and Canada and regarding the United States Reserve fleet.

[a] The designations employed in this table refer to flags of registration and do not imply the expression of any opinion by the Secretariat of the United Nations concerning the legal status of any country or territory, or of its authorities, or concerning the delimitation of its frontiers.

[b] Grt figures are shown on the first line; where available, dwt figures are shown between brackets on the second line.

[c] Countries have been listed according to dwt tonnage except where dwt figures are not available. In the case of flags of Non-Self-Governing Territories, which are listed out of rank order, the number indicating rank order is shown between brackets. Non-Self-Governing Territories are listed directly below the countries responsible for the administration of these Territories; however, the tonnage registered in these Territories is not included in the figures for the flag of the administering country.

[d] Ships of 100 grt and over; excluding the Great Lakes fleets of the United States of America and Canada and the United States Reserve fleet (see also note g).

[e] Ore and bulk carriers of 6,000 grt and over, including ore/bulk/oil carriers.

[f] Including passenger/cargo.

[g] Excluding:
(i) United States Great Lakes fleet estimated at 1,736,354 grt (2,778,000 dwt) *of which:* tankers: 50,000 grt (66,000 dwt); ore and bulk carriers: 1,497,000 grt (2,386,000 dwt).
(ii) Canadian Great Lakes fleet estimated at 1,535,057 grt (2,238,113 dwt) *of which:* tankers: 103,650 grt (152,650 dwt); ore and bulk carriers: 1,213,650 grt (1,788,150 dwt).
(iii) United States Reserve fleet estimated at 5 million grt (6.1 million dwt) *of which:* tankers: 169,000 grt (256,000 dwt); ore and bulk carriers: 112,000 grt (176,000 dwt). The figures for the United States Reserve fleet apply to vessels of more than 1,000 grt, and are thus not directly comparable with the figures from which they have been deducted, but the statistical discrepancy is very small, since few ships of less than 1,000 grt are included in the Reserve Fleet.

TABLE III

Distribution of world fleet by geographical areas, as at 1 July 1971

(Vessels of 100 grt and above; in grt and dwt)[a]

Area	*Total tonnage*	*of which:*			
		Tankers	*Bulk carriers*	*General cargo*	*Other ships*[b]
1 North America	11,210,804	5,172,290	559,751	3,124,340	2,354,423
	(16,417,520)	(8,855,126)	(947,254)		
2 Japan	30,509,280	10,722,900	9,646,398	7,145,704	2,994,278
	(47,475,601)	(19,006,515)	(15,542,968)		
3 Australia and New Zealand	1,286,282	232,655	411,332	372,258	270,037
	(1,642,502)	(375,658)	(625,885)		
4 Northern and western Europe	89,874,344	38,610,377	20,200,396	22,779,850	8,283,721
	(138,668,288)	(68,462,968)	(32,818,414)		
5 Southern Europe	21,742,795	7,136,832	3,665,304	9,262,678	1,677,981
	(32,873,182)	(12,316,926)	(6,104,528)		
6 Central and eastern Europe (excluding USSR)	4,016,791	468,827	937,149	2,001,618	609,197
	(5,618,886)	(736,937)	(1,348,883)		
7 USSR	16,194,326	3,613,932	221,784	6,201,897	6,156,713
	(16,523,059)	(5,145,022)	(157,281)		
8 Democratic Peoples' Republic of Korea, Democratic Republic of Viet-Nam and Peoples' Republic of China	1,077,814	171,550	—	830,737	75,527
	(1,498,857)	(259,375)	—		
9.1 Western Asia	1,672,209	489,506	266,019	808,024	108,660
	(2,486,340)	(891,654)	(417,458)		
9.2 Southern and eastern Asia[c]	8,361,505	1,371,168	1,696,008	4,823,673	470,656
	(12,199,856)	(2,321,945)	(2,803,121)		
10.1 Northern Africa	424,477	119,638	—	217,158	87,681
	(507,351)	(183,951)	—		
10.2 Western Africa	380,781	4,914	10,764	282,130	82,973
	(440,638)	(7,012)	(15,290)		
10.3 Eastern Africa	762,337	153,337	—	592,522	16,478
	(1,136,234)	(243,154)	—		
10.4 Southern Africa	538,493	646	24,114	332,138	181,595
	(619,066)	(1,000)	(36,421)		
11.1 Caribbean[d]	797,251	173,039	56,680	386,897	180,635
	(1,001,711)	(272,773)	(87,156)		

TABLE III *(continued)*

Area	Total tonnage	of which: Tankers	Bulk carriers	General cargo	Other ships[b]
11.2 Central America	492,840 (658,814)	226,566 (355,251)	32,105 (50,760)	166,408	67,761
11.3 South America, northern seaboard	446,606 (591,857)	263,434 (396,896)	— —	113,640	69,532
11.4 South America, western seaboard	1,062,754 (1,322,837)	197,780 (310,580)	75,914 (121,740)	654,801	134,259
11.5 South America, eastern seaboard	3,237,257 (4,481,563)	1,131,821 (1,724,559)	378,194 (621,188)	1,531,134	196,108
12 Oceania	64,127 (73,048)	508 (565)	— —	57,240	6,379
Liberia (not included in 10.2)	38,552,240 (69,121,359)	22,312,977 (41,409,725)	12,138,838 (21,858,211)	3,592,246	508,179
Panama (not included in 11.2)	6,262,264 (9,816,013)	3,244,128 (5,602,501)	653,226 (1,062,147)	1,947,099	417,811
WORLD TOTAL	238,967,577 (365,174,582)	95,818,825 (168,880,093)	50,973,976 (84,618,705)	67,224,192	24,950,584

Source: compiled from table II. See notes to that table.

[a] Dwt figures, where available, are shown on the second line between brackets.

[b] Including container ships, amounting to (in grt): North America: 1,067,468; Japan: 353,690; Australia and New Zealand: 60,645; northern and western Europe: 1,209,456; southern Europe: 9,564; Liberia: 79,858; World total: 2,780,681.

[c] Including 572,243 grt (843,081 dwt) registered in Hong Kong, part of which tonnage is believed to be controlled by foreign interests.

[d] Including 357,845 grt (423,330 dwt) registered in the Bahamas; the location of the effective control of this tonnage is uncertain.

TABLE IV

Additions to and net changes in the merchant fleets of developing countries and territories during 1970 [a]

(Thousand grt and dwt, vessels of 1,000 grt and over)

Flag of registration	All ships			of which: Tankers			Bulk carriers			Freighters			Others		
	Number	Grt	Dwt	Number	Grt	Dwt	Number	Grt	Dwt	Number	Grt	Dwt	Number	Grt	Dwt
9.1 Western Asia															
Iran															
Additions:	2	24	28	—	—	—	—	—	—	2	24	28	—	—	—
of which: new deliveries	2	24	28	—	—	—	—	—	—	2	24	28	—	—	—
Net additions	1	16	18	—	—	—	—	—	—	1	16	18	—	—	—
Israel															
Additions:	1	3	4	—	—	—	—	—	—	1	3	4	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	−8	−113	−206	—	—	—	−3	−101	−193	−4	−10	−13	−1	−2	—
Kuwait															
Additions:	5	152	267	1	107	209	—	—	—	4	44	58	—	—	—
of which: new deliveries	2	119	225	1	107	209	—	—	—	1	12	17	—	—	—
Net additions	4	150	265	1	107	209	—	—	—	3	43	57	—	—	—
Lebanon															
Additions:	3	5	6	—	—	—	—	—	—	3	5	6	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	−12	−54	−86	—	—	—	—	—	—	−12	−54	−86	—	—	—
Saudi Arabia															
Additions:	1	3	3	—	—	—	—	—	—	1	3	3	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	−4	−15	−19	—	—	—	−2	−3	−4	−1	−3	−6	−1	−9	−9
Sub-total Western Asia															
Additions:	12	187	309	1	107	209	—	—	—	11	79	100	—	—	—
of which: new deliveries	4	143	254	1	107	209	—	—	—	3	36	45	—	—	—
Net additions	−19	−16	−28	1	107	209	−5	−105	−197	−13	−8	−30	−2	−10	−10

TABLE IV *(continued)*

Flag of registration	All ships			of which: Tankers			Bulk carriers			Freighters			Others		
	Number	Grt	Dwt	Number	Grt	Dwt	Number	Grt	Dwt	Number	Grt	Dwt	Number	Grt	Dwt
9.2 Southern and Eastern Asia															
Burma															
Additions:	2	15	18	—	—	—	—	—	—	2	15	18	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	—	4	2	—	—	—	—	—	—	—	4	2	—	—	—
India															
Additions:	13	218	360	2	59	105	2	92	161	9	67	95	—	—	—
of which: new deliveries	9	189	318	1	48	88	2	92	161	6	49	69	—	—	—
Net additions	2	155	262	2	59	105	2	92	161	−2	4	−3	—	—	—
Indonesia															
Additions:	3	25	32	—	—	—	1	18	22	2	6	9	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	−7	−36	−54	−2	−19	−29	1	18	22	−6	−35	−48	—	—	—
Republic of Korea															
Additions:	13	54	83	4	12	18	—	—	—	9	42	65	—	—	—
of which: new deliveries	5	30	46	1	3	5	—	—	—	4	26	41	—	—	—
Net additions	8	34	53	4	12	18	—	—	—	4	22	35	—	—	—
Malaysia															
Additions:	2	15	21	—	—	—	—	—	—	2	15	21	—	—	—
of which: new deliveries	1	11	14	—	—	—	—	—	—	1	11	14	—	—	—
Net additions	2	15	21	—	—	—	—	—	—	2	15	21	—	—	—
Maldives															
Additions:	5	15	21	—	—	—	—	—	—	5	15	21	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	4	13	18	—	—	—	—	—	—	4	13	18	—	—	—
Pakistan															
Additions:	8	67	93	—	—	—	—	—	—	7	57	88	1	9	5
of which: new deliveries	1	9	13	—	—	—	—	—	—	1	9	13	—	—	—
Net additions	4	41	56	−1	−11	−16	—	—	—	4	43	67	1	9	5
Philippines															
Additions:	18	79	106	5	22	32	1	11	18	10	33	49	2	14	8
of which: new deliveries	9	39	61	—	—	—	1	11	18	8	28	43	—	—	—
Net additions	3	15	14	5	22	32	1	11	18	−4	−27	−41	1	9	5
Singapore															
Additions:	34	176	252	6	56	87	3	23	32	24	91	128	1	5	5
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	30	164	233	6	56	87	3	23	32	20	79	109	1	5	5
Thailand															
Additions:	5	20	31	—	—	—	—	—	—	5	20	31	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	3	7	13	—	—	—	—	—	—	3	7	13	—	—	—
Sub-total southern and Eastern Asia															
Additions:	103	684	1,018	17	149	242	7	144	233	75	363	525	4	28	18
of which: new deliveries	25	279	452	2	52	93	3	103	179	20	124	180	—	—	—
Net additions.....	49	414	619	14	119	197	7	144	233	25	127	173	3	24	15
TOTAL ASIA															
Additions:	115	871	1,327	18	256	451	7	144	233	86	442	625	4	28	18
of which: new deliveries	29	422	706	3	159	302	3	103	179	23	160	225	—	—	—
Net additions.....	30	398	591	15	226	406	2	39	36	12	118	143	1	14	5
10.1 Northern Africa															
Algeria															
Additions:	2	9	12	1	5	6	—	—	—	1	4	6	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	2	9	12	1	5	6	—	—	—	1	4	6	—	—	—

TABLE IV *(continued)*

Flag of registration	All ships			of which: Tankers			Bulk carriers			Freighters			Others		
	Number	Grt	Dwt	Number	Grt	Dwt	Number	Grt	Dwt	Number	Grt	Dwt	Number	Grt	Dwt
10.1 Northern Africa															
Egypt (Arab Republic of)															
Additions:	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	−4	−15	−22	−1	−10	−16	—	—	—	−1	−1	−3	−2	−3	−3
Morocco															
Additions:	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	−4	−17	−26	—	—	—	—	—	—	−4	−17	−26	—	—	—
Tunisia															
Additions:	1	3	4	—	—	—	—	—	—	1	3	4	—	—	—
of which: new deliveries	1	3	4	—	—	—	—	—	—	1	3	4	—	—	—
Net additions	—	−1	−3	—	—	—	—	—	—	0	−1	−3	—	—	—
Sub-total northern Africa															
Additions:	3	12	16	1	5	6	—	—	—	2	7	10	—	—	—
of which: new deliveries	1	3	4	—	—	—	—	—	—	1	3	4	—	—	—
Net additions.....	−6	−24	−39	—	−5	−10	—	—	—	−4	−16	−26	−2	−3	−3
10.2 Western Africa															
Ivory Coast															
Additions:	4	26	39	—	—	—	—	—	—	4	26	39	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	4	26	39	—	—	—	—	—	—	4	26	39	—	—	—
Nigeria															
Additions:	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	−1	−6	−9	—	—	—	—	—	—	−1	−6	−9	—	—	—
Senegal															
Additions:	1	2	3	1	2	3	—	—	—	—	—	—	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	1	2	3	1	2	3	—	—	—	—	—	—	—	—	—
Sub-total western Africa															
Additions:	5	28	42	1	2	3	—	—	—	4	26	39	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions.....	4	23	32	1	2	3	—	—	—	3	21	30	—	—	—
10.3 Eastern Africa															
Madagascar															
Additions:	—	—	—		—	—	—	—	—	—	—	—	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	−1	−7	−10	—	—	—	—	—	—	−1	−7	−10	—	—	—
Somalia															
Additions:	32	200	290	1	11	16	—	—	—	29	180	265	2	9	8
of which: new deliveries	2	20	28	—	—	—	—	—	—	2	20	28	—	—	—
Net additions	23	155	224	1	11	16	—	—	—	20	135	199	2	9	8
United Republic of Tanzania															
Additions:	1	5	9	—	—	—	—	—	—	1	5	9	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	1	5	9	—	—	—	—	—	—	1	5	9	—	—	—
Sub-total eastern Africa															
Additions:	33	205	299	1	11	16	—	—	—	30	185	274	2	9	8
of which: new deliveries	2	20	28	—	—	—	—	—	—	2	20	28	—	—	—
Net additions.....	23	153	223	1	11	16	—	—	—	20	133	199	2	9	8
TOTAL AFRICA															
Additions:	41	246	357	3	18	25	—	—	—	36	219	323	2	9	8
of which: new deliveries	3	23	32	—	—	—	—	—	—	3	23	32	—	—	—
Net additions.....	21	151	217	2	7	9	—	—	—	19	138	203	—	6	5

TABLE IV *(continued)*

Flag of registration	All ships			of which: Tankers			Bulk carriers			Freighters			Others		
	Number	Grt	Dwt	Number	Grt	Dwt	Number	Grt	Dwt	Number	Grt	Dwt	Number	Grt	Dwt
11.1 Caribbean															
Cuba															
Additions:	4	32	43	1	13	20	—	—	—	3	19	23	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	3	22	32	1	13	20	—	—	—	2	9	11	—	—	—
Dominican Republic															
Additions:	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	−1	−3	−4	—	—	—	—	—	—	−1	−3	−4	—	—	—
11.2 Central America															
Honduras															
Additions:	3	18	17	—	—	—	—	—	—	3	18	17	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	−1	11	5	−1	−1	−2	—	—	—	—	12	7	—	—	—
Mexico															
Additions:	2	5	5	1	3	3	—	—	—	1	2	2	—	—	—
of which: new deliveries	1	3	3	1	3	3	—	—	—	—	—	—	—	—	—
Net additions	−4	−23	−37	−1	−18	−30	—	—	—	−3	−4	−7	—	—	—
Nicaragua															
Additions:	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	−1	−4	−6	—	—	—	—	—	—	−1	−4	−6	—	—	—
Sub-total Caribbean and Central America															
Additions:	9	56	66	2	16	23	—	—	—	7	40	43	—	—	—
of which: new deliveries	1	3	3	1	3	3	—	—	—	—	—	—	—	—	—
Net additions	−4	2	−11	−1	−7	−12	—	—	—	−3	9	1	—	—	—
11.3 South America northern seaboard															
Venezuela															
Additions:	5	19	25	1	4	5	1	3	4	3	12	15	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	2	11	13	1	4	5	0	1	2	1	6	7	—	—	—
Sub-total South America northern seaboard															
Additions:	5	19	25	1	4	5	1	3	4	3	12	15	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	2	11	13	1	4	5	0	1	2	1	6	7	—	—	—
11.4 South America western seaboard															
Chile															
Additions:	9	104	166	1	35	58	—	—	—	8	69	108	—	—	—
of which: new deliveries	6	50	81	—	—	—	—	—	—	6	50	81	—	—	—
Net additions	−1	65	109	1	35	58	−3	−9	−3	2	45	74	−1	−6	−0
Colombia															
Additions:	2	7	11	—	—	—	—	—	—	2	7	11	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	2	7	11	—	—	—	—	—	—	2	7	11	—	—	—
Peru															
Additions:	5	42	60	—	—	—	1	4	6	4	38	55	—	—	—
of which: new deliveries	3	28	41	—	—	—	—	—	—	3	28	41	—	—	—
Net additions	−1	−2	0	—	—	—	1	4	6	−1	—	1	−1	−5	−7
Sub-total South America western seaboard															
Additions:	16	152	238	1	35	58	1	4	6	14	114	174	—	—	—
of which: new deliveries	9	79	122	—	—	—	—	—	—	9	79	122	—	—	—
Net additions	—	70	119	1	35	58	−2	−5	−8	3	52	86	−2	−12	−17

TABLE IV *(concluded)*

Flag of registration	All ships			of which: Tankers			Bulk carriers			Freighters			Others		
	Number	Grt	Dwt	Number	Grt	Dwt	Number	Grt	Dwt	Number	Grt	Dwt	Number	Grt	Dwt
11.5 South America eastern seaboard															
Argentina															
Additions:	11	121	190	4	54	84	4	50	85	3	17	21	—	—	—
of which: new deliveries	4	16	26	2	6	9	1	7	13	1	3	3	—	—	—
Net additions	4	91	149	3	51	79	2	34	61	0	10	10	−1	−4	−1
Brazil															
Additions:	17	228	343	1	10	14	3	134	234	13	84	94	—	—	—
of which: new deliveries	12	203	305	1	10	14	2	120	209	9	73	81	—	—	—
Net additions	−27	−1	3	−6	−47	−72	3	134	234	−21	−70	−130	−3	−18	−28
Uruguay															
Additions:	2	10	12	—	—	—	—	—	—	2	10	12	—	—	—
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	0	2	−2	—	—	—	—	—	—	0	2	−2	—	—	—
Sub-total South America eastern seaboard															
Additions:	30	359	545	5	64	98	7	184	319	18	111	128	—	—	—
of which: new deliveries	16	219	331	3	16	23	3	127	223	10	76	84	—	—	—
Net additions	−23	92	150	−3	4	7	5	169	295	−21	−58	−122	−4	−22	−29
TOTAL LATIN AMERICA															
Additions:	60	586	873	9	119	185	9	191	329	42	276	360	—	—	—
of which: new deliveries	26	301	456	4	19	26	3	127	223	19	155	207	—	—	—
Net additions	−25	176	273	−2	36	58	3	164	289	−20	9	−28	−6	−34	−47
12. Oceania															
Nauru															
Additions:	2	19	20	—	—	—	—	—	—	—	—	—	2	19	20
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	2	19	20	—	—	—	—	—	—	—	—	—	2	19	20
TOTAL OCEANIA															
Additions:	2	19	20	—	—	—	—	—	—	—	—	—	2	19	20
of which: new deliveries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net additions	2	19	20	—	—	—	—	—	—	—	—	—	2	19	20
TOTAL DEVELOPING COUNTRIES AND TERRITORIES ABOVE:															
Additions:	218	1,722	2,577	30	393	661	16	335	562	164	937	1,309	8	57	46
of which: new deliveries	58	746	1,194	7	178	328	6	230	402	45	337	464	—	—	—
Net additions	28	744	1,100	15	270	473	5	203	325	11	266	318	−3	5	−17

Sources: compiled from data regarding additions and deductions to merchant fleets which were made available to the secretariat of UNCTAD by the United States Department of Commerce, Maritime Administration.

[a] Figures regarding the acquisition of second-hand ships, per country, may be obtained by deducting "new deliveries" from "additions". With respect to the countries mentioned hereafter, however, the following "other additions" (see table II, note *c*) should also be taken into account; the figures shown refer respectively to the number of vessels, thousand grt and thousand dwt:

Bulk carriers: Brazil: 1, 14, 25; Peru: 1, 4, 6.
Freighters: Brazil: 4, 11, 13; Colombia: 2, 7, 11; Israel: 1, 3, 4; Kuwait: 3, 32, 42; Korea (Republic of): 1, 1, 2; Mexico: 1, 2, 2; Peru: 1. 9, 14.
Other ships: Philippines: 1, 1, 2.

TABLE V

Selected maximum and minimum tramp rates,[a] 1970 and 1971 [b]

	Commodities/routes	Currency unit	1970		1971	
			High	Low	High	Low
Heavy grain:	United States Gulf—west coast India	U.S. dollars	8.70	7.67½	12.80	—
	North Pacific—east coast India	Sterling	7.12½	5.20	4.50	4.27½
	River Plate—Antwerp/Hamburg range	U.S. dollars	15.75	8.15	9.25	5.00
	River Plate—Japan	U.S. dollars	22.00	13.25	13.00	7.00
Coal:	Hampton Roads—Rio de Janeiro	U.S. dollars	12.25	5.00	4.20	2.70
Sugar:	Mauritius—United Kingdom	Pounds sterling	6.25	4.15	4.15	3.47½
	Philippines—U.S.A.	U.S. dollars	13.50	7.85	11.00	9.25
Ore:	Marmagão—Japan	U.S. dollars	10.30	9.90	6.15	4.10
Copra:	Philippines—Continent	U.S. cents	44.00	37.00	36½	28.00
Phosphate:	Casablanca—Peoples' Republic of China	Pounds sterling	7.40	4.47½	3.90	3.25
	Aqaba—west coast India	Pounds sterling	2.67½	2.55	2.62½	2.15
Rice:	Peoples' Republic of China—Ceylon	Pounds sterling	5.90	4.25	4.47½	3.72½
Fertilizers:	Continent—Peoples' Republic of China (south coast)	Pounds sterling	9.35	6.12½	6.10	3.25

Source: based on information in *Lloyd's List and Shipping Gazette* (London), 4 January 1972.

[a] Approximate.

[b] No deductions have been made for routes which used to be normally operated via the Suez Canal.

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