Chapter - IV :

INDIA AND THE OIL CRISIS

Introduction :

For most of the non OPEC developing countries which were net consumers of oil based energy, the October 1973 increase in oil price created convulsions which in the first round were disastrous. Like Japan among the developed countries, India among the developing countries was worst hit by oil war. It is, therefore, India along with Bangladesh and Sri Lanka which was classified by Robert S. McNomara[1], World Bank President as a country worst affected by the increase in the oil prices. Hence, India provides an interesting case study of a country 'most seriously affected' by the oil price hike.

The developed countries were able to finance their large oil deficits through the recycling mechanism. The developing countries on the other hand have not been so fortunately placed, they have neither been in a position to attract Petro-Dollars nor have they increased their sales of goods

1 McNomara R.S. - Address to the Board of Governors, 10th September 1974. Reproduced in - Pendse D.R. "Energy Crisis and its impact on Energy Consumers in Third World - I". Economic and Political Weekly, 19 January 1980.

and services to the OPEC members in a substantial manner.

It too became quite clear that after allowing all the munificence which the oil exporting countries may feel like distributing among their neighbouring and even more distant developing countries, the surplus oil funds would go almost entirely to the oil importing developed countries. So while for the developed oil importing countries as a group, the prospect clearly was that of a current account payments outflow being matched by virtually automatic capital account receipts, the developing oil importing countries could look forward to no such comforting prospect. Hence, the problem of oil price hike is more severe to developing countries as compared to developed countries.

As the surplus oil fund has been transferred mainly to the oil importing developed countries; Prof. I.S. Gulati[2] has pointed out that given (a) the limited import capacity of oil exporting countries and (b) their strong propensity to lend back their surplus earning, directly or indirectly to the developed countries as a group, there existed a real danger of a net transfer of financial resources to be followed by real transfer from the oil importing developing world to the developed world.

2 Gulati I.S.: "Oil Price and Developing Countries". Economic and Political Weekly, 26th April 1975.

India's Balance of Trade :

The direct effect of the oil price increases can be portrayed simply in terms of the impact on the current account of the balance of payments of the country.[3] In order to find out the impact of oil price hike on the balance of payments of a country, it is attempted here to examine India's overall balance of payment position as well as India's balance of payment position with the OPEC countries during 1970-71 to 1978-79. It follows from Table 4.1 that deficit in the balance of trade with the OPEC countries has significantly affected India's overall balance of trade. Though India's foreign trade (Exports + Imports) with OPEC countries accounts for 7 to 18% of the India's total foreign trade during different years under consideration, India's deficit in the balance of trade with the OPEC countries accounts for more than 40% of India's overall deficit in the balance of trade. It should be noted here that during the year 1972-73 and 1976-77, though India had a deficit of Rs.106 crores and Rs.488 crores with the OPEC countries, India had a surplus in its overall balance of trade of Rs.104 crores and Rs.72 crores during 1972-73 and 1976-77 respectively. Moreover, this deficit in the balance of trade with the OPEC countries

3 Rybczynski, T.M.: The Economics of Oil Crisis - The Macmillan Press Ltd., London, 1976.

Table 4.1

Trends in India's Overall Trade Balance and Trade Balance with OPEC Countries

(Rs. crores)

Year	India's overall Trade					India's Trade with OPEC countries					% of India's Trade with OPEC to India's Total Trade	
	Ex-ports	Im-ports	Balance of Trade	% variation over preceding year		Ex-ports	Im-ports	Balance of trade	% variation over preceding year		Exports	Imports
				Ex-ports	Im-pots				Ex-ports	Im-ports		
1	2	3	4	5	6	7	8	9	10	11	12	13
1970-71	1535	1634	- 99	8.6	3.3	99	126	- 27	-	-	6.4	7.7
1971-72	1608	1825	- 217	4.8	11.3	76	182	-106	-23.2	44.4	4.7	10.0
1972-73	1971	1867	+ 104	22.6	2.3	94	200	-106	23.7	9.9	4.8	10.7
1973-74	2523	2955	- 432	28.0	58.3	187	532	-345	98.9	166.0	7.4	18.0
1974-75	3331	4519	-1188	32.0	52.9	507	1100	-593	171.1	106.8	15.2	24.3
1975-76	4043	5265	-1222	21.4	16.5	629	1165	-536	24.1	5.9	15.6	22.1
1976-77	5146	5074	+ 72	27.3	-3.6	709	1197	-488	12.7	2.7	13.8	23.6
1977-78 P	5404	6025	- 621	5.0	18.7	703	1321	-618	- 0.8	10.4	13.0	21.9
1978-79 P April-October	2972	3613	- 641	-5.9	4.6	400	781	-381	- 0.5*	39.5*	13.5	21.6

P = Provisional * % = of variation over the corresponding period in the preceding year.

Source: Indian Petroleum and Petro-chemicals Statistics, 1978-79.
Department of Petroleum, Ministry of Petroleum Chemicals and Fertilizers, Govt. of India.

accounts for 80% and 99.5% of India's overall deficit during 1973-74 and 1977-78 respectively. During the year 1974-75, 1975-76 and 1978-79, the deficit with the OPEC countries accounted for 49.9%, 43.6% and 59.4% of total deficit respectively. Hence, it may be said that India's overall balance of trade was severely affected by the deficit in the balance of trade with the OPEC countries which is the consequence of the increase in the oil price at a tremendous rate.

India's Trade with OPEC Countries :

Here, it is also essential to examine the trend in the share of India's foreign trade with OPEC countries in total Indian Foreign trade. In real terms, our import of crude oil and petroleum products has increased only by 18.69% between 1972-73 to 1978-79, but in money terms this has increased by 709.86% during 1972-73 to 1978-79. This increase in the import of crude oil and petroleum products in money terms has been responsible for increase in the share of Indian imports from the OPEC countries in total Indian imports. This share has increased from 10.7% during 1972-73 to 21.6% during 1978-79 i.e. by 101.87% during the period. In other words at an average annual rate this share has increased by

14.55%. It should be noted here that in order to meet this import bill, Indian government has tried to increase earnings from OPEC countries through exports to the OPEC countries and this has resulted in an increase in the share of India's exports to the OPEC countries in total Indian exports. This share has increased by 181.25% during 1972-73 to 1978-79 i.e. from 4.8% during 1972-73 to 13.5% during 1978-79. In otherwords, we can say that this has increased at an average annual rate of 25.89% during 1972-73 to 1978-79.

Hence it is clearly obvious that the share of India's exports to OPEC countries in total Indian exports was lower during the entire period (i.e. 1972-73 to 1978-79) as compared to imports, share of Indian exports to the OPEC countries in total Indian exports has increased at a faster rate as compared to share of the OPEC countries in total Indian imports.

<u>India's POL Imports as a Proportion of Its Total Imports</u> :

It is also important to examine share of imports of crude oil and petroleum products in total Indian imports over a period of time. In current rupee, this share has more than doubled during 1973-74 i.e. 18.96% as compared to the share in 1972-73 i.e. 7.75% and this share accounts for 26.16%

Table 4.2

Growth of Petroleum Industry in India

('000 Tonnes)

Year	Crude oil production	Petroleum Products production	Petroleum Products Consumption
1	2	3	4
1960-61	448 E	5777	8285
1965-66	3473	9561	12437
1970-71	6822	17110	19135
1971-72	7299	18639	21299
1972-73	7321	17830	22978
1973-74	7189	19495	23574
1974-75	7684	19603	23302
1975-76	8484	20829	23673
1976-77	8898	21432	25396
1977-78	10763	23219	26990
1978-79	11633	24195	29590 P

E - Estimated

P - Provisional

Source: Indian Petroleum and Petrochemicals Statistics, 1978-79. Department of Petroleum, Ministry of Petroleum, Chemicals and Fertilizers, Government of India.

Table 4.3

Imports of Crude Oil and Petroleum Products

Qty - 000 Tonnes
Value - Rs. crores

Year	Products		Crude Oil		Total	
	Quantity	Value	Quantity	Value	Quantity	Value
1955-56[E]	2005	NA	3231	25.7	5236	NA
1960-61	2217	39.8	5709	39.2	7926	79.0
1965-66	2537	40.7	6844	39.6	9381	80.3
1970-71	1084	29.9	11683	106.7	12767	136.6
1971-72	2147	46.9	12951	147.0	15098	193.9
1972-73	3525	60.6	12084	146.4	15609	207.0
1973-74	3584	124.5	13873	416.4	17421	540.9
1974-75	2648	195.0	14016	917.0	16664	1112.0
1975-76	2218	204.3	13624	1051.8	15842	1256.1
1976-77	2624	248.2	14048	1175.9	16672	1424.1
1977-78	2878	304.8	14797	1255.8	17675	1560.6
1978-79	3869	425.6	14657	1250.8	18526	1676.4

E - Estimated

NA - Not Available.

Source: Indian Petroleum and Petrochemicals Statistics, 1978-79, Department of Petroleum, Ministry of Petroleum, Chemicals and Fertilizers, Government of India.

Table 4.4

India's POL Imports As a Proportion of its Total Export Earnings

(Rs. crores)

Year	POL Imports	India's Total Exports	% of POL Imports to total exports
1970-71	137	1535	8.9
1971-72	194	1608	12.0
1972-73	207	1971	10.5
1973-74	541	2523	21.4
1974-75	1112	3331	33.3
1975-76	1256	4043	31.1
1976-77	1424	5146	27.7
1977-78	1561	5404	28.9
1978-79	1650	5544	29.8

Source: Indian Petroleum and Petro-chemicals Statistics, 1978-79. Department of Petroleum, Ministry of Petroleum, Chemicals and Fertilizers, Government of India.

during 1976-77. This is entirely the reflection of the increase in the relative prices of petroleum and petroleum products as compared to other commodities. If we remove the impact of price rise on petroleum and petroleum products and on total imports, the share of petroleum and petroleum products has increased by quite a small amount from 1970-71 to 1976-77. However this share has declined to 9.85% during 1976-77 from 10.09% during 1972-73. Hence, it is obvious that though this share has remained more or less constant in real terms, price hike in petroleum products inflated this share by 200% i.e. 7.75% in 1972-73 to 26.16% in 1976-77 in money term.

It was estimated that by 1978 India's petroleum imports as a proportion of its total export earning will reach to 50%.[4] A glance at Table 4.4 makes it obvious that over a period of time, more and more proportion of India's export earning has been utilized for the payments of oil imports and this share has trebled during 1972-73 to 1978-79. This implies that over a period of time, smaller and smaller proportion of total export earning has been available for the payments of the essential imports.

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4 Bhatia Ramesh: "The Oil Crisis: An Economic Analysis and Policy Imperatives". <u>Economic and Political Weekly</u>, 27th July 1974.

Table 4.5

India's POL Imports As a Proportion of Its Total Imports

Year	Current prices	Constant Prices (1970-71 price level)
1960-61	7.3	0.61
1965-66	4.9	1.42
1970-71	8.3	8.3
1971-72	10.6	6.19
1972-73	7.75	10.09
1973-74	18.96	8.39
1974-75	25.6	6.25
1975-76	23.28	3.12
1976-77	26.16	9.85

Source: 1. Monthly Statistics of Foreign Trade of India, Vol.II: Imports. Directorate General of Commercial Intelligence and Statistics, Government of India.

2. Table 3.2.

Share of Oil in Total Energy Consumption in India :

It is interesting to examine, whether or not, there is an impact of oil price rise on the share of oil in total energy consumption.

As is known, the principal known sources of energy can be divided into two broad and self-explanatory categories.

(1) Non-Commercial: which includes firewood, animal waste, vegetable waste, animal power, wind power and human physical power.

(2) Commercial: which includes coal, crude oil, natural gas, nuclear energy and electricity (hydro and thermal).

(3) Exploratory stage : Solar, geothermal, tidal and fusion.

The Third World as a whole accounts for almost half of the world's population but consumes roughly about 10% of the world's commercial energy. Within the third world, higher income countries (Per capita GNP above $375) consumes 60% of the energy, middle income countries ($200-$375) about 16% and the lower income countries (below $200) the remaining 24%.

The second half of the present century may well be called oil age. In 1950 the world oil consumption was only 650 million tonnes where as by 1973, it had increased to nearly 3000 million tonnes. The reason for this rapid increase in world oil consumption is not far to seek. With the discovery of grant oil fields in the Middle East and the pattern of pricing of oil based on marginal cost of production, oil became the most attractive fuel.

Table 4.6 brings out how the percentage share of different commercial and non-commercial energy changed over the last two decades in the case of India. Inspite of the significant industrialization non-commercial fuels like firewood, animal dung etc. still constitute an important element in the Indian fuel economy. Even in 1976-77, share of commercial fuels is about 55% only. Therefore S. Manoharan[5] has argued "the importance of non-commercial fuels in the national economy has served a good cushion against disastrous effects of oil crisis."

Among the commercial energy, the importance of coal, oil and electricity has changed during the year 1976-77 as against the year 1953-54. During 1953-54 the share of coal in total energy consumption was higher than that of oil, whereas it has reversed during the year 1965-66. But during 1976-77, share of coal in total energy consumption accounts only half of the oil share in total energy consumption.

Manoharan S.: The Oil Crisis - End of an Era. S. Chand & Co. (Pvt.) Ltd., New Delhi, 1974.

Table 4.6

Percentage share of oil in total Energy Consumption in India

	1953-54	1965-66	1976-77
1. Coal	15.4	16.7	13.7
2. Oil	12.8	20.8	26.6
3. Electricity*	4.1	9.9	14.7
4. Firewood	44.2	34.2	29.7
5. Dung	10.0	7.9	6.1
6. Vegetable waste	13.5	10.5	9.2
7. Total commercial (1+2+3)	32.3	47.4	55.0
8. Total Non-commercial (4+5+6)	67.7	52.6	45.0

* In India, the bulk of the electricity is hydro or thermal. Nuclear energy came on the scene only in 1969. At present, out of the total electricity consumption by public utilities of 89.2 by kwh, only 4% is nuclear power. In 1982-83 also, the share of nuclear power would stay at 4% only.

Note: These data are derived from estimates on the basis of million tonnes of coal replacement units (MTCR).

Source: Pendse D.R.: "Energy Crisis and its impact on Energy Consumers in Third World-I", Economic and Political Weekly, 19 January 1980.

Hence, it is obvious that a tremendous price increase of oil has not adversely affected the importance of oil in total energy consumption in India.

Above phenomenon can be explained in terms of the ratio of imports of crude oil and petroleum products to total consumption of crude oil and petroleum products in India.

Indigeneous production of crude oil which rose at a rapid rate between 1961 and 1968, slowed down considerably in latter years. Actually production declined by 2.4% in 1973 and rose by 4.1% to reach 7.5 million tonnes in 1975. Crude oil production has reached to 11 million tonnes in 1978 as against expectation about production of 11 million tonnes in 1976.

During the sixties there was a significant reduction in the dependence on the imported sources of crude from 90% in 1956 to 65% in 1968. Table 4.7 shows that the overall dependence on imported crude and products has declined from 93% in 1951 to 71% in 1973.

As a result of the launching of large scale refinery programme in the fifties, the extent of our dependence on product imports declined from 90% in 1951 to 30% in 1961.

Table 4.7

India : Petroleum Sector : Extent of Dependence on Imports

(Percentages)

	1951	1956	1961	1965	1968	1970	1971	1972	1973
1. Crude Petroleum. Ratio of Crude imports to refinery throughput.	-	90	93	70	65	63	65	63	65
2. Petroleum Products. Ratio of products Imports to net consumption.	90	34	30	24	6	5	10	15	18
3. Total : Ratio of Imports of crude and products to total availability.*	93	93	95	77	67	65	68	68	71

* Total availability is domestic refinery throughput plus imports of petroleum products.

Source: World Bark, India: The Energy Sector, 1975, and Govt. of India, Planning Commission: Draft Fifth Five Year Plan.

Reproduced in 'Oil, International Payments and Reforms, by S.L.N. Simha and D. Hemalatha. Madras Institute For Financial Management and Research. 1975

The next decade shows even further progress in the area of lessening dependence on imported petroleum products. In 1970, imported petroleum products accounts for a very small portion of total consumption, a bare 5%. Overall the performance of the petroleum sector in trying to reduce dependence on imported supplies of crude oil and petroleum products has been remarkable in the first two decades of planning. From 1971 onwards, however, there was a turn for the worse, mainly on account of larger import content in respect of products.

In addition to above mentioned impacts of oil price hike, it has affected the Indian economy in several ways which are as follows :

In October 1973, India's fourth five year plan was coming to a conclusion. A draft of the Fifth Plan was prepared and published and was to be launched in April 1974. But the oil price hike and its effects upset the basis of all calculations on which fifth plan draft was prepared and the process of planning received a serious jolt.

In October 1973, again the inflation fuel was already overheating the world economy. So while India received 22% higher prices for its exports, our overall import prices were up by 46%. Result: The terms of trade slided down by 16% and the balance of trade had a deficit of $508 million.

The rains failed that year and there was acute scarcity of such basic consumption goods like food grains and edible oils. Market prices went souring up, causing considerable hardship to the poorer consumers. But due to the oil price hike, much of the foreign exchange was pre-empted in imports of oil and fertilizers and adequate amount was not available to import these consumption goods. Per capita availability of food grains always low, slided down further 10% and of edible oils by 7% that year.

Indian industry met with a recessionary phase beginning from the latter part of 1974 and investment was stagnant even in 1975. It can not be denied that the after-effects of oil price rise had their share in this.

Quite, a few industries became sick directly as a result of the oil price increase. Among them were the passenger car industry in which an erstwhile seller's market was overnight turned into a buyer's market, mainly because of the very high cost of maintenance in view of the sudden increase in petrol prices. Equally affected were hundreds of electric furnaces, all over the country producing mild steel ingots from scrap. Because of the recession in demand for steel and because of widespread power shortages - both parts of energy crisis - most of these mini steel plants as they are known in India, had to close down. Among other industries hit hard were the commercial vehicles, aluminium, refrigerators, air conditioners, domestic electrical appliances etc.

An increasing number of closed and sick industrial units, reduced profitability of other units (due to recession) and the general increase in consumer prices threw many people out of employment and contributed to strained relations as reflected in the all time high figure of 40 mn man days lost in 1974.

The oil price increase also imposed severe strains on the transport sector in view of the increase in prices of high speed diesel oil used by railways and trucks and increased demand for coal moved by railways. Railway passenger fares had to be put up by 20 to 33 % in 1974-75 and freight rates by 5 to 11 % adversely affecting the weaker sections of the society.

The price of kerosene, used widely by the rural and other poor sections of the society as a fuel for lighting and cooking also went up by 27%, though the government as a deliberate policy had kept this increase at a relatively moderate level. As a result, these consumers, already caught in the cycle of poverty, inflation and unemployment had no option, but to consume less of kerosene and turn back to consuming more of firewoods and dung for direct burning. The firewood crisis was thus indirectly aggravated. No wonder therefore that in September 1974 the World Bank President said "..... The effect of this on the already marginal conditions of life of the poorest 40% within these countries is an appalling prospect." Indeed, it did then look that the end of the tunnel was not in sight.

Beneficial Effects of Price Hike :

The sharp hike in crude oil prices is certainly hurting our economy. But it has had some beneficial effects.[6] First, as never before we have recognised the urgency of stepping up our search for oil both on-shore and offshore. Secondly considerable attention is now being given to fuel efficiency with the objective of getting the optimum energy from every tonne of petroleum products consumed, thereby saving on consumption. Third and not the least important, it is a policy decision now to rely on coal as our main source of energy. There was not that shift in this country as in the industrialized countries from coal to oil as a source of primary energy. But all the same, there was an upward trend in the share of oil. Though obviously the scope for reduction in current oil consumption is very limited, it was essential that we recognized that it is to the abundant sources of coal in this country that we must turn as our source of energy.

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6 Mahatme D.B. : "India's Search for Oil", Commerce Annual Number, 1976.

Policy Measures :

Let us turn to the policy measures adopted by the government to meet the challenge thrown up by the surge in the international crude prices. The strategy of the government has been to employ both positive and negative measures. On the positive side, the main effort has been to step up production both onshore and offshore. On the negative side, the stress has been on the minimisation of consumption through increase in the excise duty, allocation of quotas and encouragement of voluntary restrictions, besides, exploring the possibilities of substituting oil with coal and other sources of energy.