

STATISTICAL BACKGROUND

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This paper provides a statistical summary of (a) the background of world oil consumption and production (b) estimates of producer revenues, import costs for developed and developing countries, and the financial implications for non-oil-producing developing countries. Under the assumption that masses of data are generally somewhat indigestible tables have been kept as straightforward as possible. Units of measurement have been standardised so that oil is always in barrels, or barrels per day; money is always in current dollars. It is hoped that the outcome allows for a fairly rapid assimilation of the statistical basis underlying many of the arguments to be found in the other contributions to this bulletin.

The background: world energy market; galloping oil demand; uneven pattern of world consumption (Tables 1-4)

A simple arithmetic of growth in world energy demand and supply underlies the current state of affairs. World energy consumption has been growing at a compound rate of some 5.6% per annum throughout the last decade. This corresponds to a doubling time of 13 years. In the last three decades alone man has used up more energy than all previous cumulative usage, and extrapolating current trends this is expected to occur again by 1985.¹ The chief means of meeting the extra annual requirement for energy has been oil: the proportion of oil in total energy consumption growing from 29% in 1950 to over 50% in 1972. (Table 1).

The demand for oil more than doubled between 1950 and 1960, and then doubled again from 1960 to 1970 (compound growth rate in each decade of 8%). Consumption rose from 9.7 million barrels per day in 1950 to 51.3 million by 1972. (Table 2). There was a further rise of 11.3% in the first nine months of 1973 over the corresponding period of 1972. Given world proven reserves of 672 billion barrels in

¹ Jahangir Amuzegar. *The Oil Story: Facts, Fiction and Fair Play. Foreign Affairs*, July 1973.

STATISTICAL BACKGROUND

1973 and assuming no further discoveries, supplies would be exhausted at *current growth rates of consumption* in little over 30 years. Of course there will be new discoveries, and the rate of growth of consumption may slow down as a consequence of recent events, but the broad magnitudes of these trends nevertheless have important implications.

As might be expected, both the level and growth rates of oil consumption are grossly unevenly distributed across the face of the globe. North America consumes 34% of the world total (63% in 1950); Western Europe 26% (12½% in 1950); and Japan 9% (negligible in 1950). Asia, Africa and Latin America with 70% of the world's population consumed only 13% of total consumption in 1972 – a proportion which has fallen slightly since 1950 (14%) (Table 3). The most startling rates of increase in consumption accrue to Japan, followed by Western Europe; the former indulging in an increase of some 9000% between 1950 and 1970 (Table 2).

The order of magnitude of these inequalities in the distribution of consumption is confirmed with respect to the use of petroleum products (Table 4). North America with 6% of the world's population has an annual *per capita* consumption of petroleum of 0.071 b/d. Asia (29% of population) and Africa (10% of population) have annual *per capita* consumptions of 0.0024 and 0.0022 b/d respectively. North America has one motor vehicle for every two people in its entire population, Asia and Africa have one for every 110 persons and one for 85 persons respectively.

There is more to the colossal increases in oil consumption by the industrialised countries than a rise in volume. The international price of crude oil fell throughout the 1950s and 1960s from \$2.17 per barrel in 1948 to as low as \$1.25 per barrel in 1970. This process occurred as a consequence of production capacity rising at an even faster rate than the immediate increases in consumption; allied to (a) the oligopolistic operations of the oil majors aimed at expanding available markets at the maximum rate; (b) the short-sightedness of consuming countries in acting as if oil were an unlimited resource and basing their notion of its value on short run marginal production cost criteria; (c) the low returns to producer governments. The price of

STATISTICAL BACKGROUND

oil has been below both its own longer term scarcity value in terms of reserve depletion, and the opportunity cost of alternative energy sources: a characteristic which has not only been a significant contributory factor to the rapidity of industrial growth in rich countries, but has also resulted in excessive and inefficient energy use. The outcome is summed up by one writer on the energy situation as follows: "By an economic myopia of incomprehensible dimensions, millions upon millions of energy-gobbling products — from impractically big and fast cars to profligately trivial household gadgets — were allowed to flood the market, only to be replaced by soon by bigger, faster and more power-thirsty models".²

In addition to encouraging inefficient usage, the low price of oil has (a) helped to keep the price of substitutes down, and has therefore dampened research and development of their potential uses, and (b) delayed research into unconventional substitutes.

TABLE 1

Share of oil in the growth of world energy consumption, 1950-1972

per cent

	1950	1960	1970	1972
Oil	29	38	49	52
Natural gas	10	15	20	20
Solid fuels	60	45	29	20
Hydro-electric and nuclear	1	2	2	8
TOTAL	100	100	100	100
Million barrels per day oil equivalent	28.9	42.0	71.1	76.8

Source: Institute of Petroleum, Oil: World Statistics 1973

² Jahangir Amuzegar, *op. cit.*

STATISTICAL BACKGROUND

TABLE 2

Growth in world petroleum product consumption¹ 1950-1970

1,000 barrels per day

Region ²	1950	1960	1970
Middle East	254	578	1,070
Western Europe	1,198	3,846	12,450
North America	6,104	10,529	15,875
Centrally Planned	847	2,920	6,760
Japan	41	664	3,846
Asia	334	827	2,342
Africa	171	355	704
Latin America	741	1,593	2,793
TOTAL	9,690	21,312	46,247

Notes

¹ Consumption includes inland demand for all petroleum products, refinery fuel and loss, bunkers and military consumption where available.

² Western Europe: includes Yugoslavia. Asia: excludes Japan, includes Australia and New Zealand. Latin America: includes Caribbean, with Cuba.

Source: *International Petroleum Encyclopedia 1973*, pp. 268-274.

STATISTICAL BACKGROUND

TABLE 3

Regional distribution of world petroleum consumption 1950-1972
1,000 barrels per day

Region	1950		1960		1970		1972*	
		%		%		%		%
Middle East	254	3	578	3	1,070	2	1,363	3
Western Europe	1,198	12	3,846	18	12,450	28	13,532	26
North America	6,104	63	10,529	49	15,875	34	17,589	34
Centrally Planned	847	8	2,920	14	6,760	14	7,695	15
Japan	41	—	664	3	3,846	8	4,540	9
Asia	334	4	827	4	2,342	6	2,627	5
Africa	171	2	255	2	704	2	867	2
Latin America	741	8	1,593	7	2,793	6	3,168	6
TOTAL	9,690	100	21,312	100	46,247	100	51,381	100

* preliminary

Source: *International Petroleum Encyclopedia 1973*, (cited Table 2)

STATISTICAL BACKGROUND

TABLE 4

World consumption pattern of petroleum products 1971

Region	Population (million)	Petroleum consumption (1,000 b/d)	Petroleum consumption (b/d per capita)	Vehicle population (million)	Vehicles per 1,000 people
Middle East	112	1,259	0.011	1.6	14
Western Europe	358	13,007	0.036	75.7	212
North America	229	16,361	0.071	116.5	509
Centrally Planned	1,174	7,184	0.006	12.0	10
Japan	105	4,179	0.039	17.6	168
Asia	1,076	2,537	0.002	10.0	9
Africa	363	788	0.002	4.5	12
Latin America	287	2,988	0.010	11.6	40
WORLD	3,705	48,303	0.013	249.3	52

Source: *International Petroleum Encyclopedia 1973*

STATISTICAL BACKGROUND

Strategic situation of OPEC: geographical concentration of world reserves; OPEC command of production and international trade.
(Tables 5-7)

While control over a large proportion of current production or international trade is a necessary condition for short-term cartel-type action on world markets, it is control over world reserves which provides the sufficient condition for this action to be maintained in the longer term. By a quite fortuitous accident of geographical location of natural resources the five Persian Gulf countries alone come quite close to satisfying all the conditions for sustaining the OPEC strategy in the long term.

World proven oil reserves stood at 672.7 billion barrels at the beginning of 1973, of which some 53% were located in the Middle East and 16% in North Africa and Nigeria. Total reserves in OPEC member countries are 435 billion barrels or nearly 65% of global reserves (Table 5).

OPEC's long-term strategic position is stronger than this proportion suggests. Most remaining reserves are located in countries with consumption requirements in excess of their maximum actual or potential production rates; and which therefore have to deplete at a rate which gives little room for flexibility with regard to the future. For example, although North America has reserves of 52.8 billion barrels, it is seriously deficient in current production, and at the current rate of depletion (10.9 million barrels per day) will exhaust those reserves in less than 15 years. A similar argument applies to the new reserves very provisionally estimated at 30 billion barrels discovered in the North Sea. If the UK exploits these at the maximum rate (which it is under considerable pressure to do; given its economic weaknesses and balance of payments difficulties) estimated at seven million barrels per day, the reserves would be exhausted in 12 years. Even at a lower rate of three million barrels per day, the known North Sea reserves would run out in 25-30 years. Some Persian Gulf States are altogether in a different situation: at current production their reserves will last for 40-50 years; and (as will become evident further on) they have no great incentive for increasing this production to match industrialised countries' demand.

STATISTICAL BACKGROUND

The unevenness observed in world consumption is matched by an uneven geographical distribution of world production which has increasingly come to favour the potential for a cartel of producing states. The Middle East's share of world production has grown from 17% in 1950 to 37% in 1972, Africa's share from 0.4% to 11%. This corresponds to a fall in the dominance of North America from 53% to 22%. OPEC's share of world production in 1972 was 52.8% (Table 6).

More critical in the short-term than production share has been the growing dominance of OPEC countries in the volume of crude oil entering world trade. The official picture for 1972, which includes quite a high proportion of intra-trade amongst industrialised countries, gives OPEC a 72% share in world oil exports (Table 7). If we ignore the intra-rich country flows (which mainly reflect locations of stocks and refining capacities) the OPEC share of world exports looks more like 90% — a proportion easily high enough to ensure that no retaliatory action in the form of using non-OPEC sources of supply was possible for the consuming countries.

TABLE 5

Distribution of world proven oil reserves 1 January 1973

Area	Billion Barrels	% Share of Total
Middle East	355.3	52.8
Africa	106.4	15.8
Latin America	32.7	4.9
North America	52.8	7.8
Asia and Pacific	14.9	2.2
Western Europe	12.6	1.9
Centrally Planned	98.0	14.6
WORLD TOTAL	672.7	100.0
OPEC	434.6	64.6

Source: *International Petroleum Encyclopedia 1973*; BP Statistical Review of the World Oil Industry, 1972.

STATISTICAL BACKGROUND

TABLE 6

Regional distribution of world crude oil production 1950-1972
1,000 barrels per day

Region	1950		1960		1970		1972	
		%		%		%		%
Middle East	1,756	17	5,278	25	13,951	31	18,658	37
Western Europe	69	0.6	285	1	372	1	374	1
North America	5,487	53	7,580	36	10,894	24	10,982	22
Centrally Planned	860	8	3,266	16	7,812	17	8,750	16
Asia	238	2	546	3	1,360	3	1,889	4
Africa	46	0.4	285	1	6,038	13	5,676	11
Latin America	1,963	19	3,728	18	5,172	11	4,831	9
TOTAL	10,419	100	20,968	100	45,599	100	51,160	100
OPEC	—	—	—	—	23,255	51.0	27,012	52.8

Source: *International Petroleum Encyclopedia 1973*

STATISTICAL BACKGROUND

TABLE 7

International trade in oil 1972
1,000 barrels per day

Area	Exports		Imports	
		% Share of total		% Share of total
Middle East	16,950	56.2	120	0.4
Africa (N & W)	5,390	17.4	130	0.5
Africa (rest) & Asia	1,100	3.6	2,205	7.2
Latin America	3,710	12.5	2,050	3.8
West Europe	325	1.1	14,060	46.4
Centrally Planned	1,260	4.5	380	1.3
USA	225	0.8	4,740	16.2
Canada	1,085	3.5	915	2.9
Japan	—	0.0	4,785	15.7
Others	50	0.4	710	5.6
TOTAL TRADED	30,095	100.0	30,095	100
OPEC	21,668	72.0	—	—

Source: *BP Statistical Review of the World Oil Industry, 1972*

STATISTICAL BACKGROUND

Increase in oil prices: OPEC revenues; oil import costs of rich countries (Tables 8-12)

On 23 December 1973 the OPEC countries meeting in Vienna announced a new posted price of \$11.65 per barrel to come into effect from 1 January 1974 (four times the January 1973 price). This price relates to a *reference quality* oil of Persian Gulf origin (light oil 34° API) and is based on a revenue per barrel objective of \$7.00. The price has since been confirmed for two further periods of three months from 1 April, and from 1 July 1974.

The posted price is a “shadow” price used by oil exporters as a basis for computing government revenues (royalties and taxes). The structure of international market prices implied by the \$11.65 level therefore depends primarily on two considerations (a) an absolute floor to the market is provided by the tax paid cost of crude oil to the petroleum companies. With an average tax of about \$7.50 per barrel (taking into account different qualities of Persian Gulf crudes); and production and internal distribution costs to oil companies of \$0.68 per barrel, this implies an average fob price of about \$8.18 in the Persian Gulf; (b) account should also be taken of the differential qualities of alternative oil sources (for instance the Libyan equivalent of the above posted price is \$15.768 per barrel).

The success of some OPEC members in obtaining much higher prices than this in the period November 1973 to February 1974 reflected immediate shortages in marginal supplies following cutbacks of 4.7 million b/d in the Persian Gulf in October 1973. It also reflected a scramble for supplies by industrial countries uncertain as to whether their basic requirements would be met.

Table 8 contains World Bank estimates of market prices through to 1980. These estimates relate to the reference oil quality (34° API) and are made under quite conservative assumptions (a 6.9% per annum increase in current prices equivalent to a real increase of 1.1% per annum for the medium estimate – the low estimate implies a slight decrease in real terms). These assumptions give a range of between \$10 and \$14 a barrel, with a medium estimate of \$12 a barrel for 1980.

STATISTICAL BACKGROUND

Table 11 gives the World Bank estimates of the revenues which will accrue to OPEC countries as a consequence of the price estimates contained in Table 8. The analysis is dependent on forecasts of the rate at which OPEC will expand production in the next decade (Table 9). The assumptions are made that growth in world energy consumption will slow down to 4.7% compound during the 1970s and 4.2% by 1980. The proportion of oil in this consumption would rise to 61% giving a demand for oil of 70 million b/d in 1980. In order for this demand to be satisfied, OPEC would increase production from 29 million b/d in 1973 to 42 million b/d by 1980. This may be a somewhat optimistic estimate, as virtually the only incentive to increase production in the Persian Gulf is pressure from consuming countries; and in view of the surpluses which will accrue from the current level of prices (provided they can be maintained) it is unlikely that such an incentive will alone carry much weight.

Based on the assumptions at the start of the previous paragraph, revenues are calculated to rise from \$85 billion in 1974 to between \$142 and \$200 billion in 1980. The 1974 figure is slightly less than the \$100 billion figure which was being bandied about by the press earlier in the year, but not sufficiently so to alter the conclusions materially. If it is assumed that Algeria, Nigeria, Indonesia and Venezuela find ready uses for all their surpluses, and further assumed that the Middle Eastern countries will absorb a sum equal to their total 1973 earnings this would still leave a net surplus of some \$40 billion in 1974, which could rise to \$100 billion a year by the end of the decade. A great deal depends on the absorptive capacity of the exporters with small populations, but there are some estimates that accumulated surplus revenues could reach \$450 to \$550 billion by the end of 1980. This may be compared to official international liquidity reserves of \$190 billion in 1973 including gold, SDRs, IMF holdings, and foreign exchange reserves.³

The dimensions of international adjustment posed by these figures in terms of the shift of world economic power are very large. The Middle East could come to control the future organisation of international monetary arrangements (effectively become the world's

³ World Bank estimates.

STATISTICAL BACKGROUND

central banker)⁴. The annual interest alone on the sums involved might reach \$40 to \$50 billion per annum by 1980. However, these considerations do not imply a collapse of existing financial structures, for the governments of Arab countries themselves would suffer should their actions lead to a serious world depression.

There is general consensus amongst the various estimates of the implications of 1974 oil prices for the OECD countries. The additional oil import cost will be of the order of \$51 billion, of which about \$32-\$33 billion will fall on Western Europe; \$10 billion on the USA; and \$9 billion on Japan. In consideration of previous forecasts that the OECD area would have a surplus of \$10 billion in 1974, the net balance of payments deficit is forecast as ranging from \$33 billion to \$40 billion. Such estimates assume an increase in OPEC imports from OECD of \$7 billion which implies a collective OECD deficit vis a vis OPEC of \$44 billion (\$51 minus \$7 billion).

The avoidance of world recession under these circumstances rests heavily on OECD countries reaching agreement on the sharing out of the drop in real living standards implied by the debt. Failure to reach such agreement could lead to a deflationary spiral (successive devaluations, deflations, import controls) as each country tries to throw the burden onto its trading partners. One predictable outcome is that the dollar will revalue against other OECD currencies. This is because of (a) the large proportion of OECD reserves held in dollars; (b) the comparatively small impact of the oil price rise on the USA; (c) the greater attractiveness of US securities to OPEC governments.

⁴ For a more detailed discussion of the financial consequences of the oil price increases see Richard Jolly's paper in this bulletin.

STATISTICAL BACKGROUND

TABLE 8

The evolution of crude oil prices 1955-1974 (with estimates to 1980)

Date	Posted Price ²	Estimated Market Price			% of January 1970 Market Price
	(\$ per barrel)	(\$ per barrel)			
Jan. 1955	1.93	1.93			148
May-June 1957	2.08	1.83			141
Feb. 1959	1.90	1.53			118
Sept. 1960	1.80	1.45			112
Jan. 1970	1.80	1.30			100
Feb. 15, 1971	2.18	1.65			127
Jan. 20, 1972	2.48	1.85			142
Jan. 1, 1973	2.59	2.20			169
Apr. 1, 1973	2.76	2.30			177
June 1, 1973	2.90	2.70			208
Oct. 1, 1973	3.01	2.70-3.10			208/238
Oct. 16, 1973	5.12	3.65			281
		Low	Medium	High	
Jan. 1, 1974	11.65	8.00	8.00	8.00	615
Jan. 1, 1975		8.40	8.65	8.88	
Jan. 1, 1976		8.74	9.27	9.76	
Jan. 1, 1977		9.04	9.88	10.68	
Jan. 1, 1978		9.36	10.53	11.68	
Jan. 1, 1979		9.69	11.23	12.78	
Jan. 1, 1980		10.00	12.00	14.00	

SAUDI ARABIAN LIGHT (34°) CRUDE OIL fob RAS TANURA

Note: The price of crude oil varies according to its specific gravity and quality. The example given here is average for Persian Gulf oil. North Africa produces a generally higher quality oil (higher priced by \$2-3 per barrel). The "posted price" is the price used by oil producers for the purpose of taxation.

Source: *World Bank estimates, January 1974*

STATISTICAL BACKGROUND

TABLE 9

Petroleum exports from OPEC countries 1972-1980

million b/d

Country	Actual		Projected	
	1972	1973	1974	1980
Saudi Arabia	5.82	7.04	7.60	11.34
Kuwait	3.13	3.08	3.12	3.21
Abu Dhabi	1.05	1.40	1.75	3.61
Qatar	0.48	0.49	0.53	0.72
Iraq	1.37	1.81	2.12	3.98
Iran	4.70	5.51	5.80	7.94
Algeria	1.02	1.10	1.10	1.19
Libya	2.19	1.97	2.30	2.65
Nigeria	1.78	1.96	2.19	2.92
Indonesia	0.93	1.11	1.16	1.53
Venezuela	3.30	3.43	3.36	3.24
TOTAL	25.76	28.89	31.04	42.32
Annual growth	1972/73 12.2%	1973/74 7.4%	1974/75 7.8%	1976-80 4.7%

Assumptions: (a) World energy consumption to slow down from 5.5% compound in the 1960s to 4.7% compound in 1970s and 4.2% by 1980.

(b) Oil now representing 57% of world energy consumption (excluding the centrally planned economies) to grow to 61% by 1980.

Source: *World Bank estimates, January 1974*

STATISTICAL BACKGROUND

TABLE 10

Estimated OPEC government revenues per barrel; 1972-1980¹
US \$

Country	Actual			Projected		
	1972	1973	1974	1980		
				Low	Medium	High
Saudi Arabia	1.40	1.19	6.99	8.75	10.47	12.18
Kuwait	1.40	1.89	6.97	8.71	10.43	12.15
Abu Dhabi	1.40	2.03	7.50	9.38	11.19	13.00
Qatar	1.40	1.99	7.28	9.06	10.85	12.64
Iraq	1.60	2.21	7.61	9.38	11.50	13.61
Iran	1.41	1.90	7.06	8.83	10.57	12.30
Algeria	1.83	2.74	9.26	10.88	13.16	15.43
Libya	2.12	3.07	9.15	10.90	13.24	15.58
Nigeria	1.84	2.72	8.70	10.60	13.30	16.00
Indonesia	1.45	1.97	5.06	4.25	5.27	6.29
Venezuela	1.60	2.30	8.17	10.20	12.23	14.25

¹ Based on the prices in Table 8, taking into account adjustments for differing qualities of oil.

Source: *World Bank estimates, January 1974*

STATISTICAL BACKGROUND

TABLE 11

Estimated OPEC government revenues, 1972-1980
US \$ million

Country	1972	1973	1974	1980		
				Low	Medium	High
Saudi Arabia	2,988	4,915	19,400	36,300	43,450	50,550
Kuwait	1,600	2,130	7,945	10,250	12,250	14,300
Abu Dhabi	538	1,035	4,800	12,400	14,750	17,150
Qatar	247	360	1,425	2,400	2,900	3,350
Iraq	802	1,465	5,900	13,650	16,750	19,800
Iran	2,423	3,885	14,930	25,650	30,700	35,750
Algeria	680	1,095	3,700	4,750	5,750	6,700
Libya	1,705	2,210	7,990	10,550	12,850	15,100
Nigeria	1,200	1,950	6,960	11,350	14,250	17,100
Indonesia	480	830	2,150	2,400	2,400	3,500
Venezuela	1,933	2,800	10,010	12,100	14,500	16,900
TOTAL	14,515	22,675	85,210	141,800	171,100	200,200
Compound Annual Growth:	1972/73 56.2	1973/74 275.8		1975-80 7.9	1975-80 11.3	1975-80 14.2

Assumptions: The revenue per barrel estimates of Table 10 and the exports production estimates of Table 9.

Source: *World Bank estimates, January 1974.*

STATISTICAL BACKGROUND

TABLE 12

*The oil cost and balance of payments consequences for OECD countries
1974*

\$ billion

Country	1973 Balance of Payments (estimated)	1974 Additional import costs	1974 Balance of Payments forecast range	Reserve holdings end 1973
US	+1.5	-10.5	- 0.5 to - 3.0	14.4
Canada	-0.6	-	-	5.8
Japan	-	- 9.5	-7.5	12.2
UK	-3.7	- 4.5	- 7.5 to - 9.0	6.5
France	+0.4	- 5.0	-3.5	8.5
Germany	+3.8	- 5.5	0.0 to - 1.0	33.1
Italy	-2.2	- 4.25	- 5.0 to - 6.0	6.4
Others	+4.6	- 12.0	- 8.0 to -11.0	52.9
TOTAL	+3.8	-51.0	-33.0 to -40.0	139.8

Note: (a) Calculations by *The Economist*; 1974 figures described as "guesstimates".

Assumptions: (a) Oil prices to remain at current levels throughout 1974.

Corrections may easily be made: every change of \$ a barrel in the price adds approx. \$10 billion to the total oil bill of OECD countries.

(b) Actual supply will not fall far short of "normal" demand at current prices.

(c) OECD exports to Arab countries will increase by \$7 billion in 1974.

Source: *The Economist*: International Banking Survey, 23 March 1974.

STATISTICAL BACKGROUND

Oil import costs of developing countries 1972-1980: additional import bills; identification of those countries most seriously affected in 1974 and 1975. (Tables 13-16)

In 1974 developing countries will be paying about \$15 billion for their oil imports, of which some \$10 billion is the additional cost above 1973 levels implied by an assumed average cif price of \$8.8 per barrel in 1974, and a continued growth (of over 8%) in the volume of oil imports.

The total bill represents some 20% of projected imports in selected Third World countries in 1974 — a devastating blow to many countries' ability to continue to sustain planned import levels required for development programmes. If the prices and volumes continue to rise, the bill could be some 20% higher in 1975. Depending on the assumptions made (Table 13), these bills will be much higher again in 1980. (Tables 14 and 15).

Both the rates of increase in oil imports needed to sustain growth plans and the ability to finance the additional costs fall most unevenly between countries. In the analysis by country given below, countries have initially been grouped according to whether they are *low income* (under \$200 per capita), *middle income* (\$200-375 per capita), or relatively *high income* (over \$375). Within each group countries have been selected according to a rough assessment of the extent to which their development prospects have been damaged by the recent events in oil and commodity markets. The most important single index has been additional petroleum costs as a proportion of total import bills. Taking into account other factors affecting individual countries, three sets of criteria have been used to identify the most seriously affected countries.

- (i) Per capita income and GNP growth rates as approximate indications of poverty and economic resilience.
- (ii) Dependence on petroleum and petroleum-based imports (esp. fertilisers) as a proportion of total import bills.
- (iii) Financial ability to meet the increased bills taking into account:-

STATISTICAL BACKGROUND

- (a) the direct impact of the increased oil costs on their balance of payments situation in 1974;
- (b) the impact of other price changes on the value of their exports and imports;
- (c) their reserves and debt burden, and their potential for borrowing from normal sources (e.g. IMF) in 1974 and 1975;
- (d) the level of their present receipts of official development assistance in relation to their needs.

The countries chosen for discussion should only be taken as a tentative list of those most obviously and directly affected by a worsening of their foreign exchange positions. It must be emphasised that a number of countries excluded from the selection (because their oil import bills are comparatively small, at least relative to their total imports) may nevertheless face serious difficulties, which would be revealed by a more exhaustive and detailed study of the impact in each developing country. The data relevant to the discussion by country may be found in Tables 15 and 16.

A. Low-income countries seriously affected by the increase in oil prices

(a) *India, Bangladesh, Sri Lanka*

These three countries are the hardest hit of all developing countries by almost any criterion. All three face serious structural adjustment problems and severe disruption of development plans as a consequence of the oil price increases. All three should be considered urgent candidates for any emergency relief plans.

India's imports of oil could well increase fourfold in value between 1973 and 1975 (from \$415 million to \$1,675 million). The forecast rise between 1973 and 1974 alone (about \$720 million) equals 32% of her 1972 imports and about half her foreign exchange reserves. India has also been hit by the increased price of food. In addition her own food production will suffer as a consequence of the increased cost of fertilisers (both imported and home produced). According to World Bank projections India would have an increased financing need of about \$800 million in 1974 over 1973 as a consequence of the oil

STATISTICAL BACKGROUND

price increase, of which a maximum of about \$600 million could be covered by existing loan arrangements, drawing down of reserves, and potential borrowing from IMF and other public loan sources. This would leave an uncovered deficit of over \$200 million. Unless special help is obtained (e.g. under bilateral arrangements with Iran or from the new Special Fund of the United Nations), this implies either very restrictive import policies (with consequent disastrous results on economic growth and the spread of poverty), or a bigger expansion of exports (the scope for which is probably quite limited in the short term).

Bangladesh's oil imports may well increase by \$60 million between 1973 and 1974 (from \$35 million to \$95 million) representing some 13% of total 1972 imports. With an average income per capita of only \$70 and a negative annual growth rate in the last five years, this country has a most severe poverty problem which the increase in oil prices will only exacerbate. Again Bangladesh has also been hit by the price increases in other commodities and food, with the consequence that it faces a forecast increased external need of \$370 million in 1974, with negligible potential for borrowing or drawing down on reserves.⁵

Sri Lanka's oil imports could rise from \$50 million in 1973 to \$150 million in 1974; the increase corresponding to 18% of total imports by value. Again problems are compounded by increases in other commodity prices. The forecast increased external capital deficit (\$93 million in 1974) is staggering in terms of the size of the economy and Sri Lanka needs urgent assistance to cover the gap (approximately \$40 million) between potential borrowings⁶ and the total burden.

(b) *Pakistan* is a borderline case as far as urgent relief is concerned. Although it faces a similarly colossal increase in oil bills (\$180 million in 1974) as its neighbours, the movement in its terms of trade in other commodities has been favourable and it has good reserves.

⁵ World Bank estimates, March 1974.

⁶ *Ibid.*

STATISTICAL BACKGROUND

(c) Kenya, Uganda, and Tanzania are relatively large oil importers in the low-income group and the extra oil cost will impose a heavy burden on their payments situation in 1974 (Kenya: approximately \$60 million; Tanzania: \$35 million; Uganda: \$25 million).

Kenya and Tanzania might just meet their burdens through maximum use of potential borrowing sources in 1974, but face possible heavy deficits in 1975. In addition they are both poor countries which have benefited little from the commodity boom.

(d) Both *Ethiopia* and *Sudan* face large increases in their import bills from the oil price increases (Ethiopia: some \$40 million; Sudan: \$72 million). They are both to some extent borderline cases as far as urgent additional aid needs are concerned — Ethiopia having reasonably healthy exchange reserves in spite of the drought; and the Sudan enjoying higher exchange receipts from her exports of cotton. However *Ethiopia's* position can be expected to deteriorate in 1975, and in view of its low income, the problem of drought and the increased cost of food and fertiliser, its needs will almost certainly be urgent. The Sudan may be expected to receive assistance from other Arab countries.

(e) *Zaire* is a borderline case. Although facing quite a large extra oil burden (\$45 million in 1974) and being a very poor country (per capita income \$90), its balance of payments has been strengthened by the high price of copper, and recent oil finds could ease its situation markedly.

(f) *Small oil importers and least-developed countries*. There are a number of countries whose oil imports, although not large in absolute terms, are quite significant in terms of total imports and GNP (Mauritania, Laos, Afghanistan). In addition for many of the least developed countries the increase in oil prices is compounded by difficulties of drought and the higher prices of food and other commodities. The *Sahelian* countries (Chad, Mali, Niger, and Upper Volta) merit particular attention in these respects.

STATISTICAL BACKGROUND

B. Middle-income countries seriously affected by the increase in oil prices

(a) *South Korea and the Philippines*

These two countries are special cases within the middle-income group. They both face massive increases in oil costs (\$825 million and \$415 million respectively) and are expected to have very large external capital deficits in 1974 (\$580 million and \$730 million respectively)⁷. Although in both cases reserves have been fairly healthy in the immediate past, the size of the oil cost increase goes well beyond the countries' ability to finance them out of reserves or from normal sources of borrowing. In the case of South Korea the implications of this burden must be offset against the tremendous dynamism of the economy, which has seen an average growth rate of 10% between 1965 and 1971, reaching 17% in 1973. It may be possible for this country to offset at least part of the burden through increased prices of manufactured exports. The case of the Philippines is more difficult, though it starts with initially more favourable reserves.

(b) *Thailand* faces a massive increase in oil import costs (\$420 million in 1974) but this is largely offset by very healthy payments and reserves and high potential use of external borrowing facilities.

(c) *Ivory Coast, Senegal, Ghana, Cameroon and Sierra Leone*

The increase in oil costs takes quite a heavy toll of all these countries' balance of payments and reserves, but there are compensating factors in their relative levels of income compared to other African states, and in some cases (for instance, Ghana: cocoa) increases in the price of their exports will tend to compensate for the extra import bills. The Ivory Coast, Cameroon and Senegal are probably in the most difficult position of countries in this group; the former two because of very low reserves and low potential use of further borrowing facilities, the latter with problems of encroaching drought.

(d) *Honduras* is a relatively low per capita income country in the Central American region and faces a heavy import bill in relation both to its total imports and foreign exchange reserves.

⁷ World Bank estimates, March 1974.

STATISTICAL BACKGROUND

In general countries which fall into the middle-income range will suffer setbacks to their economic growth in this decade but are more resilient and have better access to borrowing facilities than low-income countries. There are no cases in this group as urgent as several in the low-income group.

C. Higher-income countries affected by the increase in oil prices

The outlook for countries in the higher income group is generally much less devastating than for any of the preceding cases. Many of the group will either gain directly from the new oil prices (e.g. Peru) or are benefiting from the boom in the prices of other commodities (for example Zambia, Peru and Chile: copper). Brazil stands out as having the most massive increase in oil costs of any developing country (\$1,100 million) but enjoys fast-growing exports of manufactures with substantial reserves and plenty of scope for outside borrowing, at least in 1974. Jamaica may also have quite a severe adjustment problem; though again there is a mitigating circumstance in the value of bauxite exports.

Summary

There are obvious limitations to any attempt to rank countries according to how seriously they have been hurt by the increase in oil prices. All non-oil-producing developing countries will suffer greater or lesser degrees of setback to their development programmes during the decade. The blow is very much softened however for those countries which have made compensating windfall gains from the very large price increases in other commodities and raw materials.

A rough list of those countries *most urgently* in need of special assistance, *ranked according to the criteria given on pages 34 and 35*, would at the least comprise, in the *low income group*: India, Bangladesh, and Sri Lanka as the main priority; followed by Kenya, and Tanzania, which although just being able to finance their own 1974 deficits by maximum external borrowing, do so at considerable jeopardy to debt and payments prospects in 1975 and after; Ethiopia and the Sahelian countries of West Africa (Mali, Chad, Niger, Upper

STATISTICAL BACKGROUND

Volta, Mauritania); Pakistan, possibly Zaire, and possibly some further least-developed countries not discussed in detail here; and in the *middle-income group*: South Korea and the Philippines plus a second set of West African countries (Senegal, Ivory Coast, Cameroon).

TABLE 13

Oil imports, 1972-1974 and perspectives of price and volume for 1980

	Actual			1980 Projected		
	1972	1973	1974	Low	Medium	High
Weighted average cif prices for the 14 countries in table 14. (\$ per barrel)	2.52	3.39	8.77	10.86	13.09	15.33
Volume of oil imports (Million barrels)						
14 selected countries (see table 14)	663	693	774	1,372	1,372	1,372
All developing countries	1,474	1,547	1,696	2,840	2,840	2,840
Value of oil imports as % of total imports	g ^a	8	20			
Annual growth of oil imports, all LDCs (per cent)	1971/72	1972/73	1973/74	1975-80 (p.a.)		
Volume	8.7	5.0	11.6		9.0	
Value	18.6	41.2	183.6	12.5	16.0	19.3

^(a) excludes Bangladesh

Source: World Bank estimates, January 1974. *UN Monthly Bulletin of Statistics*, July 1974 (for total imports 1972)

STATISTICAL BACKGROUND

TABLE 14

Oil imports of selected developing countries 1972-1980

\$ million

Developing countries	Actual			1980 Projected		
	1972	1973	1974	Low	Medium	High
Large developing countries						
India	265	415	1,350	2,600	3,140	3,690
Pakistan	65	85	260	455	545	640
Bangladesh	25	35	95	160	190	225
Selected other countries						
Uruguay	40	60	160	285	345	405
Turkey	150	210	560	1,200	1,415	1,640
Morocco	50	80	215	450	550	650
Ghana	20	25	70	150	180	210
Kenya	25	40	115	230	280	325
Sri Lanka	35	50	150	275	330	385
Philippines	185	265	740	1,340	1,625	1,900
Thailand	125	180	510	980	1,185	1,385
Exporters of manufactures						
Brazil	425	540	1,425	2,925	3,530	4,150
Korea	205	325	1,075	2,600	1,140	3,690
Argentina	55	40	80	430	520	605
14 Selected Countries Sub-total	1,670	2,350	6,805	14,910	17,970	21,030
All Developing Countries	3,715	5,245	14,875	30,815	37,140	43,500

Source: *World Bank estimates, January 1974*. See Table 13 for assumptions.

STATISTICAL BACKGROUND

TABLE 15

Incremental oil import expenditures of developing countries due to effect of price increases since 1970. (a)

\$ million

Developing countries	Actual			Projected 1980		
	1972	1973	1974	Low	Medium	High
Large developing countries						
India	74	203	1,090	2,895	3,600	4,290
Pakistan	18	42	210	385	475	565
Bangladesh	6	15	75	130	165	195
Selected Other countries						
Uruguay	9	25	120	230	290	350
Turkey	32	77	425	960	1,175	1,400
Morocco	10	24	175	375	475	575
Ghana	4	11	55	120	150	180
Kenya	7	18	90	195	240	290
Sri Lanka	9	24	120	230	285	340
Philippines	45	118	580	1,110	1,390	1,665
Thailand	32	83	400	815	1,020	1,220
Exporters of Manufactures						
Brazil	96	222	1,085	2,360	2,965	3,585
Korea	52	148	850	1,155	2,690	3,125
Argentina	11	15	60	335	425	515
14 Selected Countries Sub-Total	405	1,025	5,335	12,295	15,345	18,415
All developing countries	900	2,290	11,635	25,395	31,720	38,080

Note: (a) The incremental expenditure is the difference in price between 1970 and the current year, multiplied by import volume in the current year.

Source: *World Bank estimates, January 1974*. See Table 13 for assumptions.

STATISTICAL BACKGROUND

TABLE 16

A. Data on low-income countries seriously affected by the increase in oil prices

Country	Economic Indicators			Increase in oil bills, 1973/74			Aid receipts 1972	
	(1) Income per capita 1971 S	(2) GNP growth 1965-71 % p.a.	(3) Population 1971 m.	(4) Value S m. (a)	(5) As % 1972 imports	(6) As % of 1971 GNP	(7) Gross DAC aid S m.	(8) Aid per capita S
Bangladesh	70	-0.1	72	54	6	1.1	223	3.1
Sri Lanka	100	1.8	13	60	18	4.8	63	4.8
India	110	2.4	551	723	32	1.2	728	1.3
Pakistan	130	3.0	63	156	22	1.9	365	5.8
Ethiopia	80	1.2	25	42	22	2.1	48	1.9
Zaire	90	3.6	19	45	7	2.6	125	6.6
Tanzania	110	3.3	13	33	8	2.2	62	4.8
Sudan	120	-0.9	16	72	23	3.8	42	2.6
Uganda	130	1.6	10	25	10	1.9	47	4.7
Kenya	160	4.3	12	58	10	3.1	110	9.2

Note: (a) Obtained by multiplying forecast 1974 oil import volume, by assumed 1973/74 price differential of \$6 per barrel

NB: basis of calculation differs from that used in Tables 13-15

Sources: Cois. (1) to (3): *World Bank Atlas 1973*; (4) OECD, April 1974; (5) *IMF International Financial Statistics*; (7) data from OECD, April 1974.

STATISTICAL BACKGROUND

TABLE 16

B. Data on middle-income countries seriously affected by the increase in oil prices

Country	Economic Indicators			Increase in oil bills 1973/74			Aid receipts 1972	
	(1) Income per capita 1971 \$	(2) GNP growth 1965-71 % p.a.	(3) Population 1971 m.	(4) Value \$ m. (a)	(5) As % 1972 imports	(6) As % of 1971 GNP	(7) Gross DAC aid \$ m.	(8) Aid per capita \$
South Korea	290	10.0	32	825	33	9.0	372.5	11.6
Philippines	240	2.7	38	414	30	4.5	169.7	4.5
Thailand	210	4.7	37	420	23	5.4	57.3	1.5
Senegal	250	-1.2	4	21	8	2.1	81.3	20.3
Ghana	250	-2.1	9	54	19	2.4	64.0	7.1
Ivory Coast	330	4.4	5	48	11	2.8	77.5	15.5
Sierra Leone	210	4.7	3	9	7	1.7	11.3	3.8
Cameroon	200	3.7	6	14	5	1.2	98.8	16.5
Honduras	300	1.4	3	23	12	2.9	16.6	5.5

Note: (a) See note to table 16 A.

Sources: See table 16 A.

STATISTICAL BACKGROUND

TABLE 16

C. Data on higher-income countries seriously affected by the increase in oil prices

Country	Economic Indicators			Increase in oil bills 1973/74			Aid receipts 1972	
	(1) Income per capita 1971 \$	(2) GNP growth 1965-71 % p.a.	(3) Population 1971 m.	(4) Value \$ m. (a)	(5) As % 1972 imports	(6) As % of 1971 GNP	(7) Gross DAC aid \$ m.	(8) Aid per capita \$
Brazil	460	5.1	95	1,116	23	2.5	118.4	1.2
Chile	760	2.4	10	210	22	2.8	43.1	4.3
Peru	480	0.5	14	108	14	1.6	40.0	2.9
Dominican Rep.	430	4.7	4	34	9	2.0	28.7	7.2
Mexico	700	2.9	52	150	5	0.4	27.7	0.5
Uruguay	750	0.7	3	107	57	4.9	23.5	7.8
Guatemala	390	2.1	5	35	11	1.7	20.0	4.0
Costa Rica	590	4.5	2	20	5	1.9	16.0	8.0
Panama	820	4.5	1	59	13	4.9	15.9	15.9
Nicaragua	450	1.3	2	33	15	3.5	11.0	5.5
Jamaica	720	3.5	2	72	12	5.3	19.0	9.5
Zambia	380	1.0	4	24	3	1.5	24.8	6.2

Note: (a) See note to table 16 A.

Sources: See table 16 A.