OIL PRICE SCENARIO

5.1. PROLOGUE

A reference is frequently made to the price of oil and its impact on the world economy, balance of payments, standards of living and many other facets of daily life. Oil prices are looked at from different angles by the various parties in the oil game. To the man in the street the price of oil means simply the price at the pump of the petrol which he puts in his car, and he remains largely ignorant that this is only a fraction of the total of oil sales. The final consumer (household or firm) is concerned with the petroleum products in domestic markets; the price of heating oil delivered to plants and houses, the price of road diesel fuel and of furnace oil for factories. But in all these cases the price of oil as it is understood by the ordinary man is the price of an oil product. But what is the oil price? In practice there is no such thing as a single oil price. Prices are negotiated for oil, first as a raw material crude oil and then at different stages as it is transported, refined, distributed and finally marketed as a range of products to customers. Prices can also differ according to the volume purchased and the location. In this respect oil is similar to many other commodities which are converted from raw materials to finished consumer products by industrial processes, with prices at the different stages largely determined by the forces of supply and demand and subject to negotiation by willing sellers and buyers.

Oil differs from most other commodities in two important respects:

a) for historic reasons, because of the integrated character of oil business, there is a widespread character of oil business, there is a widespread belief that the price of oil related products to the customer should immediately and automatically reflect the price of the raw material-crude oil. There is no such expectation in the case of other commodities like tin.

b) because of dominant role of oil in energy supplies, there has been, and still is, considerable government intervention in oil pricing, either by cartelization direct regulation or by taxation.
5.1.1. Posted Price

The price of oil for an oil exporting country, essentially relates to unit revenues whereas the C.I.F. import price matters most for an importing country because of the balance of payments burden. In most public mention of the price of oil, in ordinary news-paper, articles or broadcasting, in international conferences, by statesmen and by academics, what is referred to as the price of oil is not truly a price it is the 'posted price' which for many has simply been a reference value. According to the OPEC Annual Statistical Bulletin posted or tax reference price is "... the price which was used as the basis for the calculation of royalties and taxes payable to the producer Governments by the oil Companies".

5.1.2. Crude Oil Prices : Meanings

The price at which a shipment of crude oil changes hands is negotiated directly between buyer and seller and depends largely on the prevailing oil market.

Crude oils differ in quality and price differentials between grades have traditionally reflected the yield characteristics and the cost of transport from the source to the major refining and marketing centers. Seasonal and other market factors can widen or narrow such differentials. In general, lighter crudes command a premium over heavy grades because, when refined, they yield more gasoline and other high value components. Other relevant quality characteristics are the levels of undesirable elements such as sulphur and whether a crude is particularly valuable as a feedstock for specialties such as lubricants or bitumen. During the past few years many refiners have invested in processing crude oils, even for speciality purpose. Consequently, crude oil differentials have tended to become less clearly defined.

5.1.3. Term Prices

A number of published pricing systems have been used to indicate prices at which seller are willing to sell crude oil on a continuing basis (See Table 5.1).

Throughout the 1950s and 1960s, crude oil production was largely owned by the major International Oil Companies and absorbed within their integrated systems and supported by exchange deals between Companies. Trading with third parties was a minor activity and took place under long term contracts at posted prices quoted by these Companies. Nationalization
of Oil concessions, particularly in OPEC Countries, introduced new pricing mechanisms. *Government Selling Prices* (GSPs), later known as *Official Selling Prices* (OSPs), were established. In OPEC Countries these had largely replaced posted prices by 1974, and subsequently in many non-OPEC Countries. OSPs at the loading port in the country of origin are now the basis of most term contracts.

*(TABLE 5.1)*

**TERM AND SPOT PRICES**

<table>
<thead>
<tr>
<th>TYPE OF TRADE</th>
<th>PRICE VARIANTS</th>
<th>CHARACTERISTICS</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TERM SALES</strong></td>
<td>FIXED PRICES</td>
<td>Delivery period, price, quality and place of delivery fixed by contracting parties for continuing supplies</td>
<td>Traditional contracts; Pre-1973 through posted prices, since then GSP/OSP related.</td>
</tr>
<tr>
<td></td>
<td>SPOT RELATED PRICES</td>
<td>As above, except that the final price is determined by the prevailing spot prices according to a mutually agreed price formula.</td>
<td>Increasingly used from early 1980s.</td>
</tr>
<tr>
<td></td>
<td>NET-BACK PRICING</td>
<td>The value of a crude oil is determined by deducting the costs of refining/transportation from the spot price of refined products yielded at a specific refinery location.</td>
<td>Used extensively in the period 1985/86.</td>
</tr>
<tr>
<td><strong>SPOT SALES</strong></td>
<td>SPOT PRICES</td>
<td>Term agreed for each cargo by contracting parties.</td>
<td>Flexible trading of physical oil from the point of loading the final destination.</td>
</tr>
<tr>
<td></td>
<td>FORWARD PRICES</td>
<td>Cargoes sold on a spot basis for delivery in the future. The volume of oil traded much greater than the physical oil moved.</td>
<td>Brent crude oil market is a prime example.</td>
</tr>
<tr>
<td></td>
<td>FUTURE PRICES</td>
<td>Agreement to sell or purchase oil at some specified time in the future. Used to hedge risk when oil prices are volatile. Similar to trade in other commodities and currency.</td>
<td>New York Mercantile Exchange (NYMEX), International Petroleum Exchange (IPE) where oil future contracts are traded.</td>
</tr>
</tbody>
</table>


This pricing basis can be adjusted to meet changing market circumstances. However, timely agreement by OPEC Members on the magnitude and grade differentials of an OSP adjustment, and on concurrent changes to individual and collective production volumes, is required.
In practice, collective agreement is difficult to achieve because of individual interests, and external factors such as abnormal weather and lack of information can negate its relevance once attained.

If OSPs do not reflect market changes, or if stability is not achieved at the new OSP levels, then sellers and buyers will tend to negotiate on a short-term 'spot' pricing basis. This will incorporate, in some form, a mutually acceptable premium or discount on the OSP. While not constrained by OPEC's organisational rigidities in setting prices, most non-OPEC countries are still affected by OPEC's influence on the oil market and vice versa. Throughout the early 1980s OPEC attempts to maintain its pricing system were based on limiting production. Different aspirations and financial requirements of individual OPEC Members made it increasingly difficult to sustain this policy. In December 1985, OPEC abandoned production controls and the official price structure in favour of a policy aimed at establishing a 'fair market share' for OPEC oil exports. New term arrangements, known as 'realisation' deals (but also referred to as net-back arrangement), were used increasingly by OPEC producers in 1986 to ensure that individual crude oil grades remained competitive. Crude oil was sold at a price that reflected the value of the products that a refiner could manufacture from the crude oil less a margin for refining and shipping costs, plus an incentive for the customer/refiner.

Prices in these realisation deals were therefore market responsive and, by guaranteeing the refiner a margin, provided an incentive for increased refinery processing levels worldwide. The prospect of uncontrolled volumes of OPEC crude becoming onto an already oversupplied market, with this incentive to refiners, caused a collapse in oil prices to below $10 a barrel.

The steep fall in oil prices and revenues prompted a return by OPEC to a policy of production controls and re-established OSPs. Oil supplies tightened progressively and by June 1987 spot crude oil prices were very close to OSP levels at around $18 a barrel.

5.1.5. Spot Prices

They are determined through numerous open-market transactions between sellers and buyers. Price reports, produced by oil trade publications, are used extensively to track prices. However, price reports indicate what has happened in deals already concluded, and then
possibly on the basis of a relatively small number of transactions. Since the trading of Physical Oil is not done through any formal markets there is no systematic means of collecting and appraising data on trade volumes and prices.

As spot prices became increasingly volatile after 1984, oil companies and traders found themselves subject to greater financial exposure. This led to a growing interest in forward and future markets as a means of reducing, or 'hedging', the risk. Oil traded in this way is often referred to as 'dry' to distinguish it from the physical, or 'wet' oil, actually changing hands. Since the spot price is a free market price, it can be said to reflect market conditions, as distinct from Government Selling price (GSP) which is administered. According to some analysts, "... the contention is that oil producers use the spot price of their crudes as a guide to what the subjectively fixed GSP should be. The greater the degree and speed of response of the GSP to movements in the corresponding spot price, the more dynamic the pricing policy of that particular country is said to be". For instance on 15 January 1979, Norway and UK increased their Government Selling Price in response to rising spot market prices. This marketing dynamism was well in advance of any OPEC Members. Similarly in 1981, the said countries, reduced quickly their GSP in response to a glut market.

5.1.6. **Forward Prices**

They are the prices paid for contracts to supply a particular cargo at some specified time in the future. By using these contracts a buyer or seller can guarantee a price for future delivery. Trading of so called 'paper' barrels, developed initially in informal, unregulated forward markets for Brent crude oil, Russian gas oil, and to a lesser extent, Dubai crude. In more than 95 per cent of these forward transactions traders never handle 'wet' barrels because they involve simply buying and then selling the paper entitlement.

The many transactions for one cargo between the original sellers and the eventual purchaser taking physical delivery are frequently referred to as 'daisy chains'. The number of different parties in *daisy chains*’ cargoes of Brent crude can be traded more than 100 times before final delivery can make it difficult to keep track of the original supplier and destinations of particular forward dated oil shipments.

The forward market in Brent crude oil has a limited number of participants because the risks in trading lots of 6,00,000 barrels worth over $10 million are large. Some limitations
of forward markets have been overcome by trading smaller parcels of oil on the floor of regulated exchanges, enabling a wider public to become involved. Formal futures markets have been established by the International Petroleum Exchange (IPE) in London and the New York Mercantile Exchange (NYMEX). Only a very small proportion of the volumes traded in these futures markets is physically delivered.

5.1.7. Futures Prices

They are indicated by screen services using visual display units to flash deal data around the world. Prices can change almost instantaneously and dealers are able to check the prices of these so-called 'electronic' barrels on their screens before making a decision. The growing number of participants are bringing new techniques to oil trading increasing the complexity of the types of deals available.

5.2. MARKET STRUCTURES

A perfect competition is one model of market structure, the other extreme model is that of monopoly. It is generally believed that a monopolist can either set the price or determine output/sale but not both. This is but appropriate as the monopolist has to consider the elasticity of demand for his product. OPEC is not a monopoly in the traditional sense of the term but a cartel, and yet its behaviour can be that of a monopolist for a limited set of purposes. The former Minister of Petroleum and Mineral Resources of the United Arab Emirates Dr. M.S. Al-Otaiba states that "... all are agreed that one of the objectives of OPEC is to stabilize the prices at which crude oil is sold and, of course, to raise them whenever possible". Keeping this statement in mind, OPEC, according to some analysts is seen as being a price fixing cartel. Yet, After years of observation theorizing and inference the sole area of agreement among analysts is the unpredictability of OPEC. According to Okogu, B.E. "... although OPEC has a semblance of a 'cartel' or a collusive oligopoly, and therefore carries a suggestion of a certain absence of competition, this is, in fact, not the case. It is true that there is an OPEC price structure which members try, individually and collectively, to defend. However, by virtue of the fact that members have some control over the fixing of their GSP, the extent to which they have responded to market opportunities under different market conditions gives an indication of the degrees of their dynamism in marketing their crudes."
When more than one but still only a very few firms survive in an industry, the market structure is called 'Oligopoly'. Oligopoly is competition among the few. In other words, "... an oligopolistic market is one in which there are few major competitors, generally not more than six and certainly not more than a dozen, who sell similar or differentiated products. Because there are only a few producers, the competitive actions of one producer can significantly affect the market position of each of the other producers. Therefore, each of the producers must be alert to the actions of each of the others. Entry is generally not blocked; however, because of consumers' attachment to the brand names of the oligopolistic producers and because of the large capital requirement for operating in oligopolistic markets, entry is typically very difficult".9

However, the number of firms in an industry does not conclusively determine how the market functions. While large numbers of firms normally lead to competitive (price-taking) behaviour, under certain circumstances the firms may act as a collective monopolist (cartel). Conversely, a single firm in an industry normally behaves as a monopolist (price-maker), but in certain circumstances may be unable to achieve anything but the competitive outcome. The perfect competitor faces a known product price, while the monopolist faces a known demand curve for his product, after allowing for all the predictable changes that will occur when he varies his price. But the oligopolist faces a demand curve he can only guess at. This makes the oligopoly case very difficult for economist to analyse. The first person to analyse the problem at all rigorously was Cournot in the 1830s.

5.2.1. The Kinked Oligopoly Demand Curve

It is sometimes alleged that oligopolists are less prone than competitive industries to change their prices when cost or demand conditions change (See Graph 5.1).

* A cartel maybe defined as a group of independent firms attempting, Via collusive agreement to behave as a collective monopoly. Each firm in a cartel agrees to produce less than it would under unrestrained competition, the overall effect being to drive the price up so that all in the group will benefit. Cartels can raise prices by cutting firms outputs. But at the higher prices, member firms are motivated to produce even more than at competitive equilibrium. So the more successful the cartel, the greater the incentive to chisel, (cheating among members). In other words, the fundamental problem facing cartels is to stop chiselling and to keep interlopers. For the purpose of the cartel is to raise price above marginal cost., Yet if price is above marginal cost, each firm in the cartel has an incentive to produce more. The cartel does not want it to, since this floods the market and reduces joint profit. But, looking at the matter selfishly, the individual firm wants to have its cake and eat it. It wants to benefit from the existence of the cartel (which raises the price) without being bound by the rules of the cartel. These firms may be called as the free-riders. So ,the cartel, unless it had legal status, would find it difficult to discipline the free- rider. The cartel, also has two main administrative problems: how to set quotas and how to carve up the profit.10
As shown in Graph 5.1 the demand curve has a 'kink' at the point of equilibrium. It is argued that, if the oligopolist raises his price, competitors, will immediately steal his market. For they will keep their prices where they are now, and the oligopolist's product becomes uncompetitive with other close substitutes. On the other hand, if the oligopolist attempts to sell more by cutting its price, then all other firms will respond by meeting the price cut so that the oligopolist will reap only a relatively small increase in sales. Thus his demand curve, as he sees it, is kinked at the point where he is currently operating at point $P$ (i.e., $P^*$ price). This means that his marginal revenue curve (MR) is discontinuous. As the firm's output (X) increases, marginal revenue suddenly falls when $P$ is reached and the demand curve becomes less elastic. The firm is in equilibrium so long as the marginal cost curve (MC) cuts the marginal revenue curve somewhere in the discontinuous interval. So the marginal cost can shift a lot with no change in equilibrium output or price. Similarly the demand curve could shift out horizontally a good distance with no change in equilibrium price, since the kink occurs at the same price. However, theory is incomplete since it does not say anything about how the original ruling price $P$ was arrived at. Some writers have
suggested that it is better to regard oligopolists as firms which are trying to form a cartel but are only being partially successful.\footnote{Crude oil cannot be produced, it is merely extracted, and treating extraction cost as production cost is conceptually wrong. It contains a scarcity rent derived from the price of its substitutes and increases as its scarcity increases.}

5.3. A SOUND OIL PRICING POLICY

Generally, in order to determine a price which is acceptable to both consumers and producers, within and outside OPEC the element of cost must be considered. In the short-to-medium run, costs of production, transportation and marketing must be taken into account. On the other hand, in the long run one must add the cost involved for exploration and development of new reserves, expansion and modernization of downstream sector, refineries, tankers etc. There is also the issue of the 'take-per-barrel', whether it be in the form of company profits, government taxation or returns to production. In almost all the Western Europe Countries, more than two-third of the price of a gasoline is account for by government taxation and the oil Companies' take.

Furthermore, a sound pricing policy must contain flexibility to cope with dynamic elements such as foreign exchange fluctuations and inflation. According to Dr. Subroto, Secretary General of OPEC "... the oil price structure must be flexible enough to cope with the impact of such factors as enhanced environmental awareness, the reorientation of economies in the former Soviet Union and Eastern Europe and vertical integration within the oil industry itself".\footnote{Crude oil cannot be produced, it is merely extracted, and treating extraction cost as production cost is conceptually wrong. It contains a scarcity rent derived from the price of its substitutes and increases as its scarcity increases.}

The pricing policy must also consider the fact that oil is a depletable, non-renewable and irreplaceable source progressively diminished as more of it is extracted. In other words "a barrel of oil lifted today is gone forever". So, OPEC Members, as developing nations, which utilize the oil proceeds to create self-sustaining socio-economic infrastructures supporting their nations after the oil resource is depleted, try to maximize the value of their oil assets through time.

According to some economists, some factors other than the marginal revenue and the marginal cost of producing oil should be considered while taking a price decision. For examples factors like, the absorption capacity of the OPEC Countries, the amount of foreign
currency needed for domestic development projects, the growing elasticity of demand for oil as substitutes are developed and exploited, and the yield of monetary wealth versus the scarcity rent of oil resources.

5.4. CRUDE OIL PRICES IN RETROSPECT

Since World War II, oil prices have been determined under two different regimes. In the 1950s and 1960s, the pricing of crude oil was a result of cartelization of oil under the intricate control of a handful transnational oil Companies known as the 'Seven Sisters': Petroleum Corporations. A primary reflection of which was the 'Posting' of oil prices based on long term contracts. The 'Cartel' or the 'Seven Sisters' which still dominate the international oil industry were:

1. Standard Oil Company of New Jersey (also known as Exxon, Esso, or Jersey).
2. Mobil Oil Corporation (Socony)
3. Standard Oil Company of California (sometimes called SoCal or Chevron)*
4. Gulf Oil Corporation (Gulf)*
5. Texas Oil (Texaco)
6. The British Petroleum Company Limited
7. Royal Dutch/Shell (Shell)**

A high degree of concentration and integration were the main features of the oil industry. The Companies, because of these characteristics, were able to dissociate the price of oil from movements in supply and demand. The highly integrated system was amenable to planning, and as planning achieved, a balancing act, neither gluts nor shortages manifested themselves in the open. In such a situation price determination of oil has perfectly eased fluctuation in the oil prices was prevented. In fact demand variations did occur all the time, but they were transferred to the producing countries. Rises in demand led to increases in depletion rates; drops in demand to reductions in outputs. The Major Oil Companies were able to distribute these fluctuations among various producers. The passivity of oil-exporting countries enabled these companies to operate for many years a highly planned system. This was the golden age of 'administered prices'.

* Chevron and Gulf were merged in 1984.
** Compagnie Francaise des Petroles (CFP) is also treated to be the Eighth major International Oil Company.
By 1968, the Organization of the Petroleum Exporting Countries decided to exercise a complete control over the export of crude oil. Following the participation of OPEC Members in the ownership of firms, Governments received a share in current oil production equal to the proportion of equity held. But, due to lack of marketing and other infrastructural facilities, Governments decided to sell their shares in current oil production to the Company. This introduced a new price concept known as 'Buy Back Price' which was fixed by the OPEC Governments. Later, it was known as 'Government Selling Price', (GSP)\textsuperscript{17}.

A new price regime emerged in the 1970s. The industry divided into sellers and buyers of oil. The sellers, represented by OPEC, inherited from the International Oil Companies the role of price administrator, but they did not take control of the whole system. The era of full integration and balanced planning was over\textsuperscript{18}. Supply and demand were now on separate sides of the divide. Gluts (excess supplies) and shortages (excess demand) could no longer be internalized. They began to manifest themselves openly. Planning and close integration gave way to the emergence of the market.

5.4.1. Tehran Price Agreement

On 14th February 1971, Tehran Price Agreement was signed after prolonged negotiations between a three-man Committee, composed of representatives from Iran, Iraq and Saudi Arabia and representatives of Companies. According to this Agreement which was signed by six Persian Gulf Member Countries (Abu-Dhabi [UAE], Iran, Iraq, Kuwait, Qatar and Saudi Arabia) and twenty-three International Oil Companies, the posted price of the Arabian light (34 API) was adjusted to $2.18 per barrel. In addition further increase of 2.5 per cent annually on account of inflation, full expensing of royalties, elimination of the marketing allowances and an increase in the tax rate to 55 per cent from 50 per cent were agreed upon\textsuperscript{19}. The Geneva Agreement provided an 8.49 per cent increase in the price of Arabian Light to $2.37 per barrel\textsuperscript{20}.

5.4.2. The First Oil Explosion

From 1968-73, the global demand for oil increased by 25 per cent, the new Revolutionary Government in Libya headed by Colonel Gadaffi, came into power, the 1973 Arab-Israel War (Egypt and Syria against Israel) and the subsequent Arab Oil embargo against the United States, led to the 'First Oil Shock'.
In a unilateral move, on 16th October 1973, OPEC Ministerial Committee in Kuwait increased the posted prices to $5.12. On December 23, 1973 the OPEC Ministers, decided to increase the price for Marker Crude to $11.651 - effective from January 1, 1974. This decision was taken in view of the fact that the high rate of inflation and economic boom in industrialized countries made the imports by OPEC Members dearer and thereby led to a sharp decline in the purchasing power of their petrodollars. A further 10 per cent increase in oil prices was announced by the 48th OPEC Conference at Doha as on January 1, 1977. Also, it was agreed to increase the prices by a further 5 per cent to $13.3 per barrel in July 1977.

5.4.3. The Second Oil explosion

The 52nd OPEC Conference, in order to make up a portion of the loss caused by the substantial erosion in the oil revenues, the high rate of inflation and dollar depreciation, decided to adjust the price of oil over the whole period of 1979 as follows:

- As from January 1, 1979 $13.335 per barrel.
- As from April 1, 1979 $13.843 per barrel.
- As from July 1, 1979 $14.161 per barrel.
- As from October 1, 1979 $14.542 per barrel.

However, due to 1) the Revolution in Iran in 1979 and the subsequent oil production policy by the new Government curtailing the oil production by nearly 3.5 million barrels per day and 2) the beginning of Iran-Iraq War in September 1980 led to panic in the oil market and heavy stocking that was initiated by International Energy Agency (IEA) countries. The demand for oil increased despite the rise in price. The stocks accumulated in 1979-80 estimated to have peaked at a certain time at 3-4 billion barrels. These events led to increase in the official prices to $18.00 per barrel in June 1979, and $24.00 per barrel in November 1979. However, the spot price for Saudi Arabian - Light, 34 API, went as high as $40 per barrel in November 1979.

5.4.4. The 1986 Oil Collapse

The demand for oil declined partly due to oil conservation measures adopted by the IEA and also due to rise in oil prices. The oil importing countries went on accumulating huge
quantity of oil. Further, the Official Oil Price (Arabian Light-34 API) soared to $36 per barrel by October 1981. In 1983, destocking of the accumulated oil, pressed the oil price structure downward. This was coupled with glut in the oil market created as a result of increase in oil production by the non-OPEC countries (Norway, North Sea, Mexico and Alaska). There was a $5 barrel reduction in October 1983.

By 1986, the market witnessed the steepest fall in oil prices from $29 a barrel in December 1985 to $9 a barrel in July-August 1986 and stabilising at $15 a barrel in August 1986. The reasons for this steep decline in price were as under:

1) Decrease in world oil demand, especially in the first half of the 1980s
2) The ever-increasing level of non-OPEC oil output, from 24.5 million b/d in 1973 to 31.9 million b/d in 1979 and 37.8 million b/d in 1985. The net increase of 13.3 million b/d in non-OPEC production was shared as follows:

   - OECD: 3.2 Million b/d
   - Former CPEs [especially Ex. USSR & China]: 5.1 Million b/d
   - DCs: 5.0 Million b/d

3) Rising OPEC production to finance their developmental and infrastructural projects.

The Organization of the Petroleum Exporting Countries resorted to emergency production quota limiting to 16 million barrels a day in 1986-88.

On 20 December 1986, the 80th OPEC Meeting decided to approve the recommendation of the Ministerial Committee on Pricing to return promptly to a fixed pricing system at a level of $18 per barrel for OPEC's reference price. Furthermore, in order to defend the OPEC reference price, considering the excessive oil supplies in the market, OPEC reached an agreement to fix the total production for the first and the second quarters of 1987 not exceeding 15.8 million b/d. As a result of this historic decision, the prices staged a strong recovery, reaching with levels equal to and, in some cases, above OPEC's reference price. In 1988, however, excessive supplies of oil, as well as accelerated stock building by the importing countries (especially IEA) combined to threaten the price stability and as a result, the OPEC reference price of $18 was down by some $5-6 per barrel.
5.5. EMERGENCE OF NEW OIL SUPPLIES

5.5.1. The Post World War II Phenomenon

The rapid growth of cheap sources of oil in the Middle East and a few other countries in the world during the period 1945-73 changed the geography of energy production. This group of producing countries dominated the world oil supply and undermined the economic production of other sources of energy in rest of the world. The 'Protectionist Legislation' was a mean by which the energy production of the rest of the world was largely dependent. In spite of such protection against the cheap oil of the Middle East, many pre-existing energy-supply industries (like coal industry in the United Kingdom and Japan) were wound up or drastically reduced their outputs. The energy sources in the industrializing countries of the Third World, due to lack of capital, could not be developed. On the other hand, the United States which had to pass on the higher prices to the end-consumers of energy (coal, oil and natural gas) suffered adverse economic consequences. The US industrial goods in the world market could not compete with Japan and many Western Europe countries which enjoyed "...the cost advantage given to them by their use of low-cost oil imports from the Middle East. Thus, in spite of rise in oil prices in the early 1970s, the United States had to open-up its markets to international oil".

5.5.2. Change in the pattern of world oil supplies

The world oil market witnessed a standard change from 1974 onwards. This structural change was in the pattern of the world oil supplies which was dominated by the International Oil Companies, (majors and big Independents). The share of the International Oil Companies of non-Communist crude oil exports declined from 92 per cent of total supply in 1973 to less than 58 per cent in 1979. On the other hand, as (Table 5.2) indicates, the Organization of the Petroleum...
(TABLE 5.2)
CHANGES IN THE PATTERN OF WORLD OIL SUPPLIES 1973-79

<table>
<thead>
<tr>
<th></th>
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</tbody>
</table>


Exporting Countries' National Oil Companies share rose from merely 8 per cent to more than 42 per cent during the same period. Of the total crude supply at the disposal of the oil companies, 70 to 75 per cent was supplied to their own affiliates and the remaining 25 to 30 per cent sold to third parties.

5.6. DEMAND FOR AND SUPPLY OF OPEC OIL

5.6.1. OPEC as a residual supplier

The conventional methodology for studying future OPEC oil supply and demand is based on the assumption that OPEC oil is a residual supplier of world energy requirements. In other words, "OPEC oil supply is assumed to serve as a residue to fill the gap between the world total energy requirements (which is estimated by assuming a certain rate of economic growth and energy/GNP elasticities and total energy (oil and non-oil) supplies from outside OPEC. The consumers try first to satisfy their total demand for energy by resorting to their own supplies of energy, including petroleum produced in their own countries, before they enter international markets for the purchase of oil offered for sale by oil producing countries. The difference between their demands for energy and their supply constitutes a gap or deficit that should be filled by the importation of energy, mainly from the OPEC Countries. Consequently, the existence of oil availabilities offered by OPEC in sufficient quantities to the world market to fill that deficit of energy is of crucial importance for ensuring the
equilibrium between world, oil supplies from the OPEC countries, are necessary to prevent any scarcity of energy resources in the world market.

The world energy equilibrium would, therefore depend on the relationship between the magnitude of the world energy deficit and the OPEC production capacity. In the case of an abundant excess capacity for supply of OPEC oil, the world energy balance could always be maintained through an upward or downward 'swing' of OPEC output in response to variations in the energy gap. By contrast, in the case of a limited capacity of supply from OPEC, greater demands should mean increasing pressure in the market, which would be reflected in higher prices and, in certain cases, uncontrollable market disruptions.\(^{37}\)

5.6.2. Determinants of OPEC's Production Policy

According to the report prepared by Dr. Fesharaki and his associates who received a research grant from the U.S. Department of energy, to study the impact of lower oil prices on OPEC production capacity, export refineries, and the petroleum trade, the production policies of OPEC Members are determined by the interplay of three major factors of:

I Global demand for oil,
II Physical ceilings (that place a limit on oil production),
III Policy ceilings (curtailment of production for political and economic reasons).

"...at any point in time, one of those three factors weighs heaviest in determining production levels, but it is misleading to suggest that the OPEC nations respond only to oil demands, or, say, only to domestic, economic, and political pressures in deciding production levels."\(^{38}\)

The three factors mentioned above may be examined in detail:

I The World Oil Demand and Market Responses

It is usually believed in the West that OPEC Countries' production and price policies take long-term world oil supply-demand factors into consideration. This however, is not likely to be true, because the decision-making actually, is based on short and medium term consideration. It is the short-term price impact on the world economy that influences the OPEC decisions regarding more or less production of oil. Sometimes, the requirement of foreign exchange influences the decision of OPEC members.
II Physical Ceilings

It refers to physical limits owing to technical reservoir characteristics and production capabilities that place a ceiling on oil production. As far as the Persian Gulf producers and Venezuela are concerned, they have an abundant reserve (with the exception of State of Qatar). This enables them to have a sustainable oil production exceeding 2 million b/d. On contrary, the remaining OPEC Members have relatively small reserves, and therefore lower production capabilities.

According to Dr. Fesharaki, "... if the market softness continues for a prolonged period of time, the physical ceilings will not be a determining factor until the late 1990s. However, if demand picks up, the physical pressures to curtail production might emerge by the early 1990s" 39.

III Policy Ceilings

It refers to curtailment of oil production due to political and economic reasons which is mainly applicable to the Persian Gulf Nations. Each one of these countries place its own limit on production. For example, in Iran, the new Revolutionary Government in 1978-79, placed a restriction on oil production to a ceiling of around 3 million b/d; Saudi-Arabia exercise same limitations (official and unofficial) on oil production. The pre-invaded Kuwait was also following the same policy and ceiling. Similarly, the United Arab Emirates maintain 'allowable' ceilings 40.

5.7. "OIL - THE ENERGY 'SWING' AND OPEC - THE 'SWING' SUPPLIER"

5.7.1. Structural Change in the Global oil Market

OPEC price explosions and pricing policies have led to a structural change in the world oil mix where OPEC'S share in the world oil suppliers shrank. In other words, oil became the energy 'swing' in the world energy balance and OPEC oil became the 'swing' in the world oil supply (See Table 5.3). During the Fifties and Sixties, when the multinational oil companies maintained low level oil prices, oil's share in the world energy balance was steadily increasing at the cost of traditional sources of energy mainly coal. As shown in Table
5.3 out of the total energy supply of 4,045 million tons of oil equivalent in the former non-Communist world (outside the OPEC Nations), 36.5 per cent came from the OPEC oil exports in 1973.

(TABLE 5.3)


[Excluding The OPEC and The Former CPEs Countries]

<table>
<thead>
<tr>
<th></th>
<th>MTOE(^\text{*})</th>
<th>% OF TOTAL</th>
<th>MTOE(^\text{**})</th>
<th>% OF TOTAL</th>
<th>MTOE(^\text{**})</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL ENERGY USE</td>
<td>4045</td>
<td>100</td>
<td>4172</td>
<td>100</td>
<td>4575</td>
<td>100</td>
</tr>
<tr>
<td>IMPORTS OF OPEC OIL</td>
<td>1480</td>
<td>36.5</td>
<td>674</td>
<td>16.2</td>
<td>925</td>
<td>20.2</td>
</tr>
<tr>
<td>OTHER ENERGY IMPORTS(^\text{**})</td>
<td>100</td>
<td>2.5</td>
<td>207</td>
<td>5.0</td>
<td>235</td>
<td>5.1</td>
</tr>
<tr>
<td>INDIGENOUS PRODUCTION OF WHICH:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OIL</td>
<td>760</td>
<td>18.8</td>
<td>1191</td>
<td>28.8</td>
<td>1225</td>
<td>26.8</td>
</tr>
<tr>
<td>NATURAL GAS</td>
<td>765</td>
<td>18.9</td>
<td>741</td>
<td>18.0</td>
<td>800</td>
<td>17.5</td>
</tr>
<tr>
<td>COAL</td>
<td>805</td>
<td>19.9</td>
<td>1076</td>
<td>25.7</td>
<td>1110</td>
<td>24.3</td>
</tr>
<tr>
<td>OTHER</td>
<td>135</td>
<td>3.3</td>
<td>283</td>
<td>6.7</td>
<td>280</td>
<td>6.0</td>
</tr>
</tbody>
</table>

\(^\text{*}\) MTOE = Million Tons Oil Equivalent.
\(^\text{**}\) Oil, Natural Gas and Coal From the Former CPEs Countries.


Data relating to 1988 were taken from same author from his paper "Continuing Long-Term Hydrocarbon’s Dominance of World Energy Markets: An Economic and Societal Necessity ", Paper No. 89-3, December 1989, P. 18.

The production of indigenous oil, gas and coal were then each only a little over half as important as imports of OPEC oil. In 1948, oil exports from the said countries (later known as OPEC Members) had satisfied less than 7 per cent of the non-Communist world’s demands for energy\(^4\).

As a result of the oil price increase between 1973 and 1981 and the increasing uncertainty over the willingness of the OPEC Members to supply sufficient oil to meet the world’s demands for energy most of the countries of the world were encouraged to develop their indigenous production. This decision led to a dramatic fall in the contribution of OPEC oil to world energy supplies from 36.5 per cent in 1973 to almost 16 per cent in 1986, which
later improved to 20 per cent in 1988. OPEC's oil exports in 1988 were little more than gas production in the Western world and well below the contribution from indigenous coal.

Prof. Dr. Peter R. Odell, believes that "... a geographically diffused pattern of energy production is set to continue as long as the price of OPEC oil remains above the cost of producing alternatives and as long as OPEC oil is perceived to be an unreliable source of supply. This remains a strong perception given not only the interruptions from time to time in the flow of oil from OPEC Countries (for example, as a result of the Iran-Iraq War), but also the policy of OPEC deliberately to restrain supplies through the quota system which it first established in 1983 as a means of holding up prices." 43

The shares of coal in the world energy production declined from 60 per cent in 1945 to 30 per cent in 1975. One of the main reasons might be high-cost of coal exploration, largely because of the high price of the main component in overall production costs; viz., labour costs, which account for between 50 and 60 per cent of the total costs of traditional deep-mined coal. However, countries with lower-wage costs (such as India, Taiwan, South Africa and Poland) can produce lower-cost coal both from deep mines and from open-cost coal. The share of oil in the world energy, on the other hand, increased dramatically from 23 per cent to 46 per cent during the same period. Low oil prices prevented technological development towards the utilization of other sources of energy, including natural gas and nuclear power.

However, this trend started to reverse as soon as energy became expensive. Oil, after having reached a maximum of 54 per cent in 1973 was reduced to 50 per cent in 1980 to 39.5 per cent in 1989.

We may now turn to the global demand-supply position of oil in order to evaluate OPEC'S decisions regarding prices and supplies.

5.8. GLOBAL DEMAND FOR AND SUPPLY OF OIL

5.8.1. Post World War II

Most of the petroleum Economists agree that the demand for oil is a function of the price of oil, conservation measures and technology followed by the advanced industrial nations, the cost and efficiency of other (non-oil) substitutes (e.g., coal, nuclear power, gas,
hydro etc.), the global oil accumulation, oil growth in developing countries, energy intensity of GNP, transportation and energy intensive units.

The cheap oil between 1957 and 1973 was a main factor in stimulating the Western Europe's economy which grew rapidly at an average annual rate of over 5 per cent for the Seventeen year period. In 1957, the Continent used only 115 million tons of oil (of which 85 per cent was imported). Fifteen years later in 1972, Western Europe's total oil use was over 700 million tons, of which all except some 20 million tons was imported. 

5.8.2. Efficiency of Fuel Utilization

Following the 'First Oil Shock' of the 70s, the major consumers have directed their efforts, finances and technologies towards reducing their dependence on importing oil in general and OPEC oil in particular. The industrialized countries embarked on extensive investments to increase the efficiency of fuel utilization, with a view to reducing to a minimum, the amount of energy input required per unit of industrial output. These measures resulted in reduction in demand for oil in the Long-run by energy intensive industries like, Steel, Cement and Copper.

The technological changes could be best symbolized by the replacement of gas-guzzling limousines in the United States by smaller and relatively fuel-efficient cars. This indicates that technological responses to oil prices accelerated during periods of rapid price increases. The sudden and unexpected increase in oil prices in 1973 and 1979, no doubt accorded to the OPEC Countries bounties by way of rental incomes over and above what should have been the real price. But this stimulated search for high-energy efficiency and alternate fuels in importing countries which in the long run affected the growth of demand for oil. Thus, growth in oil use in Western Europe first slowed down and then ceased. By the mid-1980s Western Europe's energy use was less than it had been in 1973, and the contribution of oil to total energy supply had fallen back to only about 50 per cent compared with its contribution of almost two-thirds of the total only a decade earlier. Oil use declined in absolute terms from 750 million tons to only a little over 500 million tons.

There was also another motivation for giving greater attention to efficient use of energy, viz., the concern for the environmental impact of both the production and use of energy.
5.8.3. The Oil Intensity

As noticed earlier the demand for oil is also a function of oil intensity. There is a positive relationship between the rate of growth of Gross Domestic Product and the rate of growth of oil consumption. The structural shifts in most industrialized countries from energy-intensive to less energy-intensive industries and the increased share of the service sectors also contributed to the rapid decline in oil intensity.\(^{49}\)

\[\text{TABLE 5.4} \]

OIL INTENSITY

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NORTH AMERICA</td>
<td>1.82</td>
<td>1.50</td>
<td>1.42</td>
<td>1.36</td>
<td>1.38</td>
<td>1.37</td>
<td>1.42</td>
<td>1.39</td>
<td>n.a.</td>
</tr>
<tr>
<td>WESTERN EUROPE</td>
<td>1.82</td>
<td>1.51</td>
<td>1.47</td>
<td>1.42</td>
<td>1.43</td>
<td>1.39</td>
<td>1.38</td>
<td>1.36</td>
<td>n.a.</td>
</tr>
<tr>
<td>OECD PECIFIC</td>
<td>1.63</td>
<td>1.34</td>
<td>1.32</td>
<td>1.15</td>
<td>1.13</td>
<td>1.11</td>
<td>1.17</td>
<td>1.13</td>
<td>n.a.</td>
</tr>
<tr>
<td>OECD</td>
<td>1.79</td>
<td>1.47</td>
<td>1.42</td>
<td>1.35</td>
<td>1.35</td>
<td>1.33</td>
<td>1.36</td>
<td>1.33</td>
<td>1.20</td>
</tr>
<tr>
<td>DCs</td>
<td>2.54</td>
<td>2.42</td>
<td>2.35</td>
<td>2.28</td>
<td>2.26</td>
<td>2.27</td>
<td>2.23</td>
<td>2.19</td>
<td>2.08</td>
</tr>
<tr>
<td>OPEC</td>
<td>1.30</td>
<td>1.76</td>
<td>1.78</td>
<td>1.85</td>
<td>1.91</td>
<td>1.79</td>
<td>1.86</td>
<td>1.88</td>
<td>1.91</td>
</tr>
</tbody>
</table>


Table 5.4 indicates that following the intensive conservation and increased efficiency measures between 1979 to 1984, the oil intensity in OECD countries as a whole was reduced considerably. It has remained almost constant after 1984. According to Olorunfemi, M.A., Director of the Research Division of OPEC, "... that energy conservation and continued energy efficiency cannot increase indefinitely over time, but nor can they be reversed completely. As energy prices fall relative to the capital costs of more energy-efficient investment, the marginal returns to such investments tend to fall, thus reducing the rate of decline of energy and oil intensity. The exact point in the business cycle also affects energy and oil intensity."\(^{50}\)

Since 1973, the character of the international petroleum market has changed. Today, the Western Nations are no longer so dependent on OPEC as they were in the 1970s. The Members of International Energy Agency (IEA) were successful in reducing their requirement
for oil from outside sources from 23.7 million b/d in 1973 (63 per cent of consumption) to 14.9 million b/d (46 per cent of consumption) in 1985. As a result, a wide gap was created between demand and supply with the exception of the developing countries where the low consumption base, extreme lack of flexibility to switch to alternative fuels, and where a decline in oil consumption did not take place, there was a continuous decline in oil demand in the other regions until 1983.

5.8.4. OPEC's Share in The Global Oil Market

On the other hand, the oil industry with its peculiar cost structure featured by high capital intensity and relatively low operating cost had to face competition from a number of non-OPEC new oil exporters like the North Sea Producers, Mexico, Egypt etc.

As Table 5.5 indicates the new oil exporters (non-OPEC) followed the policy of 'production maximization'. They increased their output from nearly 24.5 million b/d in 1973 to 38.3 million b/d in 1988 and 37.4 million b/d in 1989. The net increase of 13.8 million b/d in 1988 was shared by OECD (2.3 million b/d), a large number of developing countries outside OPEC (5.5 million b/d) and the Ex. CPEs (particularly the Ex. USSR and China).

(TABLE 5.5)
WORLD CRUDE OIL PRODUCTION
Million Barrels Per Day

<table>
<thead>
<tr>
<th></th>
<th>1973</th>
<th>%</th>
<th>1979</th>
<th>%</th>
<th>1985</th>
<th>%</th>
<th>1988</th>
<th>%</th>
<th>1989</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD</td>
<td>11.70</td>
<td>21.10</td>
<td>12.70</td>
<td>22.00</td>
<td>14.90</td>
<td>27.90</td>
<td>14.00</td>
<td>24.20</td>
<td>13.10</td>
<td>22.32</td>
</tr>
<tr>
<td>DCs Excluding OPEC</td>
<td>3.20</td>
<td>5.40</td>
<td>5.00</td>
<td>8.00</td>
<td>8.20</td>
<td>15.40</td>
<td>8.70</td>
<td>15.00</td>
<td>8.90</td>
<td>15.10</td>
</tr>
<tr>
<td>Ex. CPEs</td>
<td>9.60</td>
<td>17.30</td>
<td>14.20</td>
<td>22.60</td>
<td>14.70</td>
<td>27.60</td>
<td>15.50</td>
<td>26.80</td>
<td>15.40</td>
<td>26.20</td>
</tr>
<tr>
<td>TOTAL NON-OPEC</td>
<td>24.50</td>
<td>44.40</td>
<td>31.90</td>
<td>50.80</td>
<td>37.80</td>
<td>70.50</td>
<td>38.30</td>
<td>66.10</td>
<td>37.40</td>
<td>63.70</td>
</tr>
<tr>
<td>OPEC</td>
<td>31.00</td>
<td>55.90</td>
<td>38.90</td>
<td>49.20</td>
<td>15.40</td>
<td>29.10</td>
<td>19.60</td>
<td>33.90</td>
<td>21.30</td>
<td>36.30</td>
</tr>
<tr>
<td>TOTAL WORLD</td>
<td>55.50</td>
<td>100.0</td>
<td>62.80</td>
<td>100.0</td>
<td>53.20</td>
<td>100.0</td>
<td>57.90</td>
<td>100.0</td>
<td>58.70</td>
<td>100.0</td>
</tr>
</tbody>
</table>


The OPEC's share in the world crude oil production drastically declined from 56 per cent in 1973 to 29 per cent in 1985 and there after improved to 36 percent by 1989 (See Graph 5.1 -A).
(TABLE 5.6)
WORLD CRUDE OIL RESERVES
(Billion Barrels)

<table>
<thead>
<tr>
<th></th>
<th>1973</th>
<th>%</th>
<th>1979</th>
<th>%</th>
<th>1985</th>
<th>%</th>
<th>1988</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>OECD</td>
<td>64.20</td>
<td>11.10</td>
<td>56.00</td>
<td>8.90</td>
<td>54.20</td>
<td>7.20</td>
<td>50.9</td>
<td>5.1</td>
</tr>
<tr>
<td>DCs Excluding OPEC</td>
<td>30.10</td>
<td>5.20</td>
<td>57.30</td>
<td>9.00</td>
<td>81.70</td>
<td>10.80</td>
<td>94.20</td>
<td>9.50</td>
</tr>
<tr>
<td>Ex. CPEs</td>
<td>65.30</td>
<td>11.20</td>
<td>82.10</td>
<td>13.00</td>
<td>82.80</td>
<td>10.90</td>
<td>83.60</td>
<td>8.40</td>
</tr>
<tr>
<td>TOTAL NON-OPEC</td>
<td>159.60</td>
<td>27.50</td>
<td>195.40</td>
<td>30.90</td>
<td>218.70</td>
<td>28.90</td>
<td>228.7</td>
<td>23.0</td>
</tr>
<tr>
<td>OPEC</td>
<td>420.90</td>
<td>72.50</td>
<td>434.20</td>
<td>69.10</td>
<td>537.00</td>
<td>71.10</td>
<td>762.80</td>
<td>76.70</td>
</tr>
<tr>
<td>TOTAL WORLD</td>
<td>580.50</td>
<td>100.0</td>
<td>631.60</td>
<td>100.0</td>
<td>755.70</td>
<td>100.0</td>
<td>991.50</td>
<td>100.0</td>
</tr>
</tbody>
</table>

This is against the fact that OPEC has dominated worldwide oil resources which registered a level of 771.6 billion barrels in 1989 as compared to that of 420.9 billion barrels in 1973. (See Table 5.6 & Graph 5.2). In other words, the reserves have increased from 72.5 per cent of world proven crude oil reserves to 76.7 per cent whereas the share in the global oil production was reduced considerably.

This tremendous increase in oil reserves has contrasted with the moderate one outside the Organization from 159.6 billion barrels in 1973 to 228.7 billion barrels in 1988. However the Ex. CPEs and non-OPEC developing countries have achieved a successful development in the field of discovering new reserves. These events, forced the Organization of the Petroleum Exporting Countries to greatly reduce its output, leaving substantial idle capacity in OPEC Countries' oil industry. On the other hand, a large-scale decline in OPEC's oil revenues, from a high of $284 billion in 1980 to $127 billion in 1985. This occurred in spite of the scaling down of oil production and maintenance of production quotas by OPEC Member Countries since April 1982.

(Graph 5.2)

(Graph 5.2)

OPEC & NON-OPEC OIL RESERVES

[Bar graph showing oil reserves from 1973 to 1988 for OPEC and non-OPEC countries.]

Source: Table 5.6
In the early 1970s, most analysts anticipated rising demand for oil in the medium and long term. In the early 1980s, forecasters were of the opinion that the demand for oil will either have a continuing fall or there would exist a falling trend in its rate of growth. Since 1986, the demand for oil has been increasing, often at rates which were not foreseen a few years before.

This leads us to the question of the signification of need of reasonable stability in oil markets, not only for OPEC but more so perhaps for the rest of the world.

5.9. STABILITY OF OIL MARKET

"The oil market stability is necessary and of utmost importance to the world in general and to all segments of the interdependent world. Oil price stability, not to be confused with price setting is desirable since it offers opportunities for both producers and consumers to safeguard their national interests and to achieve common objective. Rational and orderly price changes, backed by cooperation between the other groups, would enable oil importers and energy users to pursue a rational energy policy, to plan for their future fuel import bills, and to protect their costly expenditures on domestic sources of energy. Relatively stable prices would also help oil exporters better manage their debt and development obligations.

The industrialized countries have a high stake in a stable market, because most of the finances invested in the development of oilfields around the world flow from banks in those countries. Several of these banks would suffer, while other would face very serious problems in the event of an oil price crash. Similarly, the huge sums of money that have been invested in the development of alternative sources of energy would be money gone down the drain, where very cheap oil to render these alternative uneconomic.

The oil companies, too, would suffer. The companies have invested large sums of money in oilfields around the world, and without a stable market guaranteeing a steady revenue, they would be unable to amortize their investments.

Instability in the oil market has a negative impact on international trade and commerce also. The fall in the purchasing power of oil-producing countries, resulting from a fall in their oil revenues, would adversely affect international trade and aggravate the problem of
unemployment in the industrialized, goods-and-services-exporting countries, with all its associated socio-economic consequences. All this would be in addition to the disastrous situation that would emerge from the inability of oil-producing countries to service their debts owed to banks and governments in the developed nations, in the events of very low oil prices.

Similarly, it is in the interest of non-OPEC countries to join efforts to ensure oil market stability. The policy of production maximization by non-OPEC led to the oil collapse of the 1986.

A situation of significant decline in oil prices would not be conducive to the development of OPEC Member Countries or to world economic recovery. OPEC has been trying to avert such a situation and, in order to achieve this objective it has assumed the responsibility of a 'swing producer' in the world oil trade. On the other hand, market forces should be allowed to freely determine the world supply and demand of energy.

According to Mr. Jahangir Amuzegar, a former IMF Executive Director, "... oil crises and uncertainties about their future occurrence, unquestionably affect long-term energy policies. Government budgets, calculations of industrial and commercial fuel costs, future investments in oil exploration, outlays in petroleum substitutes, and business and public planning in much of the world. For these reasons, the stabilization of the global petroleum market still seems to many to be a desirable worldwide objective." 57

5.10 PRICE CHANGES DURING DIFFERENT PERIODS SINCE THE FIRST OIL SHOCK

5.10.1 OPEC-Induced Price Changes

It is proposed to analyse the OPEC-induced price changes since 1973 in four distinct periods namely 1973-76, 1977-80, 1981-84 and 1985-89 so as to focus on decisions relating to prices and production by OPEC. Each of these periods distinct in so far as specific OPEC policies relating to price stabilization decisions are concerned.

5.10.2 | 1973-1976 | The First Massive Push

The main characteristic of the world petroleum market before the massive upward leap of October 1973 (First Oil Price Shock) was a steady and rapid growth of demand for OPEC
oil. The main reason being, cheap oil price of below $2 per barrel. Had the very high growth rate of consumption of oil during the era of cheap energy continued, the demand for OPEC oil, would have exceeded 50 million b/d.\(^58\). The combination of demand rising faster than supply, the restoration of the legitimate right of oil producing countries over their national resources from the multinational oil companies and increased global concern over resource depletion caused an upward pressure on oil prices\(^59\).

The first price adjustments of 1973/74 demonstrated for first time the relationship between the OPEC’S official (Government Selling Price) and spot (market) prices. Following OPEC’S exercise of market power and an excess demand disequilibrium in oil market, resulted in a substantial rise in the spot price from under $4 per barrel to almost $17 per barrel. Despite, the prolonged negotiation OPEC first agreed to fix the GSP at $4 per barrel, even though some of the Member Countries were insisting to raise the GSP to $16 per barrel which was closer to the prevailing spot price. However, eventually a compromise price of $11.65 per barrel was agreed upon by the Member countries. This was the first time that the Government Selling Prices / official prices of OPEC was fixed considering the market (spot) prices\(^60\).

(GRAPH 5.3)

OPEC & NON-OPEC CRUDE OIL PRODUCTION

(1972-76)

Source: Table 5.7
It was only after the first major price increase in 1973 that the growth of world demand from OPEC oil was arrested both 'behaviourally and technologically' to the higher prices by taking steps which save energy.\footnote{1}

Taking September 1973 OPEC oil production of 32.38 million b/d as a base and comparing average production levels of July-December 1974 with the base, average OPEC crude oil production in July-December 1974 was 29.15 million b/d i.e., some 10 per cent lower than in September 1973. Saudi Arabia and IR Iran together increased their output by 130,000 b/d. On the other hand, Kuwait and Libya alone absorbed almost 74 per cent of the total fall in global demand for OPEC crude.\footnote{2}

The oil consuming countries with a view to generating a surplus in the oil market and creating competition between the oil exporting countries and thereby reducing oil prices began to economize their consumption.\footnote{3} As a result of the adherence of the oil consuming industrialized countries to this policy, oil consumption in the world (excluding the former CPEs) dropped by three per cent to 52.2 million b/d, this being the first decrease in world consumption in twenty years. The world crude oil production, however decreased from 55.9 million b/d in 1974 to 52.8 million b/d in 1975. OPEC share in global crude oil production reduced by four per cent to 51 per cent during the same period (See Table 5.7 & Graph 5.3).

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|c|}
\hline
\hline
OPEC & 27.1 & 31.0 & 30.7 & 27.2 & 30.7 \\
NON-OPEC & 23.6 & 24.5 & 25.2 & 25.6 & 26.9 \\
WORLD & 50.7 & 55.5 & 55.9 & 52.8 & 57.6 \\
OPEC SHARE (%) & 53.4 & 55.9 & 55.0 & 51.0 & 53.3 \\
\hline
\end{tabular}
\caption{OPEC AND NON-OPEC CRUDE OIL PRODUCTION (1972-76) (Million Barrels Per Day)}
\end{table}


\begin{itemize}
\item The world consumption of refined products reduced from 53.7 million b/d to 52.2 million b/d\footnote{4}.
\end{itemize}
In 1977, following the disagreements over fixing the official prices by OPEC Members, the Organization followed a two-tier pricing structure. The United Arab Emirates and Saudi Arabia agreed to raise their prices by only 5 per cent and the rest of OPEC Members increased the prices of their crude by 20 per cent in two installments. However, it is interesting to note that the compromise price agreed upon was quite close to the spot (market) price. This proved that the Organization of the Petroleum Exporting Countries had begun to consider the role of the free market (spot) in fixing its Official Selling Prices.

The world crude oil production increased by almost 9 per cent during the period 1976 to 1977\(^{65}\). In 1979 most of the production moved into the stock piles. Following the Iranian Revolution and widespread uncertainty with regard to availability of supply of crude oil, a strong demand for holding inventories by the major oil companies and other buyers of crudes witnessed. Inventories at the end of 1980 were estimated at well above 98 days of consumption as compared to stocks of 90 days, and 80 days' consumption at the end of 1979 and 1978 respectively\(^{66}\) (See Table 5.8).

\textbf{(TABLE 5.8)}

\textbf{INVENTORIES OF CRUDE OIL IN THE WORLD}

\begin{tabular}{|c|c|c|c|}
\hline
\textbf{PERIOD} & \textbf{OECD} & \textbf{LDCs+REST} & \textbf{WORLD Excluding FORMER CPEs} \\
\hline
1st Qtr. 1979 & 2734 & 788 & 3522 \\
2nd Qtr. 1979 & 2893 & 833 & 3726 \\
3rd Qtr. 1979 & 3161 & 910 & 4071 \\
4th Qtr. 1979 & 3338 & 894 & 4232 \\
1979 & 3338 & 894 & 4232 \\
1st Qtr. 1980 & 3264 & 875 & 4139 \\
2nd Qtr. 1980 & 3425 & 891 & 4316 \\
3rd Qtr. 1980 & 3653 & 948 & 4601 \\
4th Qtr. 1980 & 3492 & 907 & 4399 \\
1980 & 3492 & 907 & 4399 \\
\hline
\end{tabular}

\textit{Source} : \textit{OPEC Annual Report, 1980, P.71}
The reasons which led to an increase in oil demand may be:

1) Lower real oil prices in 1977-78,
2) depreciation of the US Dollar,
3) massive stock build-up in 1979 due to fear and uncertainty over oil supply following the Iranian Revolution and the onset of conflict between I.R.Iran and Iraq in late 1980.

Under the impact of oil worker's strike action in Iran against the Shah's regime the crude oil production declined from its capacity level of almost 6 million b/d to 5.5 million b/d in October 1978. This downward trend in oil output further continued reaching its lowest level of 2.3 million b/d in December. Towards the last days of 1978, Iranian oil exports were totally suspended, with only some 7,00,00 b/d being produced for domestic use. Soon after deposition of the Shah, exports were assumed at an overall 1979 average of 3.1 million b/d. 
(TABLE 5.9)
COMPARISON OF SPOT AND OFFICIAL PRICES (1978-80)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>GULF-ARABIAN LIGHT 34°API</th>
<th>US $/barrel</th>
<th>LIBYAN-ZUETINA 41°API</th>
<th>US $/barrel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SPOT PRICE</td>
<td>OFFICIAL PRICE</td>
<td>DIFFERENCE</td>
<td>SPOT PRICE</td>
</tr>
<tr>
<td>1978</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JAN.</td>
<td>12.65</td>
<td>12.70</td>
<td>-0.05</td>
<td>13.85</td>
</tr>
<tr>
<td>FEB.</td>
<td>12.65</td>
<td>12.70</td>
<td>-0.05</td>
<td>13.85</td>
</tr>
<tr>
<td>MAR.</td>
<td>12.65</td>
<td>12.70</td>
<td>0.05</td>
<td>13.75</td>
</tr>
<tr>
<td>APR.</td>
<td>12.67</td>
<td>12.70</td>
<td>-0.03</td>
<td>13.75</td>
</tr>
<tr>
<td>MAY.</td>
<td>12.72</td>
<td>12.70</td>
<td>0.02</td>
<td>13.75</td>
</tr>
<tr>
<td>JUN.</td>
<td>12.72</td>
<td>12.70</td>
<td>0.07</td>
<td>13.75</td>
</tr>
<tr>
<td>JUL.</td>
<td>12.79</td>
<td>12.70</td>
<td>0.09</td>
<td>13.85</td>
</tr>
<tr>
<td>AUG.</td>
<td>12.80</td>
<td>12.70</td>
<td>0.10</td>
<td>14.00</td>
</tr>
<tr>
<td>SEPT.</td>
<td>13.00</td>
<td>12.70</td>
<td>0.30</td>
<td>14.50</td>
</tr>
<tr>
<td>OCT.</td>
<td>14.90</td>
<td>12.70</td>
<td>2.20</td>
<td>16.25</td>
</tr>
<tr>
<td>NOV.</td>
<td>15.00</td>
<td>12.70</td>
<td>2.30</td>
<td>16.75</td>
</tr>
<tr>
<td>DEC.</td>
<td>1979</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JAN.</td>
<td>17.50</td>
<td>13.40</td>
<td>4.10</td>
<td>19.75</td>
</tr>
<tr>
<td>FEB.</td>
<td>21.00</td>
<td>13.40</td>
<td>7.60</td>
<td>24.00</td>
</tr>
<tr>
<td>MAR.</td>
<td>21.50</td>
<td>16.35</td>
<td>5.15</td>
<td>24.50</td>
</tr>
<tr>
<td>APR.</td>
<td>34.50</td>
<td>16.95</td>
<td>17.55</td>
<td>36.00</td>
</tr>
<tr>
<td>MAY.</td>
<td>34.00</td>
<td>18.00</td>
<td>16.00</td>
<td>36.50</td>
</tr>
<tr>
<td>JUN.</td>
<td>32.00</td>
<td>20.00</td>
<td>12.00</td>
<td>36.00</td>
</tr>
<tr>
<td>JUL.</td>
<td>34.00</td>
<td>20.00</td>
<td>14.00</td>
<td>36.00</td>
</tr>
<tr>
<td>AUG.</td>
<td>35.00</td>
<td>20.00</td>
<td>15.00</td>
<td>37.00</td>
</tr>
<tr>
<td>SEPT.</td>
<td>38.00</td>
<td>22.00</td>
<td>16.00</td>
<td>40.50</td>
</tr>
<tr>
<td>OCT.</td>
<td>40.00</td>
<td>26.00</td>
<td>14.00</td>
<td>43.00</td>
</tr>
<tr>
<td>NOV.</td>
<td>39.00</td>
<td>26.00</td>
<td>13.00</td>
<td>41.50</td>
</tr>
<tr>
<td>DEC.</td>
<td>1980</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JAN.</td>
<td>38.00</td>
<td>28.00</td>
<td>10.00</td>
<td>41.0</td>
</tr>
<tr>
<td>FEB.</td>
<td>36.00</td>
<td>28.00</td>
<td>8.00</td>
<td>38.50</td>
</tr>
<tr>
<td>MAR.</td>
<td>36.00</td>
<td>28.00</td>
<td>8.00</td>
<td>38.00</td>
</tr>
<tr>
<td>APR.</td>
<td>35.00</td>
<td>28.00</td>
<td>7.00</td>
<td>37.50</td>
</tr>
<tr>
<td>MAY.</td>
<td>35.50</td>
<td>30.00</td>
<td>5.50</td>
<td>38.50</td>
</tr>
<tr>
<td>JUN.</td>
<td>36.00</td>
<td>30.00</td>
<td>6.00</td>
<td>37.50</td>
</tr>
<tr>
<td>JUL.</td>
<td>34.50</td>
<td>32.00</td>
<td>2.50</td>
<td>36.50</td>
</tr>
<tr>
<td>AUG.</td>
<td>32.00</td>
<td>32.00</td>
<td>0.00</td>
<td>33.50</td>
</tr>
</tbody>
</table>

Source: See Table 5.10.

It was the theoretical Official Price for Marker Crude used by the Persian Gulf Producers except Saudi Arabia which set its own Official Selling price. The Saudi Arabian Official Price was either equal or lower than the Official Price announced by other Persian Gulf Producers.
However, inspite of offsetting this shortfall by some of OPEC producers, the consumers had a fear that oil exports from Iran now controlled by the new Revolutionary Government might further be suspended leaving them without sufficient inventory.

(TABLE 5.10)
MARKER CRUDE PRICE (1978-80)

Figures in U.S. $ Per Barrels

<table>
<thead>
<tr>
<th></th>
<th>1978</th>
<th>1979</th>
<th>1980</th>
<th>% INCREASE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DEC.</td>
<td>JAN.</td>
<td>DEC.</td>
<td>JAN.</td>
</tr>
<tr>
<td>SAUDI ARABIA</td>
<td>12.70</td>
<td>13.40</td>
<td>24.00</td>
<td>26.00</td>
</tr>
<tr>
<td>OTHERS</td>
<td>12.70</td>
<td>13.40</td>
<td>26.00</td>
<td>28.00</td>
</tr>
</tbody>
</table>


Above all, according to Ian Seymour "... it was fear of losing contractual supply connections which kept spot prices way up high for 18 months and ensured that official prices would in the end climb up most of the way to meet them". 69
As shown in Table 5.9 and Graph 5.4 the spot values of Arabian Light Maker Crude (34° API) right from April 1978 began to register at higher figures than the official prices fixed by both the Saudi Arabian Government and rest of the Persian Gulf Producers.70

To understand the reasons for the price explosion of 1979-80 and substantial gap between spot values and official prices of crude oil one must briefly study the world oil supply system and the fundamental changes that occurred during the same period.

As noticed earlier in chapter II, the major International Oil Companies were characterized by high degree of integration in production, refining and marketing system. Prior to the Iranian Revolution these major oil companies, "... through their blanket arrangements with the producing countries", were in access of a large quality of crude oil. After supplying the required amount of crude to their own refining and marketing mechanism, they resold the surplus quantity to third parties mainly under term contracts. But, with the new oil export policy in Iran and the subsequent cut-back of production there, coupled with a supply limitation of 1.5 to 2 million b/d announced by the Saudi Arabian Government from 1st April 1979, reverting thereby, to its 'traditional ceiling' of 8.5 million b/d, left the multinational oil companies short of crude oil. As a result these companies which were committed to supply crude oil to the Third World consumers (in fact directed by OPEC Government to do so) had no choice but to go for spot crude purchases to mid-May.71

This decision by the major oil companies led to the price explosion of 1979-80 which is termed as the "The Second Oil Shock" by the Western Analysts.

The Organization in its Fifty-Third (Extraordinary) Meeting on 27th March 1979 announced that "... it is left for each Member Country to add to its price market premia which it seems justifiable in the light of its own circumstances"72. In other words the organization allowed the different Members to adopt their own pricing structure. As shown in Table ... the spot prices of the different crudes moved first, followed, with a lag, by the official prices. The price of the Arabian Light 34° API crude was eventually raised to $18 per barrel in June 1979. During the said period, the spot price of Arabian light 34° API was $16 per barrel higher than the official price. This was almost the same case with the Libyan Zuetina 41° API (See Tables 5.9 & 5.10). The spot and the GSP were changed by both OPEC and non-OPEC producers at different periods.
The upward pressure in spot prices continued despite the decision announced by the Saudi Government to revert 9.5 million b/d production as from 1st July 1979. A barrel of an Arabian Light (34° API) fetched $40 in the spot market; the highest price ever registered; in November 1979 (See Table 5.9 & 5.10).

OPEC Conference in its 57th Meeting held in Algeria from 9-11, June 1980 decided to set the official price (Arabian Light 34° API) for a Marker Crude up to a ceiling of $32.00 per barrel applicable as of July 1, 1980.

As could also be observed from Table 5.9 the spot values for African crudes reached its peak in November 1979 when a Libyan Zuettian (41°API) was sold at spot market for $43.00, nearly $17 above the official price. But, later, the spot prices began to show a descending trend which was plunged below official prices by $3.50 in August 1980.

The overall percentage increase in Marker Crude oil prices (Arabian Light 34° API) from December 1978 to July 1980 was 152. On the other hand, considering the Official Selling Price set by the Saudi Arabian Government for Arabian Light Marker Crude, the increase was somewhat less than that of OPEC mainstream i.e., the Official Selling Price set by the Persian Gulf OPEC Producers other than Saudi Arabia. It registered 120.5 per cent increase in oil prices since December 1978 (See Table 5.10).

On the supply side, the OPEC's share of world oil supplies in 1979 was almost Fifty per cent (including the former CPEs) and this shows the Organization's capacity to administer the oil price and to control the process of price formation in the market.

As indicated in Table 5.11 and Graph 5.5) between 1977 and 1980, the Islamic Republic of Iran, which used to maintain its position as the second largest producer of oil in OPEC cut its output by almost 74 per cent.

Other OPEC Members like Saudi Arabia, Iraq and Kuwait showed their willingness to boost production in order to fill the supply gap. Hence, between 1978-79 Iraq increased its output by almost 36 per cent, Saudi Arabia by 15 per cent, Kuwait and Nigeria by 17 and 21 per cent respectively.
(TABLE 5.11)

CRUDE OIL PRODUCTION IN OPEC MEMBER COUNTRIES (1979-80)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ALGERIA</td>
<td>1,152.3</td>
<td>1,161.2</td>
<td>1,153.8</td>
<td>1,019.9</td>
<td>-11.5</td>
</tr>
<tr>
<td>ECUADOR</td>
<td>183.4</td>
<td>201.8</td>
<td>214.2</td>
<td>204.1</td>
<td>11.3</td>
</tr>
<tr>
<td>GABON</td>
<td>222.0</td>
<td>208.7</td>
<td>203.4</td>
<td>174.5</td>
<td>-21.4</td>
</tr>
<tr>
<td>INDONESIA</td>
<td>1,686.2</td>
<td>1,635.2</td>
<td>1,590.8</td>
<td>1,575.7</td>
<td>-6.6</td>
</tr>
<tr>
<td>IR IRAN</td>
<td>5,662.8</td>
<td>5,241.7</td>
<td>3,167.9</td>
<td>1,467.3</td>
<td>-74.1</td>
</tr>
<tr>
<td>IRAQ</td>
<td>2,348.2</td>
<td>2,562.0</td>
<td>3,476.9</td>
<td>2,646.4</td>
<td>12.7</td>
</tr>
<tr>
<td>KUWAIT</td>
<td>1,969.0</td>
<td>2,131.4</td>
<td>2,500.3</td>
<td>1,663.7</td>
<td>-15.6</td>
</tr>
<tr>
<td>S.P. LIBYAN A.J.</td>
<td>2,063.4</td>
<td>1,982.5</td>
<td>2,091.7</td>
<td>1,831.6</td>
<td>-11.2</td>
</tr>
<tr>
<td>NIGERIA</td>
<td>2,085.1</td>
<td>1,897.0</td>
<td>2,302.0</td>
<td>2,058.0</td>
<td>-1.3</td>
</tr>
<tr>
<td>QATAR</td>
<td>444.6</td>
<td>486.7</td>
<td>508.1</td>
<td>471.4</td>
<td>6.1</td>
</tr>
<tr>
<td>SAUDI ARABIA</td>
<td>9,199.9</td>
<td>8,301.1</td>
<td>9,532.6</td>
<td>9,900.5</td>
<td>7.6</td>
</tr>
<tr>
<td>UNITED ARAB EMIRATES</td>
<td>1,998.7</td>
<td>1,830.5</td>
<td>1,830.5</td>
<td>1,701.9</td>
<td>-14.9</td>
</tr>
<tr>
<td>VENEZUELA</td>
<td>2,237.9</td>
<td>2,165.5</td>
<td>2,356.4</td>
<td>2,165.0</td>
<td>3.25</td>
</tr>
<tr>
<td>TOTAL OPEC</td>
<td>31,253.5</td>
<td>29,805.3</td>
<td>30,928.9</td>
<td>26,880.0</td>
<td>-13.99</td>
</tr>
</tbody>
</table>

In 1979, despite the Iranian shortfall, OPEC as a whole raised production by one million b/d, or 3.7 per cent, to 30.9 million b/d from the 1978 level of 29.8 million b/d (See Table 5.11 and Graph 5.5).

So, as Mr. Ian Seymour believes "... OPEC's record in the matter of supply has been characterized by a sense of international responsibility and accommodation to the needs of the industrialized world".

5.10.3. [1981-1984] OPEC Relenting on Prices

Following the "Second Oil Shock" (Oil Adjustment) of 1979-80 which was due to heavy stock piling of oil by IEA countries; (despite the rise in oil prices) the global demand for OPEC oil declined by almost 16 per cent from 26.9 million b/d in 1980 to 22.6 million b/d in 1981. Some of the factors responsible for decline in world demand for OPEC oil were:

a) the prolonged economic recession in the OECD nations. (between 1979 and 1984 oil consumption in the OECD area fell from 41.6 million b/d to 34.6 million b/d, a fall of 18 per cent),

b) various energy conservation and saving programmers in industry, transportation and household sector, and energy substitution policy undertaken by the developed countries,

c) the drawing of inventories accumulated in 1979-80 which some estimate at 3-4 billion barrels,

d) an annual increase of 3.5 per cent in crude oil production in non-OPEC countries since 1978 bringing their share in 1982 to 64.7 per cent in the global market (See Table 5.12).

(TABLE 5.12)
OPEC AND NON-OPEC CRUDE OIL PRODUCTION (1980-84)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEC</td>
<td>26.90</td>
<td>22.60</td>
<td>19.00</td>
<td>17.00</td>
<td>16.30</td>
</tr>
<tr>
<td>NON-OPEC</td>
<td>32.80</td>
<td>33.40</td>
<td>34.80</td>
<td>35.70</td>
<td>37.20</td>
</tr>
<tr>
<td>WORLD</td>
<td>59.70</td>
<td>560.03</td>
<td>53.80</td>
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<td>53.50</td>
</tr>
<tr>
<td>OPEC SHARE (%)</td>
<td>45.10</td>
<td>40.40</td>
<td>35.30</td>
<td>32.30</td>
<td>30.50</td>
</tr>
</tbody>
</table>

In 1983, as shown in Table 5.12 and Graph 5.6 the total OPEC crude oil production was further reduced by 2 million b/d as a result of both, the continued decline in the international demand for OPEC crude oil and the policy of 'Production Maximization' followed by Non-OPEC nations. The OPEC's share in the international market reduced by almost 40 per cent during 1980-84. This adversely affected the capacity of OPEC to administer the oil price and to control the process of price formation in the market.

![Graph 5.6: OPEC & Non-OPEC Crude Oil Production (1980-84)](https://example.com/graph5.6.png)

On the other hand, decrease in demand for crude oil contributed greatly to reduction in some official selling price as well as spot market prices. For example Nigeria's oil production which had fallen by almost 40 per cent between 1979 and 1984, from 2.3 million b/d in 1979 to 1.39 million b/d in 1982 announced reduction of Bonny Light (36.7°API) of $5.50 per barrel demanding its fair market share. Despite the decision taken by the OPEC Conference in Vienna on March 19, 1982, to reconfirm the price of the Market Crude, Arabian Light, 34° API, Ex-Ras Tanura at $34 per barrel and setting up OPEC production ceiling at 18 million b/d as of April 1982. The following reductions in different crudes by various producers were announced by 1982 is shown in Table 5.13.

* It is to be noticed that the OPEC production ceiling was subsequently reduced to 17.5 million b/d when Saudi Arabia announced it would lower its production by 500,000 barrels a day to seven million.
(TABLE 5.13)
REDUCTION IN CRUDE OIL PRICES
ANNOUNCED BY VARIOUS PRODUCERS IN 1982

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>CRUDE</th>
<th>REDUCED PER BARREL BY US $</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALGERIA</td>
<td>SAHARAN BLEND</td>
<td>1.50</td>
</tr>
<tr>
<td>BRITAIN</td>
<td>FORTIES</td>
<td>3.00</td>
</tr>
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<td>SUEZ MIX</td>
<td>2.75</td>
</tr>
<tr>
<td>LIBYA</td>
<td>BREGA</td>
<td>1.50</td>
</tr>
<tr>
<td>NIGERIA</td>
<td>BONNY LIGHT</td>
<td>5.50</td>
</tr>
<tr>
<td>NORWAY</td>
<td>EKOFISH</td>
<td>3.00-3.5</td>
</tr>
<tr>
<td>Ex. USSR</td>
<td>URALS</td>
<td>2.15</td>
</tr>
<tr>
<td>UAE</td>
<td>DUBAI</td>
<td>0.94</td>
</tr>
</tbody>
</table>


The spot prices for medium and heavy crude at the end of the third week of March 1983, witnessed a modest improvement. These increases which reached their official levels or even exceeding them slightly continued throughout April, 1983.

(GRAPH 5.7)

ARABIAN LIGHT OFFICIAL AND SPOT PRICES (1980-84)

Figures in US $ Per Barrel

The Organization for the first time in its history, on 14 March 1983 [67th Meeting (Extraordinary)] with a view to "... to bring stability into the world market " and "... averting an immediate price collapse " decided to reduce the official price of the Marker Crude, Arabian Light, 34°API, Ex-Ras Tanura, by $5 per barrel (15 per cent) to $29 per barrel (See Graph 5.7). This decision was an adjustment to the changed oil market structure. It was against the OPEC’s pursued policy of "price defence at all cost". Hence, the decision to reduce the official prices is considered to be a landmark in the OPEC’s history. On the other hand, some analysts believe that the official reduction in the market crude was in recognition of the conditions of the spot market.81

The overall supply from OPEC was set at 17.5 million b/d and quotas were allocated to individual Member Countries except for Saudi Arabia, which considered production as part of its internal policy and was to act as 'swing producer'.82

But, according to M.V. Samii, Ex-Head of the Finance Section at OPEC Secretariat, " ... the OPEC oil pricing system adopted (in March 1983) was highly rigid and inflexible, thus creating problems for both prices and output"83.

The decision to reduce the official price and set the OPEC production ceiling at 17.5 million b/d led to an increase in Member Countries' current account deficit from $8 billion in 1982 to $17 billion in 1983.84 It resulted in a $128 billion fall in petroleum revenues. In other words, the value of petroleum exports in OPEC Countries which was as high as $284.5 billion in 1980 declined to $157 billion in 1983 a fall of 45 per cent.85

All these factors gave rise to the need to restrain economic growth further through such measures as devaluation of some Member Countries currencies, the restriction of imports of luxury and non-essential items and a more efficient use of foreign exchanges. The import volume was cut by 10.7 per cent in 1983 than the 1982 level.86

Since there is continuous market fluctuation the role of swing producer is, to quickly adjust supply in order to keep prices constant and maintain market balance. The country that plays the role of swing producer must fulfil certain criteria:

a) Flexibility in changing output and both excess capacity to increase its output when needed.
b) The country must have sufficient financial resources to absorb fluctuations in oil revenue, particularly a decline in revenue.
c) The country must be willing to play such a role.
On the basis of the above, Saudi Arabia was perfectly placed to play the role of swing producers in the system of March 1983.84.
However, the oil market was improved during the first five months of 1984. The extra-light crudes of Nigerian (Light) and UK (Brent) improved by $1.15 and $1.12 per barrel respectively. By end of May, the spot value of Arabian Heavy was $27.15 per barrel, $1.15 per barrel exceeding the official price and $1.00 per barrel over its quotation in Mid-December.

These improvements in the market could be explained taking into consideration the following developments:

1) The reduction in production of OPEC crude oil by 0.65 million b/d during the first quarter of 1984, from 17.39 million b/d in 1983,

2) following the reduction in the North Sea caused by an accident in the case of the Piper Field (Flotta Crude) and by a labour dispute in the case of the Norwegian Vallhall Field and a technical problem in the former Soviet Union, the non-OPEC production and exports were both reduced,

3) the demand for heavier products were increased due to relatively cold weather in the USA and Japan,

4) the demand for heavier products in West Europe for generation was enhanced due to the coal miners strike in the United Kingdom, thereby increasing the prices of heavy products,

5) the closure of some refining capacity in the main centers, caused either by the severe weather or by regular maintenance contributing to a reduction in product inventories,

6) the oil industry’s concern regarding the increased possibility of a disruption of oil supplies from the Persian Gulf region.

The former Soviet Union increased the price of Urals in March by $0.50 per barrel to $29.00 per barrel. Similarly in April, Egypt decided to increase the price of its Ras Gharid by $0.60 per barrel to $25.60 per barrel. However, Mexico kept crude oil prices, unchanged during April.

The period 1981-84 was characterized by the entry of a new element (non-OPEC) in the oil market environment, that continued to increase both production and exports of oil. Their share in the world crude oil production increased from 55 per cent in 1980 to almost 70 per cent (See Table 5.12). Mexico and the North Sea were the most outstanding non-OPEC exporters of crude oil during 1982. Mexico averaged 2.7 million b/d, 18.8 per cent
higher than in 1981, with most of the increase coming from the newly discovered field of Campeche. The United Kingdom's production in 1983 reached 2.3 million b/d\(^8\) compared with 1.8 million b/d in 1981. In the former USSR, production increased from 10.4 million b/d\(^8\) in 1976 to 12.325 million b/d in 1983\(^9\).

5.10.4. [1985-1989] Oil Price Collapse

Between 1974 and 1985, OPEC tried to act as price administrator, setting a fixed price for oil and playing the role of swing producer at the global level with a view to defend the price structure. The OPEC price structure was undermined as a result of rising supplies from non-OPEC oil exports and a substantial decline in world oil demand. These events forced the Organization of the Petroleum Exporting Countries to significantly reduce its production and thereby leaving substantial idle capacity in Member Countries oil industries\(^9\).

| TABLE 5.14 |

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>1973</th>
<th>1979</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAUDI ARABIA</td>
<td>7690</td>
<td>9830</td>
<td>3730</td>
</tr>
<tr>
<td>IR IRAN</td>
<td>5900</td>
<td>3200</td>
<td>2250</td>
</tr>
<tr>
<td>VENEZUELA</td>
<td>3460</td>
<td>2430</td>
<td>1740</td>
</tr>
<tr>
<td>NIGERIA</td>
<td>2050</td>
<td>2310</td>
<td>1570</td>
</tr>
<tr>
<td>IRAQ</td>
<td>2020</td>
<td>3490</td>
<td>1430</td>
</tr>
<tr>
<td>UNITED ARAB EMIRATE</td>
<td>1530</td>
<td>1840</td>
<td>1350</td>
</tr>
<tr>
<td>INDODESIA</td>
<td>1340</td>
<td>1670</td>
<td>1350</td>
</tr>
<tr>
<td>LIBYA</td>
<td>2220</td>
<td>2120</td>
<td>1100</td>
</tr>
<tr>
<td>KUWAIT</td>
<td>3090</td>
<td>2630</td>
<td>1070</td>
</tr>
<tr>
<td>ALGERIA</td>
<td>1130</td>
<td>1230</td>
<td>1010</td>
</tr>
<tr>
<td>QATAR</td>
<td>570</td>
<td>510</td>
<td>340</td>
</tr>
<tr>
<td>ECUADOR</td>
<td>210</td>
<td>210</td>
<td>280</td>
</tr>
<tr>
<td>GABON</td>
<td>150</td>
<td>200</td>
<td>150</td>
</tr>
<tr>
<td>TOTAL OPEC</td>
<td>31360</td>
<td>31670</td>
<td>17370</td>
</tr>
</tbody>
</table>

During the period 1973 to 1985 world oil production (crude oil and natural gas liquids) ranged between 58 and 66 million barrels per day. The peak was reached in 1977 and OPEC produced almost 50 per cent of the total. Since then the rise in oil prices has brought about a redistribution of the World’s oil production. OPEC’s production has declined from 32 million to 17 million b/d and the non-OPEC production has risen from 34 million b/d to 40 million b/d (See Table 5.14 & 5.15).

(TABLE 5.15)
NON-OPEC CRUDE OIL PRODUCTION
(Thousand Barrels Per Day)

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>1973</th>
<th>1979</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex. USSR</td>
<td>8700</td>
<td>12110</td>
<td>12000</td>
</tr>
<tr>
<td>UNITED STATES</td>
<td>10920</td>
<td>10200</td>
<td>10530</td>
</tr>
<tr>
<td>MEXICO</td>
<td>620</td>
<td>1620</td>
<td>3010</td>
</tr>
<tr>
<td>UNITED KINGDOM</td>
<td>10</td>
<td>1600</td>
<td>2700</td>
</tr>
<tr>
<td>CHINA</td>
<td>1100</td>
<td>2130</td>
<td>2490</td>
</tr>
<tr>
<td>CANADA</td>
<td>2170</td>
<td>1820</td>
<td>1700</td>
</tr>
<tr>
<td>EGYPT</td>
<td>170</td>
<td>530</td>
<td>910</td>
</tr>
<tr>
<td>NORWAY</td>
<td>30</td>
<td>430</td>
<td>850</td>
</tr>
<tr>
<td>AUSTRALIA</td>
<td>420</td>
<td>500</td>
<td>650</td>
</tr>
<tr>
<td>INDIA</td>
<td>150</td>
<td>270</td>
<td>600</td>
</tr>
<tr>
<td>BRAZIL</td>
<td>170</td>
<td>170</td>
<td>580</td>
</tr>
<tr>
<td>OMAN</td>
<td>290</td>
<td>300</td>
<td>500</td>
</tr>
<tr>
<td>ARGENTINA</td>
<td>430</td>
<td>480</td>
<td>460</td>
</tr>
<tr>
<td>MALAYSIA</td>
<td>90</td>
<td>270</td>
<td>440</td>
</tr>
<tr>
<td>BRUNEI</td>
<td>220</td>
<td>260</td>
<td>160</td>
</tr>
<tr>
<td>ROMANIA</td>
<td>300</td>
<td>230</td>
<td>230</td>
</tr>
<tr>
<td>PERU</td>
<td>80</td>
<td>210</td>
<td>200</td>
</tr>
<tr>
<td>TRINIDAD</td>
<td>170</td>
<td>210</td>
<td>190</td>
</tr>
<tr>
<td>COLOMBIA</td>
<td>190</td>
<td>130</td>
<td>180</td>
</tr>
<tr>
<td>CAMEROON</td>
<td>30</td>
<td>180</td>
<td></td>
</tr>
<tr>
<td>OTHERS</td>
<td>1050</td>
<td>880</td>
<td>1890</td>
</tr>
</tbody>
</table>

The year 1985 ended with recording a reduction in the percentage share of oil to other forms of energy from 39 to $38.92$. Saudi Arabia, whose oil output registered a 57 per cent decline, with a view to secure a fair market share, unlike Nigeria which reduced its prices, adopted a market-related pricing policy. This helped the said country to consequently increase its oil production.

C.E. Suarez who is a researcher with the Institut de Economia Energetica in Argentia asserts that it is clear that since the first oil price hike, developed countries, through the International Energy Agency (IEA) and with the collaboration of multinational oil organization by implementing a policy of diversifying oil-producing areas outside OPEC, energy conservation, rationalization and source substitution policies, succeeded in reversing the price increase process which had taken place in the 1970s$^{93}$.

On the other hand, the crude oil production outside OPEC (including the former CPEs) increased by 1.8 per cent to 37.38 million b/d, while OPEC production declined by 5.7 per cent (larger than that of 3.9 per cent in 1984) to 15.38 million b/d during 1985$^{94}$.

The OPEC crude oil production in 1985 was lower than the ceiling of 16.0 million b/d decided by the OPEC conference in its 75th (Extraordinary) Meeting on October 4, 1985 in Vienna. OPEC's share of total world crude oil production which was 51.5 per cent a decade before shrank to 29.1 per cent in 1985 (See Table 5.16).

| (TABLE 5.16) OPEC AND NON-OPEC CRUDE OIL PRODUCTION (1985-89) (Million Barrels Per Day) |
|-----------------------------------------------|----------------|----------------|----------------|----------------|
| NON-OPEC                                     | 37.90 | 38.00 | 38.10 | 38.30 | 37.40 |
| WORLD                                        | 53.30 | 56.30 | 55.40 | 57.90 | 58.70 |
| OPEC SHARE (%)                               | 29.00 | 32.50 | 31.20 | 33.90 | 36.30 |

The non-OPEC producers registered a growth in production in 1985 which was contributed as shown in Table 5.17.

(TABLE 5.17)

GROWTH IN CRUDE OIL PRODUCTION
OF SOME SELECTED NON-OPEC COUNTRIES IN 1985

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>INCREASED BY (Barrels Per Day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANGOLA</td>
<td>28900</td>
</tr>
<tr>
<td>AUSTRALIA</td>
<td>70900</td>
</tr>
<tr>
<td>BRAZIL</td>
<td>89300</td>
</tr>
<tr>
<td>CANADA</td>
<td>38600</td>
</tr>
<tr>
<td>CHINA</td>
<td>215900</td>
</tr>
<tr>
<td>EYGPT</td>
<td>65200</td>
</tr>
<tr>
<td>INDIA</td>
<td>73200</td>
</tr>
<tr>
<td>NORWAY</td>
<td>90100</td>
</tr>
<tr>
<td>OMAN</td>
<td>69700</td>
</tr>
<tr>
<td>UNITED KINGDOM</td>
<td>30200</td>
</tr>
<tr>
<td>UNITED STATES</td>
<td>213900</td>
</tr>
<tr>
<td>TOTAL</td>
<td>985900</td>
</tr>
</tbody>
</table>

On the other hand, some of the non-OPEC countries experienced declines in their crude oil production in 1985 as shown in Table 5.18.

(TABLE 5.18)

DECREASE IN CRUDE OIL PRODUCTION
OF SOME SELECTED NON-OPEC COUNTRIES IN 1985

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>DECREASED BY (Barrels Per Day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARGENTINA</td>
<td>18400</td>
</tr>
<tr>
<td>BRUNEI</td>
<td>5900</td>
</tr>
<tr>
<td>TUNISIA</td>
<td>2400</td>
</tr>
<tr>
<td>ROMANIA</td>
<td>29200</td>
</tr>
<tr>
<td>Ex.USSR</td>
<td>347800</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>403700</strong></td>
</tr>
</tbody>
</table>


Considering the marginal increases in oil production elsewhere within the non-OPEC group, there was an additional 700,000 barrels per day of oil available in the global market. This meant a further redistribution of world's oil production leading to a larger share for non-OPEC producers in glutted oil market. This meant a further redistribution of world's oil production leading to a larger share for non-OPEC producers in glutted oil market.

However, according to Dr. F. Fesharaki and D.T. Isaak, the increasing share of non-OPEC production is not an indication of declining OPEC influence in the world oil industry. It is the 'exportable crude' as he puts it, that provides the most important indicator of influence in the global oil industry. For example, the OPEC's share of the world oil trade was 86 per cent in 1980 as compared to its 43 per cent share in world oil production. On the other hand, in 1979, major non-OPEC oil producing nations (developed and developing) produced around one-third of world oil output, but their share in world oil trade was only seven per cent. In fact, OPEC, out of its total quota of 22.5 million b/d in 1981 exported almost 20 million b/d. The same authors also believe that "... it is erroneous to consider the oil production profiles of Less Developed Countries without taking into account high rates of growth in domestic consumption" (averaging 8-10 per cent).
As it is noticed, during the year 1985, the price movements, should be assessed taking into consideration the relationship between OPEC and non-OPEC production. Following the policy of 'Production Maximization' of non-OPEC countries there was a downward pressure on the oil price structure. These producers had consistently, by setting prices marginally lower than OPEC, managed to maximize their output. OPEC Members, on the other hand, had to devise "innovative marketing strategies such as barter deal, processing deal and counter trade, all aimed at providing discount to official prices". Competitive pricing (selling crude at spot prices or net-back) eliminated any support which OPEC was providing to the market.

It must however, be remembered that the oil output of OPEC Countries cannot be entirely exported. Part of it must meet the domestic demand which rose fast during the previous two decades. Statistics show that OPEC's domestic consumption increased from around 1 million b/d in 1973 to 2.4 million b/d in 1980 and 3.6 million b/d in 1989. So, OPEC production is not itself a sufficient indicator of OPEC's exports because domestic consumption has been/is rising fast in the OPEC Countries.

At the same time OPEC was warning that its loss of market share might eventually undermine the price structure, because it proved to be difficult for the Members to lower their production levels and revenues simultaneously. Hence, according to some analysts the year 1985 was a year "... when the 'market share policy' replaced the 'price defence approach'".

5.10.5. The Need for Cooperation

The need for cooperation between OPEC and non-OPEC producers, was felt necessary as early as 1981. Following the price adjustment of 1973/74 and structural changes in the industrialized world and the success of energy saving policies, the demand for oil began to falter. On the other hand, non-OPEC producers enhanced their production. The Organization in its 67th (Extraordinary) Meeting held in London in March 1983, fixed a production ceiling of 17.5 million b/d within which individual Member Countries quota were allocated, (except Saudi Arabia which acted as swing producer). Many OPEC oil Ministers, who met the Britain's Energy Minister took the opportunity to stress the need for cooperation between the two groups which ultimately brings more market stability. But, OPEC for the first time acknowledged formally in its 70th Meeting in Vienna in July 1984 the need for cooperation with non-OPEC producers. Despite the initial support of some of non-OPEC producers, in October 1984, Statoil of Norway followed by British National Oil Corporation and Member
Country, Nigeria announced "new pricing practices linked to spot prices, which effectively meant reductions and the undercutting of OPEC prices."\(^{100}\)

The Organization had no other choice, but, to reduce the March 1983 ceiling by further 1.5 million b/d coupled with a reduction in its Marker Crude, Arabian Light, 34 API, Ex-Ras Tanura, to $29\(^ {101}\). During October 1984 to December 1985 number of contracts and consultative meetings between OPEC and non-OPEC producers were held. The OPEC consultations with non-OPEC producers included Mexico, Egypt, Malaysia, Brunei Darussalam and Ex. Soviet Union. However, during these years, Norway, refused any kind of cooperation with OPEC claiming that its country's oil production was too modest to influence the global oil prices. It is important to note the influence of spot market prices in the OPEC pricing behaviour in 1986. It was again the free (spot) market prices which led the way, with official prices following with a lag.

The OPEC's endeavours to convince other non-OPEC producers to share the responsibility of shouldering and supporting a stable oil market, failed to achieve its goal, leading to the price collapse of 1986. The OPEC Countries decided to go for a market share policy. Consequently, the prices of a barrel plummeted from around $30 to single digits of $7-9\(^ {102}\). The oil companies, suddenly realized that the rate of return on their capital intensive investment became less profitable.

The President of the Seventy-Eighth OPEC Conference, in his opening address asserted that oil collapse of 1986 was not an accident but "... it is the culmination of the growing pressure on the price structure that started about five years ago, as a result of a world decline in oil demand and increasing supplies from non-OPEC sources. Whereas OPEC was holding the price only through cutting back its production, thus enabling new oil investments outside OPEC, these emerging new producers succeeded in securing a higher share of the shrinking market only through harmful competition, undercutting OPEC prices. On the other hand, the policy actions of the industrialized countries and the co-ordinating role played by the International Energy Agency (IEA) also gave impetus to the present situation. Many concerted measures were taken by the consuming countries to decrease dependence on OPEC oil through reducing consumption and, more importantly, through encouraging oil and non-oil energy supplies outside OPEC. While undermining OPEC, they also contributed to setting the conditions for market disorder and dangerous price fluctuations, as the very recent past has illustrated\(^ {103}\).
According to some Western analysts, however, the substantial drop in oil prices in 1986, was due to the world oil glut which was itself due to several factors. Firstly, the high level of the U.S. Dollar (in which oil is traded) increased the cost of oil in non-U.S. dollar countries. Secondly, the world economic recession reduced demand as did the conservation measures taken by many countries. The same analysts believe that, there were several other factors including the Saudi Arabia, Oil Minister - Sheikh Yamani who changed his tactics early in 1986. Instead of pressing for a higher price for crude oil by limiting supply (with OPEC quota system) he decided to flood the market with cheap crude in an attempt to raise his countrys' market share which had gradually decreased in that period. Consequently, the price of crude oil dropped dramatically. Instead of lowering the official selling price the Saudi's made deals at discount prices so that the official selling price became nonsensical. These discount prices (that became to be known as "net-back prices") were decided upon by calculating the profit on a unit of product after refining and transportation costs had been taken out.

5.10.6. The Oil Market After The 1986 Price Collapse

One of the impacts of 1986 oil price collapse was the market demand recovery. According to statistics available the world consumption of refined products (excluding the former CPEs) increased from 43.32 million b/d in 1984 to 47.35 million b/d in 1989\(^{104}\). On the other hand, the OPEC oil production for the same periods increased by 23.4 per cent from 16.34 million b/d in 1984 to 21.34 million b/d in 1989\(^{105}\).

It was only after the 1986 oil price collapse that a significant number of non-OPEC producers acknowledged the vital role played by the international oil market and its influence in the global economy. They realized that the oil market is featured by an underlying tendency towards instability. To avoid such a situation a sound pricing policy backed by the curtailment of production in conditions of excess supply was needed\(^{106}\). The oil production by the non-OPEC countries including the former Soviet Union, has stagnated in recent years (See Graph 5.9). Oil production by non-OPEC nations in OECD countries entered a phase of stagnation after 1986. This basically occurred because of the accelerated decline in oil production by the United States, the largest oil producer in the Free World. In addition, oil production in the North Sea of the United Kingdom, Canada and Australia began to either decline or bottom out\(^{107}\).
The Members of the Organization of the Petroleum Exporting Countries after conducting consultations with their respective Governments, in the 78th Meeting of the Conference held in Geneva, from 28th July-5 August 1986 decided that with a view to strengthening the oil price system thereby moving oil prices upward to "reasonable levels" and to remove the surplus oil available in the market, fixed the overall OPEC's oil production ceiling of 16 million b/d for the months of September and October 1986. The nation quotas (with the exception of Iraq) were allocated as decided in October 1984. OPEC also called upon the non-OPEC producers to cut their production significantly. Within a few weeks from this decision the prices increased by more than 50 per cent and reached to the level of $14 per barrel in the first week of October 1986. The OPEC Conference upon the suggestion of Saudi Arabia, in its 80th Meeting held in Geneva from 11 to 20 December 1986 decided to "... approve the recommendation of the Ministerial Committee on pricing to return promptly to a fixed pricing system based on a price target of $18 per barrel for a basket" of

- The basket of crudes consists of six OPEC crudes namely:
  1. Saharan Blend (Algeria),
  2. Bonny Light (Nigeria),
  3. Minas (Indonesia),
  4. Arabian Light (Saudi Arabia),
  5. Dubai (UAE),
  6. Tia Juana Light (Venezuela) and,
  7. one non-OPEC crude of Isthmus (Mexico).
seven crudes\textsuperscript{109}. It was also agreed that the maximum value difference between Arab Heavy and Bonny Light should not exceed $2.65 per barrel. This important decision was supported by OPEC production ceilings of 15.8 million b/d for the first and second quarters of 1987 distributed into national production levels. The positive response of the oil market to these agreements and OPEC's decision to restrict oil production to 16.6 million b/d in the third and fourth quarters of 1987 helped boost prices from the depressed levels of 1986. For example, by July 1987, spot prices had exceeded OPEC's prices target of $18 per barrel. The \textit{West Texas Intermediate (WTI}) sold each barrel for $21.26 compared with about $11.52 per barrel in July 1986. The United Kingdoms Brent crude oil was sold for $19.75 per barrel as against $9.57 per barrel the previous year. The price of the OPEC Basket averaged $18.7 per barrel with about $10 above the previous year's level\textsuperscript{110}.

However, the price improvements which featured the oil market after the OPEC decisions to return to fixed oil pricing supported by supply management began to erode as a result of the resumption of production maximization policies followed by both OPEC [Persian Gulf Members] and non-OPEC oil producers.

During the fourth quarter of 1987, the statistical figures show that the demand for oil was increased by less than one million b/d whereas the additional crudes supplied by both OPEC and non-OPEC oil producers exceeded 2.2 million b/d. This caused an over-supply situation in the market and reduced the prices by $7-8 per barrel in 1988.

According to Dr. Akin Iwayemi who is Petroleum Industry Financial Analyst in the Economics and Finance Department of OPEC Secretariat, Vienna, " ... what has emerged in the past year is that some lower-cost producers have become more market share oriented, against a general background of competitive production strategies by many net oil exporters"\textsuperscript{111}.

The increase in non-OPEC oil supplies was at the cost of declining oil production in Member Countries. As it can be observed from the \textbf{Graph 5.10}, the contrasting trend of OPEC and non-OPEC oil production and spot price of Arabian Light moved, the OPEC oil production curve at a downward direction whereas non-OPEC's curve moved an upward direction.
It is clear from the foregoing discussion that the OPEC was largely successful in responding to crisis situations in terms of adjusting prices of oil in favour of most, if not all, of the Member Countries. Thus, it could and in fact did influence the prices and output of oil in world markets. The hypothesis in this regard therefore stands validated.

(Graph 5.10)

OPEC and Non-OPEC Crude Oil Production and Spot Price of Arabian Light


* Crude Oil Production excludes the former CPEs.
5.10.7. Idle Capacity

Idle capacity is another problem faced by the OPEC Member Countries since the existence of new element known as non-OPEC. Since 'the First Oil Adjustment', OPEC has been reducing its production in order to defend the price structure\textsuperscript{112}. This in turn led to erosion of OPEC's share of global production (excluding the former CPEs) from 68.2 per cent in 1976 to 40.5 per cent in 1985. The gap between OPEC capacity to produce and actual production and OPEC average price can be observed in Graph 5.11.

(Graph 5.11)

OPEC AVERAGE SPOT PRICE, CRUDE PRODUCTION AND CAPACITY

\textit{Source} : See Graph 5.10, P. 345.
According to Koyama, S., the President of the Japanese Institute of Middle Eastern Economies, the OPEC Member Countries in 1988 and 1989 were unable to restore the unity; consequently, more oil is supplied than is in demand. He points out that some of the Member Countries notably Kuwait and the United Arab Emirates were ignoring OPEC policy of limiting output. He further believes that OPEC Countries are divided into two categories, those that have surplus production capacity and drill more oil than their quotas and those with insufficient production capacity that cannot even meet their quotas. Among those with surplus capacity are the UAE and Kuwait which received low quotas and have continued to expand their output to demonstrate to OPEC the necessity of expanding their quotas\textsuperscript{114}.

The OPEC Secretariat, estimated that the demand for OPEC oil would be below 22 million b/d, whereas the actual production volume for latter half of 1989 (November 1989) was almost 23.5 million b/d. The reason was the persistent over production by some of the Persian Gulf Member Countries.

The oil prices on the other hand, witnessed significant changes. For instance, the Arabian Light, 34 API, ex-Ras Tanura which had again fallen after the 1986 oil price collapse to $10.45 per barrel in November 1988, increased to $19.10 per barrel in April 1989. However, due to the over-production exercised by some of the Persian Gulf Countries; as a result of both economic and political factors, in June 1990, prices again fell to $12.45 per barrel from an average of $16.18 per barrel in 1989\textsuperscript{115}.

In early 1989, oil production in the former Soviet Union began to decline. The figure for January-September 1989 was 12,190,000 barrels per day, which was a drop of 280,000 barrels from the preceding year. After October 1989, it was reported that the figure fell below 12 million barrels. Reflecting this trend- oil exports to the West during 1989 were said to have dropped by 400,000 barrels per day\textsuperscript{116}.

It is perhaps, rightly argued that declining prices are a symptom of the existence of excess supplies over demand. As explained, the balance between world oil supply and demand is indicated by the demand for OPEC oil. However, due to stock variations, inconsistencies in the estimates between deliveries and production, delays in acquiring the requisite data, etc., it is difficult to estimate accurately the demand for OPEC oil at any given

\textsuperscript{113} Prior to the Iraqi invasion on 2 August 1990, Kuwait used to produce 1.5 to 2.0 million b/d\textsuperscript{113}.

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time. OPEC quota therefore provides a proxy measure. Graph 5.12 represents the close inverse movement between the excess of OPEC output over quotas, on the one hand, and the variation in Murban prices retroactively set, versus their official levels, on the other. The two are almost identical mirror images of one other. Many of the OPEC Members were producing crude oil more than the quotas allocated to them in 1986 as a result of which the 1986 oil collapse took place.¹¹⁷

(Graph 5.12)

MONTHLY FLUCTUATIONS IN OPEC'S CRUDE OIL PRODUCTION AND PRICES

(1986-89)


** OAPEC Data Base. selected the price of Murban crude oil to avoid the problems associated with the emergence and proliferation of spot and future prices for both the physical and paper barrel. The price of Murban crude, has the advantage of being announced by government at regular intervals. The announced price is very close to the market value.
Having had a bird-eye view of the oil scenario during the seventies and eighties, it would now be interesting to study the decisions underlying the emergence of the scenario and their impact on the Member Countries, in the next chapter.

NOTES & REFERENCES

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6 Shell Briefing Service (SBS), (1987), *op. cit.*, P. 5.
13 Ibid., P. 7.
20 Ibid., P. 39.
21 Ibid., P. 47.
23 Ibid., P. 63.
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57 Ibid., P. 16.
60 Al-Fathi, S.A., (1990), op. cit., PP. 1-6.
72 Ibid., P. 15.
74 See Krapels, E. and Emerson, S. Shortage in The International Oil Market ", Economist Intelligence Unit, Special Report, No. 1117.
75 Seymour, Ian, (1980), op. cit., P. 182.
76 Ibid., P. 183.
78 Ibid., P. 183-4.