First Draft – OPEC BOOK

Chapter 1 – Introduction

This book's primary goal is to arrive at a series of suggestions as to how any interested party can have a profitable relationship with OPEC in the opening years of the 21st century. In order to assess the nature of this profitable relationship, however, it is necessary to a certain extent to predict the future path of OPEC. Of course, the philosopher's stone for any analyst of OPEC is a series of conclusions from OPEC's past that allows the analyst to predict OPEC's future. And though few have ever found even a small scrap from this coveted rock of analysis, many continue to search. In effect, OPEC has proven itself over the years incredibly impermeable to scrutiny and even more impermeable to prediction. Nevertheless, this book, like so many before it, intends to not only find the stone of predictable OPEC actions, but to take the next step and answer how a profitable relationship with those actions is possible.

For the purposes of analysis, those who might partake of this profitable relationship include all the shareholders of OPEC – oil analysts, oil companies, oil consumers, oil stock purchasers, oil importers, oil exporters, and all other oil-dependent entities in a myriad of global-wide sectors. This list includes all who might benefit from a more accurate assessment of where OPEC is headed next. By knowing better where it's headed, they can better plan their own strategies for optimal returns, whether those returns be financial, social, political, or intellectual.

In order to arrive at its final chapter and its diverse suggestions as to how to have a profitable part in the future of OPEC, the book proceeds through a number of mazes out of which it is hoped a few nuggets of wisdom will be acquired that can inevitably add up to an entire stone of truth. These mazes include 1) an analysis of what OPEC is in terms of its industrial and

institutional organization vis-a-vis the oil exporting countries within and outside it, the oil importing countries that are its market (OECD), and the global entities that form is community of business formats, 2) an analysis of the countries that make up OPEC and a variety of indicating factors from their overall performances and relations over the last 30 years that are valuable in terms of predictive accuracy, 3) the microeconomics of the OPEC and OECD nations that are pertinent to how these two blocks behave within their particular units (a country), among themselves (as an exporting or importing bloc), and between themselves as dependent partners in trade, 4) the overall role of OPEC in the world economy, 5) the history of OPEC as it manifests itself in various indicative phases and the successes and failures of the organization within these phases, and, finally, 6) the prospects that exist for OPEC in terms of challenges and opportunities, which section includes the pertinent variables of analysis from which these challenges and opportunities are deduced. Then, and only then, in Chapter 5 do I presume to predict the behavior of OPEC in conjunction with the strategies different entities should assume in order to profit from this behavior.

The first section in the first chapter entitled “What is OPEC?” asks the important question of whether or not, or to what degree, OPEC has been and is a cartel. The importance of this question lies in the fact that different types of economic entities interact with the market in different ways. In order to predict OPEC’s behavior, we must first categorize it according to known economic models, and, from the accepted principles by which those models function, draw various parameters within which OPEC's behavior has been conducted, is being conducted, and, in the end, can be expected to be conducted.

The next section, looks meticulously at the nations that make up OPEC, and, briefly at the end, the non-OPEC exporting countries that offer peripheral competition to OPEC. After

looking at certain ways in which the countries in OPEC can be grouped according to their past actions as these have been influenced by their diverse domestic and foreign economic activities and relations (grouping variables include large population/small reserves, small population/large reserves, low-cost producers, high-cost producers, and price hawks/price doves), an in-depth look is taken at each country according to a number of economic indicators. Specifically, following the seminal work of Amuzegar (1999), I concentrate on physical and social infrastructures, real GDP per capita and growth percentages, prevalences of inequality and environmental destruction, price stability and fiscal/monetary discipline, debt and trade balances, sectoral diversity, percentage of public funds received from oil, oil reserves, and health of oil industry. Through these indicators a picture is taken of each country that can be used in the final analysis to predict how that country is going to behave over the next 10 years.

Following this section, I look at the microeconomics of the OPEC and OECD nations in general. Questions that I seek to answer in terms of the OPEC nations include: 1) what kinds of development and at what rate have taken place, 2) what is the trend in foreign investment, 3) what currency factors are there that should be considered crucial in any overall economic prediction, and 4) what kinds of GNP expectations are sound? In terms of OECD nations, I ask, and hopefully answer: 1) what is the role of oil in these countries' industrial growth and economic health, 2) what forces within these countries are working for or against continued consumption of OPEC oil, and 3) what is the role of the multinationals in these countries and as a conduit between them and the OPEC nations? Following this is a discussion of the role of OPEC in the world economy, in terms of economic, political, and the issues surrounding the independents/multinationals split. All of this material will be used to make long-term predictions about how OPEC will behave given these factors.

After this section I will look in detail at the history of OPEC. This history is broken into six phases: Pre-OPEC (1900 to 1960), Establishment (1960 – 1970), Ascendance to Power (1970 – 1973), Dominance (1974 – 1981), Withdrawal (1981 – 1986), and Limbo (1986 – 2000). Of particular importance in this historical analysis are such issues as price fluctuations, production limits, excesses and regulations, financial arrangements, factors internal and external that have influenced OPEC and its oil market, participation by the host countries in production and eventual take-over, market factors, and solidarity within the organization. Special emphasis is made at the end of each section on what is seen as the successes and failures of the organization during that particular phase.

In the fourth chapter, I inch ever closer to discussing the possible and probable future of OPEC. I begin by looking at particular challenges and opportunities that the organization will face in the upcoming ten years. These include those that arise from within the member countries, from within the organizational structure of OPEC, from within the importing countries, from within the non-importing countries that nevertheless influence the global market, from within the non-OPEC exporting countries, and from the global market in general. Then, I look at what I consider to be the key variables that will underscore these challenges and opportunities, which include: price, total output, production agreements, output division, working with the free market, foreign involvement, alternative fuels, the environmentalist movement, non-OPEC producers, and changes to the structure of the organization.

Finally, the future of OPEC is discussed. This future is framed according to a series of questions: 1) What are the external and internal factors that will be most likely to influence OPEC's behavior in one way or another, 2) what kind of production, participation, and pricing agreements is OPEC likely to enter into, and 3) what kinds of profitable opportunities will exist

for shareholders and customers of OPEC and how can these opportunities be taken advantage of to best effect? These questions answered, the book concludes.

Chapter 2 – What is OPEC?

As discussed in the introduction, wide price fluctuations have marked the history of oil. What is interesting about this phenomenon is that one would not expect an organization such as OPEC – with its cartel-like control of the market – to allow or suffer such price variances. This discrepancy thus calls forth the question – what kind of economic entity is OPEC? This question is important because it can help us establish the market dynamics that have existed within and outside of OPEC, dynamics which have fostered price fluctuations and which, if altered in some way, could prevent them in the future. But first it will be necessary to look at the various market configurations that exist: pure competition, pure monopoly, monopolistic competition, monopsony, bilateral monopoly, discriminating monopoly, and oligopoly.

In order for a market to be classified as purely competitive, three conditions need to be met:

1. Many individual firms must exist with no control over prices because each has such a small output so that any entry or exit in the industry has no effect on the market price or structure.
2. The firms product must be uniform.
3. Mergers, acquisitions, buyouts, etc., as well as entry and exit of individual firms, have to be performed freely.

If these conditions exist, then firms compete freely with one another to gain sales. There are so many firms that no firm can control the price of the product. This means that firms must

follow the consumer in establishing prices. A firm that is not able to produce what consumers want at a price that is lower than its competition will lose customers and eventually close. These conditions would lead to the disappearance of abnormal profits and losses in the long run assuming there are no changes in demand and cost variables (Economic Theory + Operations Analysis – W.J. Baumol p. 393 – 394).

It is generally agreed upon, however, the pure competition does not exist. Hage, Boroughs, and Black discuss how "over the past decade, deregulation, growing world trade and smashing technological advances have compelled most businesses to compete ferociously and freely to maintain profits…[and] these pressures have also forced a number of players to find crafty new ways of crushing rivals and exploiting markets" (42). In a sense, it is inevitable that pure competition should not exist, as one or several industry leaders eventually thrust out competitors and begin to seize the market.

A pure monopoly is found at the other extreme of the market spectrum. In this structure, only one firm exists with full control over the market for its product. There are no substitutes or competitors to challenge the firm. Pure monopolies often exist in utilities markets. For instance, citizens of New York City in the year 2000 had no choice but to obtain their energy from Con Edison.

Monopolistic competition is a step down from pure monopoly. The difference is product differentiation. This heterogeneity of products allows for multiple firms, though each firm knows that the price that can be charged is a decreasing function of the quantity sold. There is, therefore, no attempt to anticipate the reactions of individual competitors, as each is functioning in accordance with the same downward-sloping demand curve. As Dixit and Stiglitz state, in monopolistic competition, "potential commodities in a group or sector or industry are good

substitutes among themselves, but poor substitutes for the other commodities in the economy" (127).

Monopsony is the equivalent of monopoly, only monopsony exists on the demand side, while monopoly exists on the supply side. In monopsony, there is only one buyer. Unless the supply is perfectly elastic, then the buyer can exploit the fact that a reduction in buying will bring about a reduction in price.

A bilateral monopoly is a market configuration in which only one buyer and one seller exist. For instance, some sellers face only one buyer in the form of a government department (i.e., Department of Defense). Some trade unions also face only one buyer – a large employer. In a bilateral monopoly, all negotiations on price and quantity are carried out between the monopolistic buyer and seller.

A discriminating monopoly is one in which different prices are charged for the same product depending on the buyer or the market. Normally, the monopolist sets prices so that the marginal revenue in each market equals the marginal cost. However, the discriminating monopolist can charge different prices in different markets if the demand elasticity is not the same in the two markets. In that case, the price will be higher in markets with less elasticity and lower in markets with more elasticity. A monopolist can only be discriminating, however, if sale between the markets is impossible or expensive.

An oligopoly is a market structure in which there is a small number of large firms who produce the major portion of the industry's output. Unlike in monopolistic competition, oligopolists need to take into consideration the individual reactions to their change in price. Market equilibrium is thus achieved by each member of the oligopoly predicting the reactions of others.

Finally, monopolies come in several forms. First, there are trusts. A trust is a monopoly that has come to exist through amalgamation. Often, shares of stock are transferred to an individual or small group for trust certificates, and these individuals then wield a great amount of control. This technique, which began in the 1800's in the U.S., gave birth to many of the anti-trust laws. A similar and more modern example is the holding company, which issues its own stock shares for sale to the public and holds or controls other companies by owning their shares.

Another form of monopoly is mergers. This is some type of combination of firms (horizontal in which two firms interact on equal footing, or vertical, in which one firm 'controls' another) that attempts to conglomerate each firm's forces to control pricing. Mergers, quite common in recent years, have the potential for the negative effects of monopoly.

Finally, there is the cartel. A cartel is a formal organization of firms or producer countries which have an open, enforceable agreement among the members which pertains to price and possibly other market variables, such as allocation of market shares and control of production.

Singer claims that a classic cartel consists of members that are willing to adjust their production in order to comply with a total production quota. This is determined based on market demand and agreed to by all provided there is no loss in the market share. In contrast to a competitive economic environment, a classic cartel is able to impose its high price on the world market. By allowing delayed payments and artificially inflated barter deal prices, they can undercut the quoted official price. However, because the members seek profits and cannot be monitored, they are prone to cheating which in turn leads to instability in the cartel.

Cartels show a variety of characteristics that help differentiate them from other market entities in terms of how they create the propensity to cheat among their members. To begin with, the number of firms involved in the cartel is an important variable. The more firms there are in

the industry, the easier it is for one or more of them to cheat without being detected. In other words, the difficult of agreeing on a price structure (and thus the tendency to increase the motivation to cheat) is in a positive relation to the number of firms. Cartels also usually thrive when there is a homogeneity of product, since in a complex industry production structure the disagreement over price is greatly exacerbated. Also important is the number of buyers present. With a large number of buyers, it is difficult for the group to enlarge its market share. The profit margins will, then, be smaller due to the substantial capital gains put into advertising, production improvement, and price decline. As profit margins for the group will be small, individual cheating will increase in order to skim some of the profits toward the individual entity at the expense of others. Finally, loyalty is an important variable in cheating. When loyalty is high, cheating and competitive price cutting are less likely because customers are well known.

Given the above analysis, what kind of entity is OPEC? It would seem as if it were a cartel. A number of economists have discussed OPEC's status as a cartel – Al-Chalabi (Year?), Loderer (1985), Rauscher (1989), and Griffin (1985) – and among them there is a general disagreement as to whether or not OPEC fits the classic cartel model.

According to Al-Chalabi, though OPEC is not a cartel in a strict economic sense (why?), it did enjoy a cartel-like position due to its dominant position in world trade. He also points out that "in the cartelization approach, prices can be raised as long as consumption is not reduced appreciably below certain optimal levels that can be decided beforehand or before a substitute can be found" (p. 6). However, OPEC failed to realize that its cartel-like position could be preserved only if it could maintain an optimal balance between price and market demand. Thus, while OPEC had cartel-like domination, it failed to realize what this meant and how to maintain it.

For Loderer, the ultimate test for whether or not OPEC is a cartel is the degree to which it can control price. Of course, OPEC's control of and effect on price has varied. Although 34 OPEC meetings occurred during the 1974 – 1978 period, the pricing decisions made at these meetings did not consistently modify the price of spot market products (citation?). It was only between 1981 and 1983 that OPEC influenced the prices of heating oil futures. During periods of softening prices OPEC was able to cause market developments, but when prices increased, it reacted to market forces by adopting restrictive production policies which were usually not followed and thus ineffectual. For this reason, between 1974 and 1980, OPEC's market share dropped from 54.9% to 44.9%. (Rauscher, p. 66, 1989). MORE INFO ON OPEC's ABILITY TO CONTROL PRICES.

Rauscher, on the other hand, is more optimistic than Loderer, and though he does not go so far as to proclaim that OPEC has acted like a cartel, he nevertheless finds in OPEC the potential stability and homogeneous policy making among its members that typify cartels. Although during the 1970s and 1980s (WHAT ABOUT THE 90s?) the distribution of power among different members varied, the stronger ones were increasingly willing to shoulder the financial burden, indicating a group mentality akin to cartel-like collusion. For example, Saudi Arabia's decision to act as swing producer helped preserve OPEC's coherence, stability and power. Similarly, the quota system of 1983 emphasized OPEC's increasing attempts to share the burden of limited productivity and smaller profits. Saudi Arabia, being in a better economic position than other members, absorbed 6.4% of the 15.5 million bl/d cutback compared to only a 2.6 million bl/d production restraint that the other Arab Gulf States had to endure (Rauscher, p. 67). Such behavior on the Saudis' part would indicate some internal sense of a cartel-like organization and its potentials for market dominance.

Finally, by testing four competing models for suppliers on the world oil market, i.e. cartel, competitive, target revenue, and property rights, Griffin is able to demonstrate that OPEC's core acts as a cartel, while its fringes espouse a competitive price-taking model (Van Bergeijk, p. 365). Griffin defines a cartel as a group of members who decide to share their power with each other and obey rules of how to share the market by dividing their power and responsibilities in two ways: 1) assigning market share per member, and 2) establishing a variable market share that depends on price and production in difficult times. According to Griffin, OPEC's core obeyed these rules, while its fringes did not. The reason that the fringe acted more competitively was an awareness that other price-setting forces were at work in the market.

From all of the above information, it would seem as if OPEC has generally acted as a cartel, though not always successfully. First, it sought to maximize profits by increasing prices. Second, it took advantage of its large production capacity as a tool to influence the market. Third, it is comprised of a group of producers (countries) with common action parameters. Finally, the organization has tried to establish a price structure and an output quota system.

The Nations of OPEC

OPEC is what Amuzegar calls "a heterogeneous group with shared objectives" (1). The differences that make them a heterogeneous group are physical, demographic, economic, technological and socio-political. Two elements, however, have remained constant throughout the group: reliance on petroleum revenues as a central element of their economies and the primacy of the state in all aspects of oil production and management. In this section I will outline the differences between the countries along the above-mentioned lines, as these differences will

play an important element in the analysis of OPEC's behavior over the years. Then, I will break the countries down according to the following categories: 1) Large population/small reserves, 2) Small population/large reserves, 3) Low-cost producers, 4) High-cost producers, and 5) Price hawks vs. price doves.

Dynamics Within Each Country

Physical diversity is an aspect of the OPEC countries. Primarily, size, location, natural resource endowment, and infrastructure are the key differences. For instance, Algeria at 2.5 sq km, Indonesia at 1.9 million sq km, and Saudi Arabia at 2.15 million sq km dwarf countries like the UAE at 84,000 sq km, Kuwait at 18,000 sq km, and Qatar at 11,000 sq km. In terms of location, Libya and Algeria are in prime spots for serving Europe, Venezuela and Ecuador for serving the United States, and the Gulf countries for serving Asia. At times, the countries' location vis-a-vis the Suez canal, or a particular war, or a particular trade route made transporting oil easier or more difficult. In terms of natural resources, the amount of fresh water, mine-able mineral deposits, and timber vary among the countries. Further, Indonesia and Iran have considerable agricultural potential, while Saudi Arabia and Libya have almost none. Finally, the infrastructure of the countries has differed widely over the years. In a report by the World Bank in 1994, in 1990 Indonesia had 116,000 sq km of paved roads while Ecuador had 3,000 sq km. Iran had 4996 sq km of railroad track while Gabon had only 683 sq km. Iran also had 4.4 million main telephone lines, while Indonesia, with a much larger population, had only 2.5 million. Finally, in 1994, in terms of electricity production, Venezuela had 73.1 billion kwh, while Gabon had 933 million (World Bank). These differences drastically effect a country's ability to produce and transport oil.

Finally, one major difference between the countries in terms of natural resources is the difference between their known oil reserves. For instance, in 1996 the following small reserves were listed (in million barrels): Ecuador (2015), Gabon (2350), and Qatar (3500). The following larger reserves were also listed (in million barrels): Iran (94,300), Iraq (100,000) and Saudi Arabia (261,375) (OPEC, *Annual Statistics Bulletin*, 1996).

Demographic features have also distinguished the OPEC members from each other. For instance, in 1994, 60% of the population in Qatar was part of the labor force, while only 21% of the population of Kuwait was. Iraw and Iran, at 29% and 25% respectively, were not much better. Unemployment rates also differed. Algeria had a 27% unemployment rate in 1994, while several OPEC members had 0% unemployment.

Oil also forms a different part of the overall structure of production of each OPEC nation. According to the World Bank, for instance, in 1994 oil production in Ecuador and Indonesia accounted for only 13% and 12% of GDP respectively, while it accounted for 42% in Kuwait, 32% in Gabon and Saudi Arabia, and 34% in the UAE.

The countries of OPEC also relied to a differing degree on oil exports as a percentage of their overall exports. In 1996, oil accounted for 97% of all exports in Nigeria, 92% in Libya, and 90% in Kuwait. On the other hand, the numbers are 15% in Indonesia, 40% in Ecuador, and 48% in the UAE (IMF, *International Monetary Fund Yearbook*).

Several social indicators further highlight the differences between the countries. For instance, there are vast differences among the countries in terms of health. The life expectancy in Nigeria in 1994 was 55 years, in Iraq 57 years, and in Gabon 54 years. In Kuwait, however, it was 75 years and in the UAE 74 years. Further, the infant mortality rate in 1994 (per 1000) in

Iraq was 146, while it was 17 in the UAE. Finally, in 1994, only 66% of the population had access to health care in Nigeria, while 100% had access in Kuwait and Qatar (Amuzegar, 231).

Further Groupings

Several countries fall into the "large population/small reserves" category. These are Algeria, Nigeria, and Indonesia, with populations of 27 million, 108 million, and 190 million, and reserves of 9.98 billion barrels, 20.99 billion barrels, and 4.98 billion barrels, respectively. This difference between large population and small reserve has generally caused these countries to tend "to favor a strategy of short-term revenue maximization and...to have had relatively low political/social tolerance for the pain caused by low oil revenues" (Feld, 33).

The countries that fall into the "small population/large reserves" category are Kuwait, the UAE, and Saudi Arabia. Kuwait's population in 1994 was 1.5 million, the UAE's 1.8 million, and Saudi Arabia's 18 million, while Kuwait's reserves in 1996 were 96.5 billion barrels, the UAE's 98.1 billion barrels, and Saudi Arabia's 261.3 billion barrels. These countries have tended to be less worried about price decline and have thought more long term about their revenue maximization.

The countries can also be divided according to low-cost and high-cost producers, factors which inevitably influence the price at which these countries can sell their oil. For low-cost producers, such as Saudi Arabia, Kuwait, the UAE, and Iraq, the marginal cost of producing oil is relatively low. This means that they stand a better chance of weathering periods of low price. For countries with high-cost production factors, such as Venezuela and (non-OPEC countries) Norway and Britain, periods of low price can be more difficult to handle since their marginal production costs are high, forcing oil fields to shut down (Feld, 34).

These relations among population, reserves, and cost of production differentiate the groups into "price hawks" and "price doves." The price hawks are those countries who prefer a higher price in the short-term so that they can make as much money as possible as quickly as possible. Often these are the countries with high populations and small reserves, but also these can be countries who see their financial needs as more imminently pressing than others, due, for instance, to war (in the case of Iraq and Iran). The price doves are those countries that prefer lower prices over the long-term in order to stretch out their oil revenues. These are generally the countries with smaller populations and larger reserves, since their smaller population requires less "up-keep" and their reserves are likely to outlast those of other members.

Specific Country Dynamics

Within each country, there are political, social, and economic circumstances that are unique and thus uniquely influence the way each country behaves in the OPEC organizational setting. In this section, I will look at some of the differences among countries, highlighting differences that are most likely to effect oil policy. This analysis will take as its framework the research conducted by Amuzegar, whose theory of windfall allocation concentrates on how and how well each nation has attempted to utilize the revenues from oil.

Algeria

Algeria was governed up until the late 1980's by a primarily socialist and heavy-handed governmental structure that eschewed most forms of private enterprise. The windfalls it received from the oil booms were primarily put into state-run industrial and petroleum projects. There

were years of deferred private consumption intermingled with periods where housing and other private developments were engaged in.

Throughout the 1970's, this trend continued, and Algeria had one of the highest ratios of gross domestic capital formation to GDP – 40% - in the entire world (Amuzegar, 51). The second Four Year Plan, which ran from 1974 – 1977, concentrated on establishing heavy, low labor industries instead of light, labor-intensive industries. Hydrocarbons and liquefied natural gas were at the center of much of this expansion, as was capacity expansion for oil, gas, and gas liquids. Steel, fertilizers, petrochemicals, and plastics were also high on the agenda. Over 27 large projects were built by SONATRACH, along with the world's largest LNG export capacity and an undersea pipeline for natural gas between Algeria and Europe. Private consumption was kept to a minimum and private investment played a largely marginal part.

By the 1980s, there were a number of social needs that had not been addressed due to the heavy emphasis on industrialization. Housing, education, health, lighter industries, and agriculture had suffered in the 1970s and became part of a plan of reform. These sectors became the object of increasing private investment. However, since savings levels were not keeping up with demand, foreign investment had to be sought, which left an external debt of $16 billion by 1985.

As the price of oil plummeted in 1986, Algeria ran into very hard times. The planning ministry was disbanded in 1987 as it continued to try to funnel more money from oil to other lighter sectors. With help from the International Monetary Fund in 1989 and 1991, Algeria sought to impose austerity plans on itself, including tighter monetary policies, adjusted exchange and interest rates, and trade was more tightly controlled. Privatization continued apace throughout the 1990s through IMF programs, which also included currency devaluations, higher

interest rates, an end to price controls, anti-inflationary measures, and a decrease in deficits (Amuzegar, 52).

In essence, Algeria's economy was tightly controlled by a central authority – primarily the Treasury and the Central Bank – until the early 1990's, when the IMF stepped in and liberalized. Even then, however, privatization was primarily kept only to lighter industries and service sectors. Foreign trade, foreign exchange, banking, and investment activities were controlled by central authorities. Foreign participation in the oil industry was largely shunned until the mid-1990s, when many joint venture agreements were signed between SONATRACH and foreign oil companies. Finally, though Algeria is a pseudo-military regime, its military budget was generally only 3% of GNP.

Continue section into 1990s...

[INSERT FELD ANALYSIS]

Key Economic Indicators
(Millions of U.S. Dollars unless otherwise indicated)
(Country Report, US Department of State, March 2000)

	1997	1998	1999 1/
Income, Production and Employment:			
Nominal GDP 2/	47,100	48,300	51,400
Real GDP Growth 3/	1.1	5.1	4.0
GDP by Sector: 2/			
Agriculture	4,497	5,756	6,171
Manufacturing	4,405	4,765	5,129
Construction	4,616	4,731	5,028
Hydrocarbons	13,717	10,700	12,042
Services	10,771	11,794	12,707
Government	8,922	9,670	10,323
Real Per Capita GDP (US$)	1,596	1,610	1,620
Labor Force (millions)	8.07	8.10	8.3
Unemployment Rate (pct)	27.8	28.0	28.0
Fiscal Deficit/GDP (pct)	2.4	-3.50	-4.5
Money and Prices (annual percentage growth):			
Money Supply (M2)	18.5	19.0	21.5

Consumer Price Index	5.7	5.0	3.5
Exchange Rate (dinar/US$, annual average)			
Official 4/	57.7	59.5	65
Parallel 5/	65.0	70.0	71
Balance of Payments and Trade:			
Total Exports	14,640	10,213	12,100
Oil/Gas	13,700	10,100	11,000
Exports to U.S. 6/	2,439	1,656	1,775
Total Imports CIF	10,190	9,403	9,900
Imports from U.S. 6/	695	713	905
Trade Balance	4,450	1,500	1,200
Balance with U.S.	1,744	953	870
Current Account Deficit/GDP (pct)	6.45	-1.00	-1.6
External Public Debt	31,050	30,261	28,960
Debt Service/GDP (pct)	8.9	11.1	11.3
Gold and Foreign Exchange Reserves	8,500	8,300	6,510
Aid from U.S. 7/	156	209	325
Aid from All Sources 8/	392	N/A	N/A

1/ Embassy estimates based on partial data furnished by Algeria's Central Bank.
2/ GDP at current market price.
3/ Percentage changes calculated in local currency.
4/ Bank of Algeria and embassy estimate.
5/ Embassy estimates.
6/ 1999 data, based upon 9 month statistics.
7/ In thousands of dollars, IMET and USIA exchanges.

Oil Data (Euromonitor 1999)

Algeria	Unit	1994	1995	1996	1997	1998	1999
Production of Crude Oil	Million tons of oil equivalent	56.4	56.8	59.3	60.2	58.9	na
Proven Oil Reserves	'000 million barrels	9.2	9.2	9.2	9.2	9.2	na
Proven Oil Reserves ('000 MTOE)	'000 MTOE	na	1.2	1.2	1.2	1.2	na
Ratio of Proven Oil Reserves to Production	Years	na	na	19.4	18.8	19.8	na

Ecuador

Ecuador joined OPEC in 1973 and left the organization in January 1993. In those twenty years, it exported approximately $25 billion in oil. It regularly overproduced as a member of OPEC, and upon leaving saw even higher revenues as it was able to produce more than the OPEC quotas.

Amuzegar points out three ways in which Ecuador went about utilizing its oil windfalls: land, tax, and public administration reforms. None of these went as planned, with land reform changing very little the ownership demographics, tax reform being generally overlooked, and the public administration entities growing larger than planned.

Despite the fact that Ecuador's windfalls were administered through its prototypically powerful state planning structure, the distribution of the oil revenues was chaotic. This was primarily due to the fact that the planning as not centralized and the country was constantly in a state of political shock. Further, the public sector continually absorbed a huge portion (generally up to 40%) of the government funds, leaving very little for other spending programs. Foreign borrowing was also a problem, as Ecuador lent heavily to finance a number of projects. In the early 1990s, however, privatization measures took hold, and small steps were taken toward loosening the state's control of economic activities.

The IMF also took a large role in the policies of Ecuador during the 1980s and early 1990s. Through its assistance, the government sought to decrease inflation, balance the budget, reduce subsidies, and deregulate trade. As the oil bust in 1986 set in, however, the economy grew extremely weak, with high unemployment and inflation, causing more state control to take effect. By 1992, however, conditions had not bettered and staples were growing scarcer, bringing in a more free-market-minded government under Duran Ballen.

Ecuador also set out, after leaving OPEC, to expand its known level of oil reserves through programs that expanded exploration. The state also stepped in and purchased back its shares in Texaco and Occidental, returning state control to the oil industry of that country. By 1993, however, foreign companies were being invited in through foreign investment and production-sharing contracts.

Throughout the 1980s and early 1990s, the fiscal policies of Ecuador attempted to deal with the fact that oil revenues were not a major share of total revenues by increasing oil prices and taxes to bolster public entities' budgets. The IMF attempted to check this behavior through its programs designed to reduce subsidies and improve tax collection procedures. Foreign borrowing, however, continued to hamper growth in Ecuador, as ever greater sums were being paid in interest payments.

Monetary, price, and exchange rate policies proceeded throughout the 20 years in OPEC, and the years following, to attempt to liberalize the economic structure of Ecuador. Interest rates were lowered, credit policies through the Central Bank were established, attempts were made to bring wages into line with world averages, and the currency was allowed to be traded on the free market (Amuzegar, 58). All these policies were part of Ecuador's movement toward less state control of the economy. Like Algeria, military expenditures during this time stayed at around 3% of GDP, but political instability continues to hamper economic progress in Ecuador.

Continue section into 1990s...

[INSERT FELD ANALYSIS]

Key Economic Indicators
(Millions of U.S. Dollars unless otherwise indicated)
(Country Report, US Department of State, March 2000)

	1997	1998	1999 1/
Income, Production and Employment:			
Nominal GDP	19.8	19.7	14.5
Real GDP Growth (pct)	3.4	0.4	-10.0
GDP by Sector:			
Agriculture, Fishing	4.1	-1.4	2.7
Petroleum, Mining	3.5	-3.3	-2.6
Manufacturing	3.5	0.4	-9.2
Commerce, Hotels	3.3	0.9	-11.3
Finance, Business Services	1.9	3.5	1.1
Government, Other Services	1.3	1.2	-11.9
Per Capita GDP (US$)	1,665	1,619	1,164

Labor Force (estimate - 000s)	3,374	3,441	3,880
Urban Unemployment (pct)	9.3	11.5	16.9
Money and Prices (annual percentage growth):			
Money Supply (M2) 2/	35.0	43.0	N/A
Consumer Price Inflation	30.7	45.0	50.4
Exchange Rate (Sucres/US$ annual average)			
Central Bank	4,000	5,442	11,165
Market	4,070	5,445	11,182
Balance of Payments and Trade:			
Total Exports FOB 3/	5.3	4.2	2.8
Exports to U.S. 3/	2.0	1.7	1.1
Total Imports CIF 3/	2.2	5.2	1.7
Imports from U.S. 3/	1.5	1.7	0.6
Trade Balance 3/	3.1	-1.0	1.1
Balance with U.S. 3/	0.5	0.0	0.5
External Public Debt	12.6	13.3	13.6
Debt Service Payments/GDP (pct)	27.7	22.4	21.0
Current Account Deficit/GDP (pct)	-3.8	-11.0	2.6
Fiscal Balance/GDP (pct)	-2.5	-5.9	-4.0
Gold and Foreign Exchange Reserves	2.1	1.7	1.3
Aid from U.S. (FY-US$ millions)	11.5	12.5	16.4
Aid from Other Sources (US$ millions)	N/A	N/A	N/A

1/ 1999 figures are estimates based on data available in November 1999.
2/ 1999 figure is for August 1998-August 1999.
3/ All 1999 figures are for the period January-August.

Oil Data (Euromonitor 1999)

Ecuador	Unit	1994	1995	1996	1997	1998	1999
Production of Crude Oil	Million tons of oil equivalent	19.8	20.2	20.1	20.2	19.6	na
Proven Oil Reserves	'000 million barrels	2	2.1	2.1	2.1	2.1	na
Proven Oil Reserves ('000 MTOE)	'000 MTOE	na	0.3	0.3	0.3	0.3	na
Ratio of Proven Oil Reserves to Production	Years	na	na	14.8	14.8	15.2	na

Gabon

Gabon, a small republic on the west coast of Africa, is rich in natural resources, including timber, minerals, and, of course, oil. Between 1974 and 1994, total oil exports equaled more than $28 billion. Gabon built up its oil producing and exporting capabilities, along with the

infrastructure and services they demand, through partnerships with major oil companies, foreign loans and investment, and loans from the World Bank. The total amount of grants and loans coming into Gabon between 1974 and 1994 was $2.5 billion (Amuzegar, 59).

Gabon is a primarily centrally planned economy, governed by a strong state apparatus that holds a large share in the majority of the economic entities in the country. Natural resource exploration and distribution was at the center of these activities. Oil development was also strongly pursued through joint ventures with the majors.

Oil windfalls have formed a significant portion of Gabon's gross fixed investment, averaging, for instance, between 1974 and 1978, up to 50% of GDP. A number of large projects were pursued through these revenues: railways, city development, and large building complexes, all in attempt to modernize and provide the infrastructure necessary to grow. With a large dependency on foreign agricultural products, due to the small nature of its agricultural output, the Gabonese government spent during the 1980s attempting to shore up its agricultural workforce, improve the life of the rural population, and making more modern equipment and marketing opportunities available to farmers. Further efforts were expended toward making certain that Gabon's timber resources were managed well in order to provide a long-term, sustainable form of resource-dependent revenue. Finally, while the government attempted during the 1970s and 1980s to insure more direct domestic involvement in industry, requiring companies provide outright 10% of their equity, 3% of their capital for Gabonese nationals, and train Gabonese citizens, by the mid-1990s these restrictions were slackened in order to attract even more foreign company involvement.

In terms of fiscal policies, the Gabonese system was "arguably the most detailed and complex" (Amuzegar, 60) in all of OPEC. A diverse array of taxes were levied on a multitude of

activities, and over half of all tax revenues by 1994 continued to come from oil revenues. Monetary policy has played a small role in Gabonese economics, primarily due to the lack of utilization of interest rates for leveraging credit. Price controls and subsidies, however, have been very intricate, with controls and subsidies being placed on essential and basic items, while imported products were subject to "profit-margin limitations" (Amuzegar, 61) Finally, wage policies were carried out throughout the 70s, 80s, and 90s, with progressive minimum wage and social security systems, making Gabon's workers the highest paid in equatorial Africa.

In short, Gabon's economy, though one of the strongest in Africa, has had to mature and function under a strong-minded authoritarian regime. As Amuzegar puts it, "although the government officially followed a pro-business, pro-private enterprise policy, and declared itself ready to grant tax exemption, tariff protection, public credit and contracts to private interests, the regime's highly bureaucratized nature proved a formidable obstacle to such undertakings" (62).

Continue section into 1990s...

[INSERT FELD ANALYSIS]

GABON
Key Economic Indicators (Millions of U.S. dollars unless otherwise noted)
(Country Reports, US State Department, 1994)

	1992	1993	1994 1/
Income, Production and Employment:			
Real GDP (1989 prices) 2/	4,212	4,316	4,293
Real GDP Growth (pct.)	-1.5	2.5	-0.5
GDP (at current prices) 2/	5,021	4,824	3,654
By Sector: Agriculture	466.7	450.5	326.6
Industry	2,378.4	2,443.1	2,150.7
Oil	1,720.3	1,626.1	1,558.4
Non-Oil	652.4	629.3	456.2
Construction	194.3	187.6	36.0
Services	2,631.6	2571.3	1484.9
Real Per Capita GDP ($:1989 base)	4,254	4,272	4,127
Labor Force (000s)	89.3	89.5	N/A

Unemployment Rate (pct.)	N/A	N/A	N/A
Money and Prices: (annual percentage growth)			
Money Supply (M2)	-11.23	-4.66	19.46
Base Interest Rate (pct.) 3/	12.0	11.5	12.0
Personal Saving Rate (pct.)	23	22	N/A
Retail Inflation (pct.)	-4.6	1.3	48.2
Wholesale Inflation (pct.)	N/A	N/A	N/A
Consumer Price Index (100=75)	283.0	286.7	400.8
Exchange Rate (USD/CFA) Official	265	283	530
Parallel	N/A	N/A	N/A
Balance of Payments and Trade:			
Total Exports (FOB) 4/	2,259.1	2,113.7	1,883.0
Exports to U.S.	927.9	940.6	543.2 5/
Total Imports (FOB) 4/	886.2	835.2	741.1
Imports from U.S.	54.7	48.2	20.0 5/
Aid from U.S. (000's)	168	168	N/A
Aid from Other Countries	125	12	N/A
External Public Debt	3,350.9	3,358.4	3,442.0
Debt Service Payments (paid)	351.7	119.0	463.7
Gold and Foreign Exch. Reserves	75.3	5.0	N/A
Trade Balance 4/	1,372.4	1,278.5	1,141.8
Trade Balance with U.S.	873.2	892.4	543.2 5/

N/A--Not available.
1/ 1994 figures are all estimates based on available monthly data in October 1994.
2/ GDP at factor cost.
3/ Figures are actual, average annual interest rates, not changes in them.
4/ Merchandise trade.
5/ Figure is based on January-June data.

Oil Data (Euromonitor 1999)

Gabon	Unit	1994	1995	1996	1997	1998	1999
Production of Crude Oil	Million tons of oil equivalent	16.8	17.8	18.3	18.6	17.8	na
Proven Oil Reserves	'000 million barrels	1.3	1.3	1.3	na	2.5	na
Proven Oil Reserves ('000 MTOE)	'000 MTOE	na	0.2	0.2	na	0.3	na
Ratio of Proven Oil Reserves to Production	Years	na	na	10.2	na	19.2	na

Indonesia

The Indonesian economy, prior to the discovery of oil, was the poorest in all of OPEC and one of the poorest in the world. Following the oil boom, however, their economy began to blossom and today is (insert figures). Most importantly, Indonesia has succeeded, despite oil exports accounting for up to 40% of total exports, in developing a diverse economy that offers a number of positive relationships between private and public entities.

The Indonesian economy was orchestrated in the three decades prior to the 21st century through five-year plans, or Repelita. Specific growth targets were established, qualitative goals outlined, and private investment and guidance sought. Importantly, "adherence was flexible and pragmatic rather than strict and rigid" (Amuzegar, 62).

Total earnings in oil for Indonesia between 1974 and 1994 was approximately $166 billion. Foreign investments, grants, and loans also poured into the country during these years. In 1981, foreign private investment reached $140 million, which grew in 1994 to $2 billion. Due to insolvency by Pertamina, Indonesia's national oil company, the government took it over and used the second oil boom's windfalls to pay off its debts, accrued in the early 1970s in an attempt to diversify the company's industrial activity.

The diversification of the economy in general was a success through windfall allocation to light and heavy industries, as well as agricultural reform. Services in telecommunications and banking were also nurtured. Finally, rural development was stressed in an attempt to distribute windfall benefits evenly.

At the heart of the diversification was a focus of private investment in import-substituting industries. These included basic metals, fertilizer production, cement, paper, and hydrocarbons (Amuzegar, 63). By the mid-1980s, as outlined in the Repelita III (1979 – 83), oil production

capacity was increased by 2 million barrels per day by the mid 1980s. President Suharto, coming to power in the early 1990s, saw Indonesia's future as also lying in high-tech, manufacturing ships, planes, nuclear plants, and satellites (Amuzegar, 63). Finally, Indonesia created a progressive social service system by funneling outlays into sectors such as health and education.

When the price of oil dropped in 1986, oil revenues dropped with it. In 1985 the average crude price was $25 per barrel, which fell to $18 per barrel in 1986. The global depression also shrunk Indonesian exports in coffee, rubber, tin, and high tech goods. In order to rescue the economy, Suharto instituted a wide array of fiscal, monetary, exchange, trade, and foreign investment measures.

Fiscally, Indonesia maintained what was called a "dynamic balanced-budget" principle, which was the only of its kind among the OPEC members. Current expenditures were covered by domestic taxes, while capital expenditures were covered by oil revenues and foreign investment, obviously meaning a shrinking of capital formation during the low-price days. In terms of taxes, measures were taken to increase the tax income on non-oil products, which, of course, Indonesia had more of than the average OPEC members. Elaborate monetary policies designed to keep inflation low through credit ceilings, selective credit allocation, and subsidized low interest loans were practiced during the hard times (Amuzegar, 65). Rounding off these economic measures were liberal and open exchange markets, strict price and wage controls, oil subsidies for domestic consumption, and a highly regulated trade structure to support local industries. Trade regulations loosened throughout the 1990s, however.

Continue section into 1990s...

[INSERT FELD ANALYSIS]

Key Economic Indicators
(Millions of U.S. Dollars unless otherwise indicated)

(Country Reports, US Department of State, March 2000)

	1997	1998	1999
Income, Production and Employment: 1/			
Nominal GDP	216	94	67
Real GDP Growth (pct)	7.6	-13.2	-4.0
GDP by Sector:			
Agriculture	34.5	18.4	15.0
Manufacturing	54.9	23.4	16.7
Services	67.5	35.7	26.4
Government	11.5	4.1	3.16
Per Capita GDP (US$)	1,116	465	550 2/
Labor Force (millions)	87.0	92.6	96.6
Unemployment Rate (pct)	4.6	10	10
Money and Prices (annual percentage growth):			
Money Supply (M2) (pct)	23.2	62.3	10.2 3/
Consumer Price Inflation (pct)	8.0	75.0	0.02 4/
Exchange Rate (Rupiah/US$ annual average)	2,909	10,014	7948
Balance of Payments and Trade: 1/			
Total Exports FOB	56.2	50.4	21.7
Exports to U.S.	9.2	9.3	5.3
Total Imports CIF	41.7	27.3	11.5
Imports from U.S.	4.5	2.3	1.1
Trade Balance	14.5	23.1	10.2
Balance with U.S.	4.7	7.0	4.2
External Public Debt	56.4	71.4	70.7
Debt Service Payments/GDP (pct)	3.8	7.6	6.7 5/
Current Account Balance/GDP(pct) 6/	-0.9	3.9	2.7
Fiscal Deficit/GDP (pct) 6/	1.1	2.2	5.0
Gold and Foreign Exchange Reserves (end of period)	17.4	23.5	26.7
Aid from U.S. (millions of US$)	71	135	139 6/
Aid from All Other Sources	5.2	5.2	7.8 7/

1/ 1999 GDP and export/import figures are for January-June. (Average Rp/US$ exchange rates were 8,775 for 1Q CY-1999 and 7,921 for 2Q CY-1999.)
2/ 1999 per capita GDP figure is rough estimate. Increase in 1999 over 1998 due to strengthening of Rp/$ exchange rate.
3/ 1999 figure is for January-August.
4/ 1999 figure is for January-September.
5/ 1999 figure as of March 31 (includes debts of state-owned enterprises).
6/ Fiscal year.
7/ 1999 figure is amount pledged.

Oil Data (Euromonitor, 1999)

Indonesia	Unit	1994	1995	1996	1997	1998	199
Production of Crude Oil	Million tons of oil equivalent	74.3	73.9	74.1	73.2	71.9	na
Proven Oil Reserves	'000 million barrels	5.8	5.2	5	5	5	na
Proven Oil Reserves ('000 MTOE)	'000 MTOE	na	0.7	0.7	0.7	0.7	na
Ratio of Proven Oil Reserves to Production	Years	na	na	8.6	9	9.2	na

Iran

During its membership in OPEC, Iran has gone through incredible alterations in its political, social and economic structures. Prior to 1979, Iran had a varied economy of public and private activities and ownership, and it attempted to practice free-market policies at home as well as open up to opportunities outside itself. The 1979 revolution brought with it all sorts of changes regarding religion, free markets, trade with the West, foreign investment, fiscal and monetary policies, domestic consumption, etc. In short, Iran became far more centered on Islamic ideology, nationalism, and isolationism, all orchestrated through a tyrannical central state. Throughout the 1980s, the country was consumed, as were most of its resources, in the war with Iraq. Following the war, knowing it needed some recuperation, a free-market was allowed to exist alongside the more tightly controlled governmental entities. Finally, in the late 1990s, Iran began to open up to outside investment and free-enterprise, specifically through joint partnership and investments from Asia and Europe.

During the 1970s, Iran sought to develop both its public and private sectors. The government invested oil revenues in direct capital formation programs, while the private sector was incentivized to invest. Industrialization programs were set up to take advantage of Iran's oil windfalls and to branch out into new areas of production.

Growth was foremost on the minds of the technocrats of Iran in the 1970s. During the fifth Five Year Development Plan (1973 – 1978), GDP grew by 13.3% a year on average. The oil sector, however, did not grow as well as expected, growing at less than 1% per year on average. Amuzegar blames this dismal performance on a plan that tried to achieve too much too soon, a failure to calculate accurately domestic infrastructure needs, too much confidence in the ability to control market forces, and rampant inflation (128).

Following the revolution of 1979, however, the private sector began to dry up, until, by the late 1980s, only about 30% of the economy was private and 20% was in the black market. The plans that were instituted under the Islamic regime never fully panned out, mostly due to conflict within the party, the difficulties of the Iran/Iraq war, and, of course, ineffective plans that put ideological goals over purely economic ones.

In the early 1980s, in which a recession occurred, oil continued to perform poorly, as did industry in general, mostly due to a lack of extractive efforts, war, and sanctions by the West. With growth of almost 7% from 1982 – 1986, as the country recovered from the war and began producing and exporting more oil and industrial goods, Iran seemed to be improving. The price crash of 1986, however, put an end to that. Once the Iran/Iraq war ended, however, and a new plan was put into place for 1989 – 1994, progress again occurred. Oil and imports increased by nearly 7% per year. By 1994, however, imports had slackened, and growth of only 1.5% was achieved.

Throughout these years, Iran attempted to diversify its economy, often successfully, often unsuccessfully. As oil declined as a share of GDP, other industries were supported by the government. The primary emphasis was on traded goods such as cars and appliances. Despite these efforts, industry's share of GDP declined between 1974 and 1994, while agriculture's rose

from 10% to 21%. By 1994, the oil sector was only 18% of the economic output, though its relation to total exports went from 95% in 1974 to 80% in 1994.

At the same time the country was dealing with the difficulties of employing a rapidly growing population. Between 1979 and 1989, the population grew at around 3.9% per year. Unemployment grew to 14% in this period as well.

The Islamic revolution, despite its populist propaganda, added to the division between rich and poor in Iran, until, in 1994, over 60% of the population lived in poverty. Their lack of income and benefits was compounded by a poor economy in terms of prices and waged. After the revolution, the annual average inflation was 15%, and during the Five Year Plan of 1989 – 1994, it was officially put at 23%. Finally, the government's dependence on fluctuating oil revenues to balance their budget created huge deficits and thus shrink backs in spending on public amenities.

Finally, Iran's currency situation did not emerge a winner from the revolution. A deficit in external accounts was the norm, often, as between 1990 ad 1993, by over 10% of GDP, and by 1994 reaching $23 billion, of which $11 billion was in arrears. Major debt rescheduling has been done in order to keep the country solvent.

To conclude, Amuzegar paints a mixed picture of Iran at the end of the 20th century:

> By 1994, Iran had a much larger population (60 million) than at the beginning (35 million [in 1974]), more extensive physical infrastructure, more and better roads, railways, sea and airports, greater electric power-generating capacity, vaster telephone and telecommunication lines...more multi-purpose dams and modern irrigation networks, more numerous manufacturing, petrochemical plants, and oil refinery plants, considerable weapons production capability and much larger education and health facilities. Yet the country had a much smaller per capita income and private per capita consumption, a larger per capita domestic and external debt, higher unemployment, bigger budget deficit, more inflation, a wider balance-of-payments gap, a more overbalanced currency, more numerous money-losing public enterprises and a shorter life-expectancy for its oil deposit at the on-going extraction rate" (132).

The primary reason for Iran's difficulties is its war with Iraq, which created a total cost of over $644 billion, though Rafanjani often quoted $1 trillion.

For many observers of Iran, hope came eighteen year after the Islamic revolution, in the form of a moderate president newly elected to the government: Mohammed Khatami, who defeated a clergy candidate in May of 1997. When Khatami won election as Iran's president, "the world sensed that a change was in the making--but no one envisioned so radical a shift in the Islamic republic. His landslide victory against the candidate favored by the ruling Islamic clerics in the May 23, 1997, election shook the foundation of Iran's clerical rule. The 20 million people who voted for him claimed his victory as a triumph for civil liberties in Iran" (Political Resurrection…). His election has raised many hopes in the Middle East and around the world that moderation is going to be the new style of government for Iran and that the economy would open up to the world, which, indeed, it has shown signs of doing.

What is encouraging about Khatami's victory is that "a disparate group of intellectuals, businessmen, women and young people, all dissatisfied with economic hardship and limitations on personal freedom, put Khatami into office with nearly 70 percent of the vote and with a clear mandate to shake up the system" (Moseley). Khatami stressed throughout his campaign and since his election that he hopes to have a dialogue with the West. Khatami seems set on changing business as usual in Iran. In his own words, he hopes "for a thoughtful dialogue with the American people and through this thoughtful dialogue we could get closer to peace and security and tranquility" (US, Iran Relations…). He has promised to appoint a more liberal cabinet, and, in many respects, has fulfilled the promise. Khatami's potential for changing the country through these methods given the strong force of the religious leadership is dependent on how much the people support him.

In recent years, however, Khatami's revolution has seemed hollow...

[INSERT FELD ANALYSIS]

IRAN
Key Economic Indicators
(Millions of Iranian rials (IR) unless otherwise noted)
(Country Report, US Department of State, May 1996)

Years ending March 20	1992-93	1993-94	1994-95
Income, Production and Employment			
Population (millions)	57	58	60
Real GDP (billions 1983 IR) /1	14,451	14,785	15,045
(US$ millions)	48,065	56,630	74,160
Per Capita GDP (US$)	843	976	1,236
Real GDP Growth (percent) /1	6.1	2.3	1.8
GDP by Sector (percent of GDP)			
Manufacturing	19.5	18.7	18.5
Agriculture	23.2	20.7	21.5
Petroleum	8.8	17.6	18.8
Services	45.5	42.8	42.2
Money and Prices			
Money Supply (M1, billions IR)	16,941	23,385	31,956
Interest Rate on			
Short-term Deposits (percent)	7.5	8.0	8.0
Wholesale Price Index (1990/91 = 100)			
End-year	168.9	211.7	301.4
Consumer Price Index (1990/91 = 100)			
End-Year	150.1	184.4	249.3
Exchange Rate (IR/US$)			
Basic Rate	66.0	N/A	N/A
Floating Rate	1,459	1,653	1,750
Balance of Payments and Trade (millions of U.S. dollars)			
Total Exports (FOB) /1	19,868	18,080	19,054
Exports to U.S. /2	0.2	0.9	0.2
/3			
Total Imports (FOB) /1	23,274	19,287	12,683
Imports from U.S. /2	616	329	223 /3
Trade Balance	-3,406	-1,207	6,371
Current Account /1	-7,304	-4,515	4,581

1/ Estimate.
2/ Year ending December 31.
3/ January-June 1995.

Oil Data (Euromonitor, 1999)

Iran	Unit	1994	1995	1996	1997	1998	19

Production of Crude Oil	Million tons of oil equivalent	182.6	182.7	183.8	184	187.7	na
Proven Oil Reserves	'000 million barrels	89.3	88.2	93	na	89.7	na
Proven Oil Reserves ('000 MTOE)	'000 MTOE	na	12	12.7	na	12.3	na
Ratio of Proven Oil Reserves to Production	Years	na	na	69.1	na	65.3	na

Iraq

It is very difficult to make an economic, social, and political assessment of the nation of Iraq due to the lack of data published by the government. Hussein's regime has proven incredibly opaque in its practices. Nevertheless, some data is available and from this can be gleaned a general picture of things as they bear on the question of oil and Iraq's involvement in OPEC.

Prior to the war with Iran, the Iraq economy showed signs of robust expansion. Oil revenues increased by 450% between 1974 and 1980, imports went from $2.6 billion in 1974 to $21 billion in 1982, and many other industrial and service sectors saw considerable expansion. The war, however, put an end to all this, as well as, in the 1990s, the invasion of Kuwait, the destruction this caused at the hands of a multi-national coalition, and the ensuing UN sanctions. Capital formation, oil revenues, imports, consumption, all led to negative growth throughout the late 1980s and 1990s.

Oil production fluctuated throughout the 1970s, 80s, and early 90s. Crude output rose from 2 million barrels per day in 1973 to 3.5 million in 1979. Export revenues also increased during the same period from $2 billion to $21 billion. However, once the war with Iran got under way, and Iraq not only began spending its energies toward that as well as losing its access to its Persian Gulf terminals, production dropped to under 1 billion barrels per day, only to pick back up again to 2.8 billion in 1989. All this came to an end, however, with the Persian Gulf, after which all exporting was put to an end.

Before, and, for a while, during the war with Iran, the government nurtured certain industries, primarily mining, manufacturing, construction, water, and power. These attempts were, however, largely unsuccessful. Much of what was built before the war was destroyed during the war. Today, it is hard to say what percentage of the economy is based on industry, as accurate numbers do not exist.

Oil revenues provided around 85% of the governmental budget prior to the war with Iran. During the war, however, as oil revenues fluctuated and the government concentrated on combat, no accurate figures were published. Then, once the embargo by the UN kicked in following the invasion of Kuwait, the government again failed to publish economic information. Further havoc exists in Iraq's balance of payments with its foreign creditors. At last count, Iraq had a debt of $45 billion with the West, an untold amount with the East, and no intention or ability to pay.

What figure does exist, nevertheless, is per capita real GDP, at least up to 1991. In 1970, it was $1745, in 1980 it was $4100, and in 1991 it was $630. The wars with Iran and Kuwait have, essentially, decimated Iraq's potential to participate in the world economy. The dinar as a unit of trade is utterly worthless. Numbers also exist regarding Iraq's recent oil production and revenues. In August of 1998, production was at 2.3 million barrels per day. Exports were at 1.8 million barrels per day that same month. These amounts have been allowed by the UN in order to somehow ease the burden of the embargo on the people of Iraq. For all of 1998, Iraq earned $6.1billion in oil export revenues, which was up from $4.2 billion in 1997. As of 1998, Iraq's output constituted up to 10% of total OPEC output, identical to that of Venezuela.

Oil Data (Euromonitor, 1999)

Iraq	Unit	1994	1995	1996	1997	1998	1999
Production of Crude Oil	Million tons of oil equivalent	25.2	27.3	29.9	58.1	105.3	na
Proven Oil Reserves	'000 million barrels	100	100	112	na	112.5	na
Proven Oil Reserves ('000 MTOE)	'000 MTOE	na	13.4	15.1	na	15.1	na

Ratio of Proven Oil Reserves to Production	Years	na	na	100	100	100	na

Kuwait

By any measure, Kuwait has been very successful in managing and integrating its oil wealth into benefits for its citizens and future economic potential. Concentration throughout the years has been laid on diversifying the economy, investing the oil wealth wisely, and enhancing its society to better serve its people and its economic goals. The standard of living in Kuwait has been consistently one of the highest, foreign investment of oil revenues has brought added wealth to the economy, and a diversified services and industries sector has contributed significantly to the GDP, each adding about $3.6 billion in 1999, compared to approximately $12 billion from petroleum.

Several hard spots for Kuwait have included limited agricultural output due to a lack of arable land, a concentration of industrial success in the public (and thus heavily subsidized) sector, and an inability to balance the governmental budget due to excessive social spending to provide free services to the citizenry. Finally, the objective of “Kuwaitization” of the labor force has, for the most part, failed, as in 1994, 800,000 of the 1.6 million citizens were foreigners. Spreading the wealth to this largely laboring element of the population is something that Kuwait has promised but has yet to achieve.

Negative GDP growth throughout the 1990s has taken a positive turn recently, with 1999 showing 10.1% growth. The per capita income for 1999 was up to $12,000, in large part due to increasing oil revenues, which shot up from $7.7 billion in 1998 to over $12 billion in 1999. By 1994, the account surplus on foreign borrowing was $4.6 billion.

In the last few years, as throughout the past, Kuwait's revenues have fluctuated in direct relation to the price of oil, considering that government revenues still some 90% from the oil sector. Positive figures from the data below include the increasing current account surplus, which reached 18.4% of GDP in 1999, and the decreasing external public debt, which was $451 million in 1999, down significantly from $1.4 billion in 1997. BRING DATA UP TO DATE.

Kuwait

Key Economic Indicators

(Millions of U.S. Dollars unless otherwise indicated)

(Country Reports, US Department of State, March 2000)

	1997	1998	1999 1/
Income, Production and Employment:			
Nominal GDP 2/	30,242	25,151	27,696
GDP Growth (pct) 3/	-0.2	-16.3	10.1
GDP by Sector:			
Manufacturing	4,033	2,999	3,538
Services	3,602	3,617	3,655
Government	6,399	6,643	6,842
Petroleum	12,158	7,772	12,062
Per Capita GDP (US$)	13,691	11,075	12,089
Labor Force (000s)	1,208	1,243	1,255
Unemployment Rate (pct)	1.3	0.7	0.5
Money and Prices (annual percentage growth):			
Money Supply Growth (M2)	3.9	-0.8	2.6
Consumer Price Inflation (pct)	0.7	0.2	0.3
Exchange Rate (KD/US$ annual average)			
Official	0.303	0.305	0.305
Balance of Payments and Trade:			
Total Exports FOB	14,238	9,548	9,977
Exports to U.S. 4/	1,998	1,471	1,344
Total Imports CIF	8,257	8,610	8,963
Imports from U.S. 4/	1,394	1,479	1,212
Trade Balance	5,983	938	1,014
Balance with U.S. 4/	604	-8.7	132
Current Account Surplus/GDP (pct)	26.8	10	18.4
External Public Debt 5/	1,404	802	451
Debt Service Payments/GDP (pct)	3.1	2.3	1.3
Fiscal Deficit/GDP (pct) 6/	4	16.2	23.7
Gold and Foreign Exchange Reserves			

(US$ billions)	3.3	3.6	3.7
Aid from U.S.	0	0	0
Aid from All Other Sources	0	0	0

1/ 1999 figures are projections based on data through August 1999.
2/ GDP at factor cost.
3/ Percentage changes calculated in local currency.
4/ Source: U.S. Department of Commerce and U.S. Census Bureau; exports FAS, imports customs basis; 1999 Figures are estimates based on data available through August 1999.
5/ Based on Kuwaiti Government figures as of January 1999.
6/ This is a Ministry of Finance projection calculated using an estimated world crude oil price of US$ 10/barrel; Embassy projects a lower deficit for FY 1999/2000.

Oil Data (Euromonitor, 1999)

Kuwait	Unit	1994	1995	1996	1997	1998	199
Production of Crude Oil	Million tons of oil equivalent	104.1	105.3	105.6	105.3	107.6	na
Proven Oil Reserves	'000 million barrels	96.5	96.5	96.5	96.5	96.5	na
Proven Oil Reserves ('000 MTOE)	'000 MTOE	na	13.3	13.3	13.3	13.3	na
Ratio of Proven Oil Reserves to Production	Years	na	na	100	100	100	na

Libya

Libya, like Iraq, is a country from which it is difficult to acquire accurate and current economic data. With the arrival of Qadhafi's Arab Socialist Union in 1972, most of the economy fell into the hands of a central planning agency, dominated by Qadhafi's decisions, and the public sector came to dominate all aspects of the country's social and economic existence. Nevertheless, oil did very well for the country, amounting to $214 billion in revenues between 1975 and 1994.

Libya experienced real GDP growth in the 1970s and 1980s, at different times and depending on different circumstances. In the latter half of the 1970s, growth reached up to 10%. Then, however, in the first half of the 1980s, due to fluctuations in oil, it began to shrink by as

much as 4% annually. Then, in the early 1990s, with the oil boom, it rebounded, only to drop again in 1994 by 4.5% per year for the two years prior.

Oil has always been the prime contributor to economic figures in Libya. For instance, during the first two oil booms, 50 – 60% of GDP came from oil, 97% of total exports, and 85% of public revenues. Between 1987 and 1994, oil made up 21% of GDP, 50% of government revenues, and 93% of exports. BRING UP TO DATE.

Other sectors went up and down in the last three decades. Agriculture has not been a successful venture in the country, importing between 1993 and 1994 almost $1.2 billion in food. Industry has suffered heavily in recent years under UN sanctions. Services, however, have done relatively well, accounting for 60% of non-oil GDP in 1994.

Fiscally, the record has been mixed as well. In 1994, public revenue was 20% of GDP, compared to 50% in 1974, and public expenditure had dropped from 55% to 27%. Inflation has been excessive for long periods of time, with the UN sanctions bringing an estimated 50% by the end of 1994. In recent years, Libya has taken in no new foreign lending, as their credit ranking has been too low. In 1994, the estimated foreign debt stood at $3 billion in short-term, and $2 billion in long-term. As its population has practically doubled in the last 30 years, it has had a hard time keeping up on employment.

In terms of oil exports, Libya earned $5.8 billion in 1998, down from $9 billion in 1997. This is hard on a country where 95% of hard currency earnings come from oil. Economic growth has been sluggish lately, with .7% in 1996, .6% in 1998, and .5% in 1999.

Oil Data (Euromonitor, 1999)

Libya	Unit	1994	1995	1996	1997	1998	1999
Production of Crude Oil	Million tons of oil equivalent	68.6	69	69.6	70.8	69.2	na
Proven Oil Reserves	'000 million barrels	22.8	29.5	29.5	na	29.5	na
Proven Oil Reserves ('000 MTOE)	'000 MTOE	na	3.9	3.7	na	3.9	na

Ratio of Proven Oil Reserves to Production	Years	na	na	56.4	na	28.8	na

Nigeria

Nigeria, once the shining hope of Africa in terms of economic progress, has proven to be an almost chronically troubled country. Preventing the realization of the diversification, Nigerization, and equalization of the economy an its benefits have been tribal feuds, governmental incompetence, and political turmoil. Now, as the 21st century begins, it seems as far as ever from achieving its national goals, for, as the economic data in the chart at the end of this section indicates, there has been little progress in recent years in terms of economic growth and debt payment.

During the mid-1970s, Nigeria saw real GDP growth of 6% per year on average. Once the 1980s arrived, however, Nigerian oil revenues decreased drastically, as production fell from 2.3 million barrels per day in 1979 to 1.4 million barrels per day in 1981 and between 1980 and 1986, oil exports dropped from $25 billion to $6.5 billion, with a real GDP decline of 2 – 3% for that period. Between 1987 and 1992, however, real GDP began to grow again by almost 5% a year as the manufacturing and service sectors of the economy picked up under structural adjustments in the country's allocation of capital forming activities. In 1993 and 1994, however, GDP slowed to an almost 0% growth rate.

Throughout the 1980s and 1990s, Nigeria's agricultural sector saw mixed results. Until 1986, Nigeria imported the majority of its food. After new programs instituted in that year, its agricultural sector grew at a rate of 3.5%. Then, however, by 1994, much of the momentum of this growth had been lost, and, due in large part to poor planning and financial management in the sector, Nigeria lost many of its former exports, such as palm oil and cotton.

Industry suffered even worse during the period. In 1994, industry accounted for only 10% of GDP, down from 19% in 1974. As Amuzegar puts it:

> Responsible for the poor overall economic performance in both agriculture and industry were the high share of infrastructural outlays in total allocation, very high capital output ratios in these investments, laxity in back-up requirements, the stop-go nature of planned capital formation and the inefficient and *ad hoc* character of foreign exchange allocation to projects. (147)

One of the most disappointing aspects of the last thirty years has been the lack of success in diversification. In 1973 – 1974, mining and manufacturing accounted for 7.5% of GDP, while, in 1994, it accounted for 7%. The services sector vacillated between 30 and 40% of GDP.

In terms of fiscal responsibility, not much was achieved. Governmental deficits have been the norm. In 1994, the budget deficit was 10% of GDP, though, as the chart at the end of this section shows, it was down to 4.7% by 1998. Consumer price inflation has fluctuated wildly. In 1988 it was 55%, in 1990 7.5%, in 1994 100%, and by 1998 it was only 10%. The stock of public foreign debt went from $4 billion in 1980 up to $34 billion in 1997.

Along with massive environmental degradation and continuing social turmoil, Nigeria has seen its GDP per capita fall from $1200 in 1980 to $250 in 1998. Further, crude oil export revenues fell by 36% in 1998, down to $9.2 billion from $14.5 billion in 1997. In somewhat good news, Nigeria's proven oil reserves and oil production have increased in recent years, from 17.9 million barrels in 1994 to 22.5 million barrels in 1998 and from 97.6 million tons of oil equivalent in 1994 to 106.2 million tons of oil equivalent in 1998 (see chart below).

Nigeria
Key Economic Indicators
(Millions of U.S. Dollars unless otherwise indicated)
(Country Reports, US State Department, March 2000)

	1997	1998	1999 1/
Income, Production, and Employment:			
Nominal GDP 2/	50.1	52.0	N/A

Real GDP Growth (pct) 3/	3.2	2.4	N/A
GDP by Sector (pct):			
Agriculture	31.5	32.3	N/A
Manufacturing	6.3	6.1	N/A
Services	9.7	9.6	N/A
Per Capita GDP (US$)	250	250	240
Labor Force (millions)	43.0	40.0	N/A
Unemployment Rate (pct)	2.6	3.9	N/A
Money and Prices (annual percentage growth):			
Money Supply Growth (M2)	15.0	15.6	N/A
Consumer Price Inflation	8.5	10.0	8.0
Exchange Rate (Naira/US$ annual average)			
Official	22	82	95
Parallel	55	85	101
Balance of Payments and Trade:			
Total Exports FOB 4/	15.2	9.0	N/A
Exports to U.S. 5/	6.3	4.2	N/A
Total Imports FOB	10.3	9.9	N/A
Imports from U.S. 5/	0.8	0.8	N/A
Trade Balance	4.9	-2.0	N/A
Trade Balance with U.S. 5/	5.5	3.4	N/A
Current Account Deficit/GDP (pct)	1.2	-3.5	N/A
External Public Debt	27.1	28.7	N/A
Debt Service Payments/GDP (pct)	1.8	1.4	N/A
Fiscal Deficit/GDP (pct)	0.2	4.7	N/A

1/ 1999 figures, except exchange rates, are all estimates based on available monthly data in November.
2/ GDP at factor cost. Conversion to U.S. dollars done with official exchange rate of 82 naira to the dollar for 1998/99.
3/ Percentage changes calculated in local currency.
4/ Merchandise trade.
5/ Source: U.S. Department of Commerce and U.S. Census Bureau; exports FAS, imports customs basis; 1999 figures are estimates based on data available through November 1999.

Oil Data (Euromonitor, 1999)

Nigeria	Unit	1994	1995	1996	1997	1998	19
Production of Crude Oil	Million tons of oil equivalent	97.6	98.1	105.4	113.4	106.2	na
Proven Oil Reserves	'000 million barrels	17.9	20.8	15.5	16.8	22.5	na

Proven Oil Reserves ('000 MTOE)	'000 MTOE	Na	2.8	2.1	2.3	3.1	na
Ratio of Proven Oil Reserves to Production	Years	Na	na	19.8	20.2	28.8	na

Qatar

Like Iraq and Libya, data from Qatar is often difficult to obtain and inaccurate. Total GDP in 1981 was around $9 billion and it decreased to $7.5 billion in 1994. In 1974, oil production was at a daily average of 518,000 barrels, reaching 269,000 barrels per day in 1983, and X barrels in 1996. Oil continued into 1996 to play an important part in the economy, as between 1987 and 1994 it accounted for 1/3 of GDP, 70% of total exports, and 65% of budgetary revenues, and in 1996 it accounted for 36% of GDP.

Though agriculture has always played a minimal part in the Qatarian economy, contributing 1% of GDP and 1.6 of non-oil GDP in 1994, industrial production has increased over the years. Through steel, petroleum refining, water desalination, and cement industries, along with others, industry contributed up to 19% of GDP an 30% of non-oil GDP in 1994. Services, however, have proven the most successful non-oil sector. By 1994, it formed 49% of Qatar's GDP, represented by finance, housing, and household services. Finally, per capita GDP has increased in Qatar over the last 30 years, beginning at $7240 in 1974, peaking at $36000 in 1981, and dropping to $12,800 in 1994.

Budget deficits have increased over the decades, until, in 1994 it had reached 11% of GDP. CPI remained low, however, staying at 2% annual average between 1990 and 1994. Finally, the overall balance of payments grow to over 7.5% of GDP in 1994, mostly due to rising imports and foreign grants, and reached an estimated $3.5 billion in 1996, the last year for which data is available.

The most important breakthrough for Qatar in recent years is its entry into the light natural gas market in late 1996. Shipments of LNG to Japan are at 6 million metric tons per year and similar amounts are being sent to South Korea. The US State Department claims that this development will bring Qatar's per capita GDP to one of the highest in the world, despite the fact that oil production is decreasing.

Qatar
Key Economic Indicators

Qatar	Unit	1992	1993	1994	1995
Annual Rates of Inflation	% growth	3.1	-0.9	1.3	3
Exchange Rates Against US Dollar	National currency units per US dollar	3.6	3.6	3.6	3.6
Foreign Exchange Reserves	Million US $	609.8	621.7	584	na
GDP by Origin - Total GDP (national currencies)	Million Qatar riyals	27,202.00	na	Na	na
GDP from Agriculture, Hunting, Forestry and Fishing	Million Qatar riyals	242	na	Na	na
GDP from Community, Social and Personal Services	Million Qatar riyals	310	na	Na	na
GDP from Construction	Million Qatar riyals	1,110.00	na	Na	na
GDP from Electricity, Gas and Water	Million Qatar riyals	309	na	Na	na
GDP from Finance, Insurance, Real Estate and Business Services	Million Qatar riyals	2,943.00	na	Na	na
GDP from Manufacturing	Million Qatar riyals	3,450.00	na	Na	na
GDP from Mining and Quarrying	Million Qatar riyals	9,750.00	na	Na	na
GDP from Other Origins	Million Qatar riyals	6,468.00	na	Na	na
GDP from Transport, Storage and Communications	Million Qatar riyals	798	na	Na	na
GDP from Wholesale and Retail Trade, Restaurants and Hotels	Million Qatar riyals	1,822.00	na	Na	na
GDP Usage - Exports of Goods and Services	Million Qatar riyals	14,203.00	12,011.00	12,046.00	12,550.00
GDP Usage - Government Final Consumption Expenditure	Million Qatar riyals	9,258.00	9,370.00	9,250.00	9,010.00
GDP Usage - Gross Fixed Capital Formation	Million Qatar riyals	5,159.00	4,849.00	6,575.00	6,850.00

GDP Usage - Imports of Goods and Services	Million Qatar riyals	-9,890.00	-9,037.00	-9,066.00	-9,120.00
GDP Usage - Increases in Stocks	Million Qatar riyals	583	300	8	50
GDP Usage - Private Final Consumption Expenditure	Million Qatar riyals	8,519.00	8,557.00	8,030.00	8,015.00
GDP Usage - Total GDP (national currencies)	Million Qatar riyals	27,832.00	26,050.00	26,843.00	27,355.00
Gold Reserves	Million troy oz	0.9	0.9	0.8	0.3
Trends in Money Supply	Million Qatar riyals	3,989.80	4,254.30	3,910.30	3,720.10
Trends in Private Consumption	Million Qatar riyals	8,519.00	8,557.00	8,030.00	8,015.00
Trends in Public Consumption	Million Qatar riyals	9,258.00	9,370.00	9,250.00	9,010.00
Trends in Total GDP (national currencies)	Million Qatar riyals	27,832.00	26,050.00	26,843.00	29,622.00
Trends in Total GDP (US $)	Million US $	7,646.20	7,156.60	7,374.50	7,515.10

Key Economic Indicators (Euromonitor, 1999)

Oil Data (Euromonitor, 1999)

Qatar	Unit	1994	1995	1996	1997	1998	1999
Production of Crude Oil	Million tons of oil equivalent	20.8	21.3	26.4	33.6	36.9	na
Proven Oil Reserves	'000 million barrels	3.7	3.7	3.7	na	3.7	na
Proven Oil Reserves ('000 MTOE)	'000 MTOE	na	0.5	0.5	na	0.5	na
Ratio of Proven Oil Reserves to Production	Years	na	na	22.5	na	13.3	na

Saudi Arabia

Saudi Arabia, the country with the largest oil reserves and revenues, has always maintained a tight link between oil, government budgets, and development. This has created an incredible volatility in the economic situation and outlook of the country. With the goal of rapid and diverse economic growth always foremost in the government's planning agenda, Saudi Arabia can look back on thirty years of successes and failures, as well as forward to many years of opportunities and challenges.

In the 1970s, during the first oil boom, real GDP growth reached 9% on average annually. During the second boom, in large part due to decreased exporting from Iran and Iraq, GDP reached nearly six times what it was in 1974, and the non-oil sector grew from 1979 – 1981 at 11% on average annually with GDP growth of 5% annually.

When oil prices began to slump, however, in the mid-1980s, the Saudi Arabian economy took a strong downturn. In 1982, the oil sector decreased by as much as 9%, and then, between 1983 and 1988, it decreased an average of 18% annually. With the Persian Gulf war and the increase in prices, Saudi Arabia's fortunes looked up somewhat between 1988 and 1992, until, in 1993 and 1994, GDP growth was flat.

One of the most impressive aspects of the Saudi Arabian economic miracle was real growth in per capita GDP. In 1972, it was $1200. In 1981, it was $17,000. After the decline in oil it fell again, only to pick back up somewhat in 1994 to $7,000. In 1999 it had dropped somewhat to $6,543, and, with recent increases in oil prices, it is likely to be significantly higher as of the end of 2000. GNP in 1994 was estimated at $90 billion, and in 1999 at ??? Overall oil revenues between 1974 and 1994 are estimated by Amuzegar at $1 trillion (153).

Inflation was only a problem in 1974 and 1975, when it reached 35%. By 1994 it was at around 1% and has stayed there, with small fluctuations up or down, for most of the succeeding years, ending at 1% in 1999. Interestingly enough, the Saudis' attempt to maintain an open and modern economy made it more susceptible to market fluctuations than other OPEC members who kept a more closed economy. Global depressions, exchange rate fluctuations, interest rate trends, and currency movements influenced the economy heavily. This meant that a balanced budget has often been impossible to achieve, with domestic borrowing reaching the equivalent of

77% of GDP, or $100 billion, by 1994. The fiscal deficit was as much as 25% of GDP in 1987, but had dropped to 8.8% in 1998.

Though the Persian Gulf war reputedly cost the kingdom as much as $55 billion, much of this was made up through increased oil exports due to drops in Iraq and Kuwait. The war also brought an end to the massive spending programs, both in terms of social benefits and military expenditures, that had become the norm and had essentially bankrupted the treasury. By 1995, though austerity programs, he external debt stood at as little as $2 billion.

Two factors have added to a weaker-than-hoped economy, and one factor has added to its strength. To begin with, demand for foreign goods over the years has created a massive trade imbalance and foreign accounts deficit. The government's stubbornness in maintaining the riyal at a fixed ratio to the US dollar has also increased these debts. Diversification of the Saudi economy, however, has continued apace with some noted successes. In 1974, oil represented 77% of GDP, industry 5%, services 17%, and agriculture 1%. By 1994, however, agriculture was at 7%, oil and gas at 32%, industry at 20%, government services at 18%, and other services at 23%. Finally, in 1999, government was at 26.5%, agriculture still at 7%, services at 44.6%, and manufacturing, including oil, at 9.8%. (Check figures off Business Reports site for State Dept.)

The Saudi industry sector has grown estimably in the last 30 years. During the first two oil booms, manufacturing rose at an average of 12% annually, until, in 1994, there were more than 2,200 manufacturing facilities creating over $15 billion in goods. Agriculture has also done well, making Saudi Arabia, for instance, the sixth largest exporter of wheat. Finally, the services sector, represented by finance, trade, communications, and real estate, continues to be the largest sector in the country. This intense growth has taken a toll on the water supply in the kingdom, however, and it is estimated that the Saudis will be out of fresh water in less than 25 years.

Saudi Arabia has not ended its dependence on oil, with the oil sector still providing, in 1995, 90% of total merchandise exports, and 70% of government revenues. Further, many of the other sector successes have come through massive subsidies and loans. Finally, with imports still at around 40% of GDP and a massive expatriate labor situation, the Saudis still have a lot to do to bring diversity with stability to their economy.

In terms of oil alone, the Saudis have the highest reserves of any OPEC member and maintain their position as the leading exporter. With proven reserves of almost 100 years at over 261.5 billion barrels, oil will continue to provide a steady income to the kingdom. The Saudis earned approximately $45.5 billion from oil in 1997, though this fell by 35% in 1998 to $29.4 billion. (talk briefly of recent governmental changes and more oil information).

Saudi Arabia
Key Economic Indicators
(Millions of U.S. Dollars unless otherwise indicated)
(Country Reports, US State Department, March 2000)

	1997	1998	1999 1/ 2/
Income, Production and Employment:			
Nominal GDP	146.3	128.9	140.0
Real GDP Growth (pct)	1.9	1.6	1.0
GDP by Sector:			
Agriculture	8.9	9.1	N/A
Manufacturing (including oil)	13.5	12.6	N/A
Services	56.2	57.5	N/A
Government	36.7	34.2	N/A
Per Capita GDP (US$)	6,836	6,190	6,543
Labor Force (millions)	6.7	6.5	N/A
Unemployment Rate (pct)	N/A	N/A	N/A
Money and Prices (annual percentage growth):			
Money Supply Growth (M2)	6.6	2.4	N/A
Consumer Price Inflation	-0.4	-0.2	1.0
Exchange Rate (SR/US$ annual average)			
Official	3.745	3.745	3.745
Balance of Payments and Trade:			
Total Exports FOB	60.7	39.7	37.5
Exports to U.S.	9.4	5.1	N/A
Total Imports FOB	-26.4	-27.5	-27.4

Imports from U.S.	5.9	5.9	N/A
Trade Balance	34.2	12.1	10.0
Balance with U.S.	N/A	N/A	N/A
Current Account Deficit/GDP (pct)	0.3	-13	-5
External Public Debt	N/A	N/A	N/A
Debt Service Payments/GDP (pct)	4.7	5.3	5.1
Fiscal Deficit/GDP (pct)	1.1	8.8	N/A
Gold and Foreign Exchange Reserves	17.8	17.8	N/A
Aid from U.S.	0	0	0
Aid from All Other Sources	0	0	0

1/ 1999 figures are projections.
2/ Sources: IMF International Statistics Yearbook 1999; Saudi-American Bank Economic and Market Update; U.S. Embassy Riyadh 1999 Saudi Economic Trends Report; IMF Saudi Arabia Statistical Index.

Saudi Arabia	Unit	1994	1995	1996	1997	1998	1999
Production of Crude Oil	Million tons of oil equivalent	426.1	426.7	434.6	442.1	443.2	na
Proven Oil Reserves	'000 million barrels	261.2	261.2	261.5	261.5	261.5	na
Proven Oil Reserves ('000 MTOE)	'000 MTOE	na	35.7	35.8	35.8	35.8	na
Ratio of Proven Oil Reserves to Production	Years	na	na	83.4	79.5	80.7	na

The United Arab Emirates (UAE)

Seven separate emirates joined in 1971 to form the UAE, and since that foundation petrodollars and foreign investments have helped those countries develop at a rapid pace. Infrastructure designed to aid in industrial growth, luxury items such as apartments and entertainment centers designed to provide comfort to natives and attraction to foreigners, and a massive social service sector designed to improve the standard of living for its people, all came together in the last 30 years to make the UAE one of the world's wealthiest and most luxuriant spots. Of course, not all of the development was frivolous, with a majority of it going to the procurement of an infrastructure that would aid future growth.

Oil plays a smaller part in the UAE's economy in recent years than it did in the beginning of the federation. In 1974, 78% of its GDP was from oil sector, but by 1994 it was at 34%. Despite this, however, oil still made up 80% of governmental revenue in 1994.

During the first two oil booms, the UAE promoted growth in its industrial sector. Water (desalination), power, and construction all saw huge booms. By 1994, almost 10% of the labor force was involved in manufacturing, and the entire industrial sector accounted for up to 20% of GDP in the same year. This growth has two downsides, however. First, it was carried out at the expense of a self-sustainable agricultural sector (a difficult task, of course, in a country primarily covered in sand). Second, much of the industrial sector is still based in hydrocarbons.

One of the biggest successes that the country has seen in the last 30 years, outside of oil, is in the exploitation of its position as a air and sea hub for transportation through the area. Dubai is one of the major stopping points to the Persian Gulf. The Jebel Ali Free Trade Zone has attracted hundreds of businesses and benefits.

In comparison to the other OPEC countries, the UAE's economic growth over the years has been hindered by fewer downfalls. GDP rose at around 5 – 6% during the 1970s, dipped in the early 1980s by as much as 4%, but went back up again in the late 1980s and 1990s due to the success of the region's non-oil sectors, such as finance, shipping, services, and construction.

Inflation is something that has typically left the UAE alone. The exception is during the mid and late 1970s, when it grew at almost 30% per year at times. By the 1980s, however, it dipped down to 8%, and then as low as 4 - 5% by the early 1990s.

In terms of unemployment, the UAE has had almost no problems in its entire history. For the most part, employment has been guaranteed. The only problem is the fact that over 80% of the employment force is expatriate.

One problem that the UAE has suffered is budget deficits from fluctuating oil revenues and an inability to curb spending. The budget deficit reached 16% in 1986, varying from 3.5 – 11% between that year and 1994. As of 1999 it was 10%. Fortunately for the country, however, there is no foreign debt, net foreign assets believed to amount to as much as $100 billion in 1994, and a positive trade balance as of 1999.

There has been an increase in per capita GDP throughout the years, with a major dip during the oil crisis. Overall per capita GDP in 1994 was almost $20,000, and $17,500 in 1999. However, there are big differences among the emirates. The richer Emirate of Abu Dhabi was around $32,000, while the poorest emirate of Ajman was at $6,300.

In terms of oil, the UAE has almost as much in proven reserves as Saudi Arabia, at nearly 100 billion barrels. At the current production levels, as well, this signifies, like for the Saudis, at least another 100 years of production and oil revenues. In 1998, almost $10 billion was earned from oil.

In short, the UAE has been uniquely successful in achieving marked sector diversification, a rising per capita GDP, infrastructure development, and low inflation. The budget deficits, environmental damages, and dependency on oil revenues continue to cause problems for the federation, however. The main challenge ahead is better organization among the members in order to insure more effective planning and implementation of policy.

The United Arab Emirates
Key Economic Indicators
(Millions of U.S. Dollars unless otherwise indicated)
(Country Reports, US State Department, March 2000)

	1997	1998	1999 1/
Income, Production and Employment:			
Nominal GDP 2/	49.2	46.3	48.0
Real GDP Growth (pct)	0.8	-8.1	2.5
GDP by Sector: 3/			
Agriculture	1.5	1.6	1.6

Manufacturing	5.5	5.5	5.5
Services	22.2	23.4	24.0
Government	5.1	5.4	5.4
Per Capita GDP (US$)	18,741	16,780	17,500
Labor Force (000s)	1,330	1,380	1,400
Unemployment Rate (pct)	2.6	2.6	2.6
Money and Prices (annual percentage growth):			
Money Supply (M2)	9.0	4.2	4.0
Consumer Price Inflation (pct)	2.8	1.5-2	3.0
Exchange Rate(Dirham/US$)			
Official	3.67	3.67	3.67
Balance of Payments and Trade:			
Total Exports FOB 4/	34.0	30.4	33.5
Exports to U.S. 5/	1.0	0.7	0.7
Total Imports CIF 4/	26.6	27.2	29.0
Imports from U.S. 5/	2.6	2.4	2.3
Trade Balance 4/	7.4	3.2	4.5
Balance with U.S. 5/	-1.6	-1.7	-1.6
Current Account Surplus/GDP (pct)	12.8	3.9	6.0
External Public Debt	0.0	0.0	0.0
Debt Service Payments/GDP (pct)	0.0	0.0	0.0
Fiscal Deficit/GDP (pct)	5.1	17.0	10.0
Gold and Foreign Exchange			
Reserves (end of period)	8.2	8.9	9.5
Aid from U.S.	0	0	0
Aid from All Other Sources	0	0	0

1/ Estimates based on available monthly data in November 1999.
2/ GDP at current prices.
3/ GDP at factor costs.
4/ Merchandise trade; includes re-exports.
5/ Source: U.S. Department of Commerce and U.S. Census Bureau; exports FAS, imports customs basis; 1999 figures are estimates based on data available through August.

Oil Data (Euromonitor, 1999)

United Arab Emirates	Unit	1994	1995	1996	1997	1998	19
Production of Crude Oil	Million tons of oil equivalent	113.1	113.6	120	119.5	121.4	na
Proven Oil Reserves	'000 million barrels	98.1	98.1	97.8	97.8	97.8	na
Proven Oil Reserves ('000 MTOE)	'000 MTOE	na	12.7	12.6	12.6	12.6	na
Ratio of Proven Oil Reserves to Production	Years	na	na	100	100	100	na

Venezuela

Venezuela has had mixed results in its attempts to create a healthy economy and society that utilizes oil as an important, but not key, sector. In order to achieve this, it has had several aims – diversification, social welfare, and stable growth. Some successes, some failures, have been seen in these areas.

In terms of diversification, Venezuela has been able to make only moderate gains. For instance, despite a concerted effort to increase its agricultural output, with the goal of gaining independence in food production, this has not materialized. Despite growths in output during the mid 1970s and mid 1980s, by 1994, Venezuela was still importing 70% of its food. Diversification has also failed in other industrial sectors, such as steel, electricity, and aluminum. Originally, these were set up with massive outlays by the government in an attempt to have them replace the oil sector in part, but only minimal growth was achieved. Manufacturing, which contributed in its highly protected sphere nearly 10% of GDP in 1974, contributed only 14.5% in 1994, dropping into negative figures by costing the government more than it was producing in the late 1990s. In 1974, oil accounted for 40% of GDP, industry for 23%, and services for 32%. By 1994, oil was down to 22%, industry at 23%, and services at 50%. However, oil still accounted for 83% of total exports and 64% of public sector revenues. To blame for this general failure is "a very high capital/output ratio (attributed to the long-gestation nature of industrial enterprises, poor management and marketing, cost overruns and unused capacity)...poor timing, bad sectoral composition, little foreign participation to assure foreign market access and an inordinately large scale for the domestic market...[and] an emphasis on short-term financing" (Amuzegar, 164).

Achieving an improvement in social welfare over the last 30 years has also proven difficult for Venezuela. In the 1970s and early 1980s, modest gains were made in terms of increased household consumption, low prices (achieved through subsidies), and improving wages (also largely achieved through subsidies). Subsidizing growth perpetually, however, is not the recipe to real improvement, as high inflation constantly eroded the real purchasing power of Venezuelan consumers. For instance, inflation increased an average of 36% annually in the early 1990s, though, by 1999, it had fallen to 20%. Another problem was that the income gap in the country was appalling. By 1994, over 31% of the population lived below the poverty line, this despite GDP growth per capita from $2250 in 1974, $2830 in 1994, to over $4000 by 1999.

Public sector spending and financial management has impeded Venezuela's goal of stable growth. Public expenditures grew steadily throughout the 1970, 1980s, and 1990s, though the share of GDP continued to fall. In 1982 there was a deficit of 12% of GDP, in 1988 9% of GDP, 5% in 1993, and 3.1% in 1999. Again, fluctuating oil income and an inability to cut public spending were the culprits.

The balance-of-payments situation for the country vacillated heavily in the last three decades. With foreign capital fleeing the country after the early 1980s and an increasingly obvious inability on the part of the government to service its debts, external debt reached almost $38 billion (60% of GDP) in 1983. Sliding oil prices in the early 1990s and public outlays to stimulate growth worsened the situation after a variety of corrective currency and debt measures were taken. External public debt was $22 billion in 1999.

Throughout the 1970s, GDP expanded appreciably for the most part, achieving 5% annually between 1974 and 1978. Massive spending and the oil slump brought this growth to a halt, until, between 1985 and 1988, 4% annual growth was achieved. Political problems and

misuse of IMF funds led to growth fluctuation throughout the early 1990s, and, by 1999, GDP growth was at –5%.

In 1998, Venezuela had over 70 billion barrels of proven oil reserves, and many more years of oil revenues to come. Oil export revenues in 1998 fell by 37% from 1997 to bring in $11.1 billion. The government in recent years has made numerous gestures to cut spending and balance its books, including efforts to encourage privatization, foreign investment, a stronger banking sector, and increase foreign exchange reserves.

Venezuela
Key Economic Indicators
(Millions of U.S. Dollars unless otherwise indicated)
(Country Reports, US State Department, March 2000)

	1997	1998	1999
Income, Production and Employment:			
Nominal GDP	88.4	95.0	95.1
Real GDP Growth (pct)	5.9	-0.7	-5.0
GDP by Sector:			
Agriculture	2.5	-0.7	1.7
Manufacturing	4.5	-4.7	-8.0
Services	3.7	0.5	-4.7
Government	-3.4	1.0	3.2
Per Capita GDP (US$)	3,882	4,087	4,013
Labor Force (000s)	9,507	9,907	10,259
Unemployment Rate (pct)	10.6	11.0	18.0
Money and Prices (annual percentage growth):			
Money Supply Growth (M2)	62.5	18.6	3.7
Consumer Price Inflation	37.6	29.9	20.0
Exchange Rate (BS/US$ annual average)			
Official	488.6	547.6	628.9
Parallel	488.6	547.6	628.9
Balance of Payments and Trade:			
Total Exports FOB	23.7	17.5	18.5
Exports to United States	13.4	9.3	9.8
Total Imports FOB	13.7	14.0	11.0
Imports from United States	6.6	6.5	5.7
Trade Balance	10.0	3.5	7.5
Balance with United States	6.8	2.8	4.1
External Public Debt	23.8	22.9	22.6
Fiscal Surplus (Deficit)/GDP (pct)	1.7	-4.2	-3.1

Current Account Surplus (Deficit)/GDP (pct)	4.4	-1.8	1.7
Foreign Debt Service Payments/GDP (pct)	11.9	7.8	7.3
Gold and Foreign Exchange Reserves	17.8	14.8	15.1
Aid from United States	N/A	N/A	N/A
Aid from All Other Sources	N/A	N/A	N/A

1) Embassy's estimate based on inflation (20%), GDP Growth (-5%), Exchange rate (Bs/628.91), and population (23,706,711).
2) Embassy's estimate based on average of the official rate and most private estimates.
3) BCV and Veneconomy.
4) Calculation based on figures for no. 1 above.
5) Central Statistical Office (OCEI) as of the first semester 1999.
6) Ministry of Finance.
7) BCV as of October 29, 1999.
8) Embassy's estimate on the average for January-October, 1999.
9) Embassy's estimate based on the monthly depreciation rate of 1.28 percent.
10) Veneconomy.
11) Department of Commerce, January-July, 1999. Embassy used average and derived projections therefrom.
12) GOV Budget Office (OCEPRE).
13) Embassy calculation.
14) OCEPRE, BCV, and Embassy calculation.
15) BCV as of November 18, 1999.

Oil Data (Euromonitor, 1999)

Venezuela	Unit	1994	1995	1996	1997	1998	19
Production of Crude Oil	Million tons of oil equivalent	142	152.4	162.2	173.5	171.8	na
Proven Oil Reserves	'000 million barrels	64.5	64.5	64.9	71.7	72.6	na
Proven Oil Reserves ('000 MTOE)	'000 MTOE	na	9.3	9.3	10.3	10.5	na
Ratio of Proven Oil Reserves to Production	Years	na	na	57.5	59.5	60.9	na

Non-OPEC Producers

It is valuable at this point to look at the oil producing history and capacity of the non-OPEC producing countries in order to, in the end, make an educated analysis of how these producers will influence OPEC behavior in the coming years.

In 1999, there were four main non-OPEC producers, in order of reserves:

1. FSU (the former Soviet Union) – 56.988 billion barrels
2. Mexico – 47.822 billion barrels
3. The United States – 22.546 billion barrels
4. Norway – 10.913 billion barrels

The total Asia-Pacific reserves (Australia, Thailand, New Zealand, North Korea, and others) were at 38.034 billion barrels, other Western hemisphere non-OPEC producers (Canada, Brazil, Argentina, among others) had a total of 21.825 billion barrels, and the United Kingdom had a total of 5.191 billion barrels. This, along with some input from Eastern European countries, brought the total reserves for non-OPEC countries in 1999 to 234.188 billion barrels, as opposed to 800.479 billion barrels in reserve for OPEC, or 77.4% of the world total.

The long-term outlook for these non-OPEC (vs. OPEC) producers is as follows:

Worldwide Crude and NGL Production (1,000 barrels/day)

				Change (%)
	2000	2001	2002	1999-2002
OPEC	30,800	31,500	32,700	10.1
Non-OPEC	43,150	43,950	44,250	4.6
TOTAL WORLD	73,950	75,450	76,950	6.9
% Non-OPEC	58.4	58.3	57.5	

Worldwide Crude Production Capacity – Current and Outlook (1,000 barrels/day)

				Change (%)
OPEC	2000	2001	2002	1999-2002
Algeria	1000	1100	1100	10
Indonesia	1400	1300	1300	-7.1

Iran	4100	4100	4200	5.0
Iraq	2700	2900	3100	24
Kuwait	2600	2700	2800	7.7
Libya	1600	1700	1700	6.3
Neutral Zone	600	600	0	0
Nigeria	2400	2500	2500	4.2
Qatar	700	700	700	0
Saudi Arabia	10400	10800	10900	2.8
UAE	2700	2800	2800	3.7
Venezuela	3700	3800	3900	8.3
TOTAL OPEC	34,200	35,000	35,600	8.3
Non-OPEC				
FSU and East Europe	7700	7900	8100	8
Other non-OPEC	34,400	34,600	34,800	1.8
TOAL NON-OPEC	42,100	42,500	42,900	2.9
WORLD TOTAL	76,300	77,500	78,500	4.1

As this chart clearly shows us, though reserves are in OPEC's favor, production and production capacity are not, as the non-OPEC countries have a higher level of both. A major goal of OPEC countries in the last few years, therefore, has been the acquiring of foreign investment capital to increase production capacity. This has only recently reversed the trend of "driving out the multinationals."

As shown above, the major non-OPEC players are the FSU, Mexico, the United States, and Norway. Brief analyses of these countries' oil and gas sectors follows.

Russia contains the world's largest natural gas reserves, the 2nd largest coal reserves, and the 8th largest oil reserves. As well, it is the world's largest exporter of natural gas and 2nd largest energy consumer. Russia's export ability is severely limiting, however, to its ability to maintain its production, as it can only export around half of what it producers. Russian companies, however, have been profiting well off their extensive exports and high prices in recent years. For the most part, Russia exports have moved away from shipping within the FSU and shipping more to Western European countries. Between 1992 and 1998, the share of net exports to countries outside the FSU went from 53% to 89%.

Russia's economy has been relatively healthy in the last two years, with GDP rising by 3.2% in 1999 and over 5% in 2000. Further, in 1999, industrial output was up 10.3%. Inflation has also slowed recently to below 20% and high oil prices have helped Russia pay off much of its foreign debt.

Russia itself has an estimated 49 – 55 billion barrels of oil in proved reserves, though, as mentioned above, a troubled production sector (aging equipment, poorly developed fields, depletion of existing wells, transport infrastructure problems, and lack of investment possibilities) is hindering full capacity. Exploratory drilling is going on apace, however, especially in Siberia, and the Russians look to have their oil production be a major part of their economic recovery.

Of major importance in the area is the issue of privatization. Privatization has been going on since 1993, first by arranging state-owned enterprises as joint-stock companies as well as the auctioning off of state-owned shares. Most Russian oil companies have had a significant share of their ownership auctioned off, and, after large successes, this is expected to continue.

Recently, joint ventures between the EU and the FSU have taken place in order to help the FSU increase its production. 20% of Europe's natural gas and 16% of its oil supplies come from Russia. Russia also needs to develop more export routes as well as position itself, as it plans to, as a primary explorer, developer, and exporter of Caspian Sea reserves.

Mexico

US

Norway

Chapter 3 - History of OPEC

This chapter will review the history of OPEC from 1900 to 2000. This history is broken into six phases: Pre-OPEC (1900 to 1960), Establishment (1960 – 1970), Ascendance to Power (1970 – 1973), Dominance (1974 – 1981), Withdrawal (1981 – 1986), and Limbo (1986 – 2000). Each phase description will be followed by an analysis of the strengths and weaknesses, mistakes and successes, challenges and opportunities of the organization during that time period.

Pre-OPEC (1900 – 1960)

While oil has been known to humanity for thousands of years, the real beginning of modern big-time oil came when Rockefeller established Standard Oil Trust in 1870 with $2.5 million and the goal of controlling the oil market in the United States. By 1904, he had largely achieved his goal, as the Trust controlled 40,000 miles of pipeline in the US, while all other companies combined had only 550 miles (Ghanem, 4). Though the Trust was eventually dissolved by anti-Trust measures, its splinter companies continued for decades to dominate world oil production and distribution.

Another major player was the Shell Royal Dutch Company, amalgamated in 1907. Shell operated mostly in Russia, Indonesia, and some European countries, as well as Mexico and Venezuela. By 1921, Shell had extracted 200 million barrels from Mexico and in 1925 it extracted 54,600 bl/d from Venezuela (Ghanem, 5 - 6).

In the Middle East, it was the Germans who moved in first, but they were eventually surpassed by the Brits due to their relations with the Turkish National Bank. By the time World War I ended, the British companies had already monopolized oil production in the region, but shortly after this the Americans moved in, helped by the Turkish Petroleum Company that negotiated in 1922 to allow Standard Oil geologists into the region (Ghanem, 7).

The cartelization of Middle Eastern oil began with the Red-Line Agreement in 1914, which was then reinforced by the As-Is Agreement of 1928. The Red-Line Agreement stipulated that all Middle Eastern reserves would be produced through the Turkish Petroleum Company alone, which was owned by British Petroleum, Royal Dutch-Shell, and the French Compagnie Francaise des Petroles. The As-Is Agreement, however, divided world oil sales among British Petroleum, Royal Dutch-Shell, and Exxon (Standard Oil Company of New Jersey). During the 1930s, other major oil companies were worked into the deal so that by the early 1950s the cartel consisted of Compagnie Francaise des Petroles and what came to be known as the "Seven Sisters": Exxon, Mobil, Texaco, Socal, Gulf, Shell, and British Petroleum. Between 1914 and 1955, this cartel of multinational oil companies controlled world oil.

What becomes clear from this brief history is the dichotomy between the companies controlling oil – primarily American and British companies, along with the French company – and the countries from which the oil is being extracted – primarily Middle Eastern countries, along with Mexico and Venezuela in Latin America. As Ahrari points out, though a discrepancy

between the companies profiting off the oil and the countries providing the oil was known for decades, "the establishment of international oil companies as business entities in the various oil-producing countries took place at a time when the national governments in these countries existed in their most primitive form and when the social consciousness and political awareness of their peoples was very low" (6). The deals that were signed were incredibly lop-sided in favor of the companies. For instance, between 1911 and 1951, the British received $700 million in oil revenues while the Iranians earned only $316 million (Ahrari, 8).

An awareness of this inequity was emerging, however, throughout the early half of the 20th century. The first big step on the part of the countries to break from the companies came when in 1932 Reza Khan cancelled his agreement to pay royalties to the Anglo-Persian Oil Company. This cancellation came about due to a variety of complaints: The government lacked access to the company's books; the government had not earned any income from the company's tanker fleet; the company was not reporting all its income due to discounts to subsidiaries; the British government, but not the Iranian government, was receiving income from the company; and the oil potential in Persia was being left under-developed (Ahrari, 8).

The next major step was that the Venezuelan government instituting a 50/50 profit-sharing system in 1949. It also sent delegates to the Middle East in order to 1) advertise the notion of a 50/50 split that would thus deflate the attractiveness of the Middle East and boost its own attractiveness, and 2) establish contacts that might bring about organized measures against the oil companies in favor of producing countries. The result of this trip was that Saudi Arabia set up a 50/50 system. Iran then followed, and, on March 15, 1951, nationalized its oil industry, setting into motion an incredible decrease in power for the multinationals as the oil concessions the oil producing countries had been making became ever more unpopular.

The 1950s saw a steady but progressive shift in the decision-making centers from the concession-holding oil companies to what became known as their host governments. First, the volume of off-take and the posted price, both which formed the bases of the countries' tax take (originally the prerogatives of the concessionaire companies), became matters for negotiation with the governments. Second, annual regulatory meetings with Shah Palhavi and other leaders of the oil producers became customary. At these meetings, laws and energy policies were drafted (such as the 50/50 split) that both the multinationals and the governments had to follow.

In the beginning of this process of devolution of power from the multinationals to the governments, the latter lacked technology and an educated, skilled labor force, especially in the fields of planning and management. Most educated men, such as Abdullah Takiri, an ex-Texaco man and a graduate of the University of Texas, as well as a key player in the formation of OPEC, gravitated towards policy-forming levels. Once the host countries realized that by educating their own people they would be able to replace the foreign power in their midst, it became only a matter of a limited, defined quantity of time before the host countries assumed control.

Also in the beginning of the process the companies, due to their superior capacity in mobilizing considerable funds, had the upper hand on the host governments. This led the latter, partly out of ignorance and partly out of dependence, to relinquish their rights easily and cheaply. For instance, the mineral rights in Persia were acquired in exchange for a share of D'Arcy and a meager sum of $20,000. However, as soon as the initial investments were completed, the balance of power began to shift in favor of the host countries. The MNC's had already tied up substantial capital and assets in foreign land and thus had something to lose whereas the host countries had everything to gain. In addition, western financial institutions were more willing to lend money to host governments now that industry had been established. Finally,

post-World War II Third World countries were in great need of foreign aid due to their disoriented financial systems and only the MNC's were able to provide them with the revenue.

What light can be thrown on the cobweb of relationships among the oil companies, host governments, related individuals, and intergovernmental agencies?

From the beginning, the involvement of the parent governments was substantial and increasing. The initial period reached some form of conclusion with the 1928 Red line Agreement marking a truce between the French, Anglo, Dutch, and American interests striving to control oil development in the former Ottoman empire. The second period extended from 1928 to 1939, and was characterized by relatively little parent government involvement, though there was some limited diplomatic activity stemming from the desires of one or two late-coming companies to win stakes in the various sheikdoms. However, international oil issues figured relatively low on the agendas of parent governments, and the three leading majors of the time – Jersey, Anglo-Persian, and Shell – were sufficiently free of official supervision to establish the 1928 Achnacarry Agreement which, with various subsequent additions, regulated competition between the signatories.

The 1940s brought an era of increased involvement by the parent governments in the production of oil in their countries. They primarily attempted to increase their power by filling the vacuum created by internal industry disputes during and after World War II. Essentially, the host governments, to the dismay of the MNCs, started seeking to develop co-working relationships with the independent oil companies. These smaller business entities were offering both better concession terms than their MNC counterparts, as well as an opportunity for the host governments to be more involved in the day-to-day management. This move indirectly revealed to them the insider dealing and mechanisms of the oil companies, as well as a better

understanding of oil market dynamics. Thus, when in 1948 Getty Oil and Pan American Petroleum Corporation (double check name) presented the host countries with an offer to enter into a joint business relationship in the Neutral Zone between Saudi Arabia and Kuwait, the MNCs were incensed.

Although authors such as Rand (1975) proclaim that the giant majors used political clout and economic cohesion to keep their host governments in a permanently dependent position, this view is exaggerated. The MNCs had some local clout and influence on the current events but it was the nationals that shaped them. For example, although skepticism has surrounded Mussadiq's overthrow and blame has often been placed at the feet of the oil industry, the reality must have been otherwise. It is understandably true that the MNCs were not in favor of the expropriation of the Anglo-Iranian Oil Co., but the fact that there was no pro-MNC political replacement indicates that there was no incentive for such action and the blame lacks validity.

There is no simple relationship between the majors and their parent governments. However, the following pattern has been observed: in times of stress, the major oil companies have all appeared to see their national interest best served by their own oil companies being free to search for oil with or without the encouragement of their parent governments, and this freedom has generally been in the interest of the key host governments (EXPLAIN).

Establishment (1960 – 1970)

A number of conditions in the world oil economy brought about the establishment of OPEC. To begin with, the oil producing countries had been struggling to get a better deal from the MNC's for decades. Second, with the 50-50 profit-sharing principle begun in Venezuela, and a variety of nationalist sentiments spreading throughout the oil producing countries, there was a

new sense in the air that more could be had by those who possessed the oil. There had been an increase in contacts between the oil producing companies which had informed them slowly of their mutual interests and potential powers as a unified group. What is generally considered to have brought about the major impetus for the early meetings on the formation of the organization, however, are the price cuts that began in February 1959.

Prices were initially dropped from $2.12 per barrel for Saudi oil from Ras Tanura to $1.94. Then, in August 1960, it was further reduced to $1.84 per barrel. The oil companies claimed that this was necessary because Middle East oil production had grown and there was competition from the Russian oil companies. The country that was most deeply concerned about these price cuts, however, was Venezuela, since the Middle Eastern countries had increased production enough to maintain their revenue stream at equal levels. Venezuela's Minister of Mines and Hydrocarbon, Perez Alfonzo, called for an international agreement to be hatched that would "avoid the waste of energy sources" (Ghanem, 19). Venezuela also decided to participate in the first Arab Petroleum Congress that had been organized by the Arab League in Cairo in April 1959. Here, all countries called on the MNC's not to make changes in posted prices before notifying the producing countries, but this request was ignored, sending anger through the host governments.

At this important meeting in April 1959, the idea of creating a petroleum producers' organization was introduced. Present were the Arab exporting oil countries, Iran, Libya (not yet an exporter, but with new discoveries of oil on its land), and Venezuela. The organizer of this meeting was Egypt, which was not an oil exporting country, but which had political motives. Its goal was to be a part of an Arab League that would wield world power due to its share of world

oil. While nothing official was established at this meeting, there were many unofficial agreements and a call for an "Arab Petroleum Organization."

At the second Arab Petroleum Congress in September 1960, the members agreed to establish "the Organization of Petroleum Exporting Countries," which had the following objectives:

1. members shall demand oil companies to maintain their prices steady and free from all unnecessary fluctuations;
2. members shall endeavour, by all means available to them, to restore present prices to the levels prevailing before September 1960;
3. members should ensure that if any new circumstances arise which in the estimation of the oil companies necessitate price modification, oil companies must enter into consultations with the member or members affected in order to fully explain the circumstances;
4. members shall study and formulate a system to ensure the stabilization of prices by, among other means, the regulation of production with due regard tot he interests of the producing and consuming nations and to the necessity of securing a steady income to the producing countries, an efficient economic and regular supply of this source of energy to consuming nations, and a fair return on their capital to those investing in the petroleum industry;
5. that if, as a result of application of any unanimous decision of OPC, any sanctions are employed directly or indirectly by any interested company against one or more of the member countries, no other member shall accept any offer of a beneficial treatment whether in the form of an increase in exports or an improvement in prices which may

be made to it by any such company or companies with the intention of discouraging the application of the unanimous decision reached by the conference.

And thus, OPEC, stating in its objectives the very seeds of the very problems that would plague it in years to come, was born. Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela were the founding members. Qatar joines in 1961, Indonesia and Libya in 1962, Abu Dhabi (now a part of the United Arab Emirates) in 1967, Algeria in 1969, Nigeria in 1971, and Ecuador in 1973.

The first decade of OPEC saw its members setting out to achieve the goals listed above. They sought to achieve these goals through a number of subsidiary, but linked, activities. These activities involved 1) getting the price of oil back to its pre-1960 price levels, 2) to end the problem of surplus capacity which was increasing the amount of oil in the market and, therefore, decreasing the price by regulating the production of oil, and 3) to increase the income from oil by a) improving the financial arrangement, the income tax, the royalties agreements, and the marketing allowances. In could generally be said that OPEC failed in the first two objectives, but succeeded in the third.

According to the MNC's, the decrease in price was justified by a number of global factors. First, the re-opening of the Suez Canal brought shipping prices down and thus oil prices. Second, the US put into effect in 1959 its import restrictions which raised the amount of US oil in the market and lowered the amount of imports. Third, Russian oil continued to be cheap and available. And finally, independent oil companies continued to make discoveries and provide competitive pricing in the market. Of course, many in and out of OPEC claimed that the MNC's were still manipulating the prices to their own advantages (and the disadvantages of the oil

producing countries) but these global market claims had sound reason in them, and OPEC's desire to fight against them as if they did not exist was not sound economic policy.

The first goal – getting the price of oil to pre-1960 levels – was not obtained in OPEC's first decade. While it is true that prices remained relatively the same throughout the decade, with inflation, this actually meant a decrease in price. Also, the realized price (on which the producing countries' income taxes were based) and the transfer price (that charged when the oil companies transferred oil to their affiliates) both went down. Realized prices dropped due to the independents and Russians making some valuable discoveries, such as in Libya, and the transfer price went down because the majors were discounting to their affiliates.

The reason that OPEC failed in achieving its first goal was that it failed in achieving its second goal, as the two are linked. Limiting producing capacity meant increasing the price. OPEC could not limit its production capacity, however, because it was not a perfect cartel – there were outside producers offering oil at lower prices, and its members cheated on one another in terms of meeting production limits. Various pro-ration programs were suggested and implemented, but the quick profits were too tempting for individual countries not to cheat by overproducing.

Having failed to increase the price of oil and limit production, the members of OPEC made a final attempt to increase their revenues from oil – a reorganization of financial arrangements that created this revenue. When OPEC formed, the financial arrangements that the members (and other oil producing countries, such as Libya) had with the oil companies all varied. Three issues needed to be resolved: 1) the basis of the payment of the income tax, 2) royalties, and 3) the issue of market allowances provided by the oil companies that cut into the

countries' revenues. At the June 1962 OPEC meeting, three resolutions – numbers IV-32, IV-33 and IV- 34 – were issued to deal with these three revenue issues.

Underlining the importance of oil revenues to the host governments' attempts to maintain their economies, the members issued resolution IV-32 "with a view to ensuring that oil produced in member countries shall be paid for on the basis of posted prices not lower than those applied prior to August 1960." (Ghanem, 94). Along with this stipulation, the need to take action to restore prices to their pre-1960 levels was expressed, as well as the intention to "jointly formulate a rational price structure to guide their long-term price policy" (Ghanem, 94).

In resolution IV-33, the members stipulated that royalty payments paid by the oil companies to the countries "shall be fixed at a uniform rate which members consider equitable, and shall not be treated as a credit against income tax liability" (Ghanem, 95). While a unification of royalty rates would not increase the revenue of members significantly, though it was an important step in unifying their positions on oil policy and getting them to act as a single policy unit, the statement that royalties may not be used as credit against income tax liability would. Prior to this, the royalty was treated as a part of the government's 50/50 profit-sharing. Rather, OPEC wanted the royalty treated as part of the operating cost, which was the way the oil companies treated it in their accounting books.

Finally, the OPEC members expressed a position against market allowances on the part of the majors in resolution IV-34. The important point, according to the members, was that oil companies were making allowances on the market that were not agreed upon by the host governments or their companies. Thus, the oil companies should stop making allowances from the post price.

The members decided that they would not create a central committee that would approach the oil companies, but that each country would do it on its own, and Saudi Arabia took the first step in August 1962 by approaching ARAMCO with the three resolutions. Iran then approached them in October. Basically, the oil companies rejected the payment of income tax based on the posted price, accepted a limit to allowances to $.005 per barrel, and expressed a willingness to pay royalties with certain annual discounts.

The oil companies commenced to make different arrangements with every OPEC member, sending the organization into a state of confusion. Saudi Arabia, Iraq, and Iran were chosen as the countries that would negotiate for the entire organization. However, no unity was achieved, and OPEC decided in July 1964 that all members should negotiate on their own behalves with the oil companies.

The oil companies continued to make different offers to different countries, with Iran, Kuwait, Libya, Qatar, and Saudi Arabia reaching agreements, but with a lack of continuity, the organization decided to adopt resolution no. 49, which states that "the organization should finish its task and that the acceptance or rejection of the royalty settlement should be left to the member countries concerned" (Ghanem, 99). The final royalty agreement that the countries got agreed to a level of 12.5 per cent of the posted price with a series of stipulated discounts, a reduction in marketing allowances by the oil companies to a half cent per barrel, and a "most favored company clause" which prevented Middle East governments from making arrangements with other oil companies outside the majors that involved different stipulations than those in the royalty agreement made. After haggling with Libya, the independents also signed onto the new royalty agreements.

If one looks back on the 1960s for OPEC, it's evident that a number of successes and a number of failures occurred. The organization was unable to return prices to their pre-1960 levels and to come to a group decision on limiting production, though increased output was one of the mechanisms whereby revenues were increased. The organization also took important steps in terms of creating an organizational structure, having a series of meetings that brought their leaders together, generated joint actions and resolutions which began the processing of presenting a unified front to the world, and they also prepared a number of research projects that taught themselves and others about the world of oil. Finally, the members increased their revenue through the royalty agreements. Nevertheless, as Ghanem points out, the resolutions that formed the backbone of the organization's actions, "were not more than a talking show of solidarity, did not mean much to the countries concerned and did not influence the outcome of disputed issues between the countries concerned and the companies, one way or another" (114).

Ascendance to Power – 1970-1973

The ascendance to power of OPEC that culminated in 1973 actually began with an event that took place in September 1969 – the overthrow of the Libyan monarchy by a revolutionary group of officers led by Colonel Moamer al Qaddafi. Throughout the decide of the 1960s, Libya had played a passive and fringe role in the organization, though its dealings with the independents and its insistence on good deals from the majors had always brought about adjustment within the organization. With the government of Qaddafi, however, Libya took a different turn, and OPEC inevitably followed suit to its supreme advantage.

Essentially, the overthrow of Libyan King Idria by Qaddafi marked the end of multinational leadership in the Middle East. More specifically, Qaddafi's Pan Arab ideology and

hatred of foreign exploitation caused him to ruthlessly seek ways to halt the outsiders' political presence and diminish foreigners' economic might. In March 1970, the British evacuated their Libyan bases and a month later the Americans withdrew from Wheales Field.

The next step was for Qaddafi to oust the oil companies. His economic strategy came from the dual facts, which he realized, that 1) the world had not yet fully recovered from the 1967 Suez Canal closing, and 2) large supertankers, still under construction, were not yet available. Because Libya was the last shipping contact point between the Middle East and Europe, it had the power to dictate tanker rates. This gave Qaddafi power in two areas: production, because of Libya's low sulfur high quality oil, and transportation.

At the center of the new Libyan position was the issue of Libya's posted price. Esso Standard Libya, an affiliate of Standard Oil Company of New Jersey, announced in August 1961 that Libyan crude would have a $2.21 per barrel fixed posted price. This price was protested throughout the 1960s by the Libyan government, especially since it was used to determine its income tax, as too low. Nothing, however, was done about it, until the monarchy fell.

The new Libyan government did not simply protest the low posted price. It nationalized an American company, Chappaqua Oil Company, it ordered reductions in output, curring it by over 800,000 barrels per day, and it ordered Esso to stop exporting natural gas and nationalized the marketing of petroleum products in Libya. Needless to say, the oil companies were alarmed.

Once Occidental Oil stepped in and agreed to Libya's posted price of $2.53 for 40 degree API, thereby winning a reward of increased output from the Qaddafi regime, other countries began making demands, and the process snowballed. The majors made deals with many countries to raise posted prices, which again made Libya feel like it could get more. This created a process of leap-frogging, which would occur again and again, as one country makes a deal,

other countries follow, and those new deals are seen as new goals for the original country, and new deals are again made, spinning the entire process upward.

Part of this upward process had to do with the fact that the MNCs failed to act in accord. This was not only because the companies were used to competing with each other, but also due to the fact that the US government's attentions were elsewhere, and it was thus unable to act as a unifying force. Washington's focus on Vietnam and Russian submarines in Cuba clouded its officials to the importance of the impending oil crisis. The diminution of foreign petroleum company control created a vacuum which Libya and the other OPEC countries were eager to fill.

This process was marked by a number of resolutions and agreements between 1970 and 1974 that were made to bring oil prices and revenues in line with economic realities. The first was OPEC's resolution XXI-120, made at their twenty-first conference in Caracas. It stated the following objectives (among others):

1. to establish 55 per cent as the minimum rate of taxation;
2. to eliminate existing disparities in posted or tax reference prices of the crudes in member countries;
3. to establish a uniform general increase in the posted price or tax reference price;
4. to eliminate completely the marketing allowances granted to oil companies as of January 1971 (Ghanem, 123).

The organization also re-expressed a strong sense of solidarity and intent for united action. Of issue, however, was OPEC's relationship with Libya. Fearful of Libya's hawkish attitude toward the oil companies, and feeling dependent on oil revenues that such hawkish behavior could threaten, OPEC decided to distance itself from Libya. Iran, Iraq, and Saudi Arabia were chosen to negotiate for the entire Gulf group.

What happened next was interesting – the oil companies got together (suspect in the light of American anti-trust laws, but conveniently ignored by American politicians) and issued an offer to OPEC, demanding that OPEC deal with the companies' cartel. The offer basically provided OPEC with its demands from its twenty-first meeting, and had as one of its primary goals to block any further Libya-like actions of the countries dealing with one oil company at a time, which was raising prices dramatically. Libya, however, refused to negotiate with this new cartel on the block.

Following a visit from the Under Secretary of State to President Nixon, John N. Irwin II, the US government urged an agreement, and, following that, OPEC made a statement after a February 3 meeting that an agreement must be made by February 15, 1971, else members "shall take appropriate measures including total embargo on the shipments of crude oil and petroleum products" (Ghanem, 126). What resulted from this threat was the Tehran Agreement.

As mentioned, this agreement gave OPEC almost all it had demanded at its twenty-first meeting, but it also made some demands on the governments: member countries agreed not to ask individually for improved financial agreements and there were to be no production restrictions with the goal of increasing revenue. Libya, of course, was not pleased with this agreement, since its short-haul premium was limited to $.215 per barrel. Libya was also displeased since the agreed upon posted price was still lower than what Libya was getting in the free market. OPEC did not extend much support to Libya in its position. Cornered, Libya made the Tripoli Agreements of February 1971 and March 1971 with the majors, accepting concessions in its demands.

These round of agreements, however, were the beginning of the oil countries getting demands – especially in the posted price and in the end of market allowances – from the oil

companies. Along with a premium for lower sulphur-content crude, an important measure was introduced designed to protect the oil countries from inflationary pressures which were mounting.

Dealing with the problem of inflation was the next step in this period of OPEC's history. The demand was made at Caracas that "in case of change in the parity of monies of major industrialized countries...posted or tax reference prices should be adjusted as to reflect such changes" (Ghanem, 129). Once the US decided to float its dollar in response to the worsening international currency situation, OPEC and the oil companies came to an agreement known as the Geneva Currency Agreement. This stipulated adjustments for inflation. Due to further devaluation of the US dollar, however, this agreement turned out not to be in the interest of the oil countries, and, therefore, a second Geneva Agreement was entered into, with new formulas of inflation adjustment.

The final issue that made this time period – 1970 – 1974 – the ascendance to power was participation. This refers essentially to the nationalization of the oil companies that are functioning in a given country in order that the host country reach a deeper level of participation in the oil companies' activities. The wave of participation agreements spread throughout 1971 and 1972, with all countries reaching nationalization agreements ranging from 25 per cent in Saudi Arabia and other Gulf countries to 50 per cent in Kuwait and 52 per cent in Libya. In December 1972, Saudi Arabia forced ARAMCO to provide the former with a greater dollar amount cut arising from participation. Then, Iraq, in March 1973, expropriated the IPC.

As mentioned in the introduction, much of the reason for the ascendance to power of OPEC can be given to Libya and Qaddafi. Qaddafi triggered a change in the way the OPEC countries approached the oil companies. During King Idris' era, the countries pleased with the

companies to increase local production. This stance placed the countries in an inferior defensive position. Qaddafi reversed this trend by threatening the companies with decreased in the flow of oil. The other OPEC countries inevitably embraced Qaddafi's approach, though mostly by default in response to his radical, inflexible stance. Oil production threats were made. Demands for higher taxes levied on the companies' revenues and price increases were made in front of threats to cancel concessions and nationalize.

By creating psychological warfare in the market, the countries were able to extract more revenues from the oil companies. Unfortunately, this large cash gain promoted greediness among the members. Any economically unrealistic strategy that focuses only on increasing price without decreasing production leads to greediness and only short-term success and satisfaction. In contrast, one that advocates a decrease in production when price increases encourages restraint and is in harmony with the law of supply and demand.

Despite this greediness, there was a great deal of unity among OPEC members during this time. A. Rustow, in his book Oil in Turmoil: America Faces OPEC and the Middle East, believes that the unifying factor among the OPEC members was their thirst for cash and their success in obtaining it through aggressive strategies beginning in 1972. The cartel was further unified by the fact that all members were producers of the same short-run, inelastic commodity: oil. In addition, Libya showed the other OPEC members that their strength lay in their furthering the West's misperception of OPEC members' unique assets.

This misperception – generally an overemphasis of the strength of the OPEC cartel – on the part of the West had several causes. First, the OPEC members, through imaginative means, were able to successfully promote panic in the market and thus gain control. The closing of the Suez Canal, the breaking down of the pipe-line, bribery allegations, and the embargo due to the

Yom Kippur War were just a few examples of what led to this panic. Second, because the OPEC members approached the West individually and in different ways, the West recognized the unique assets of each country and visualized the variety of benefits arising from each and every OPEC country, when it as only the case with a few.

This misperception on the part of the Western countries and the MNCs promoted an egalitarian, simplistic approach to the OPEC countries, yet each country was living under different circumstances. For example, Libya had the advantage of close proximity to Europe and its low sulfur oil. The Persian Gulf countries' most important asset was their production capability and potential. Venezuela promoted its being a safe distance from the volatile Middle East region and its closeness to the US market. In sum, each region had its assets and was thus able to make demands through different pressure tactics for submissiveness from the West.

Erroneous Western perception is what caused the demand variable to increase in the name of future production shortages as opposed to present consumption needs. Given the fact that, prior to the 1973 crisis, there was on oversupply of oil in the market, an inventory accumulation to protect oil-dependent nations from days of shortages and higher prices, along with only a gradual increase in market demand, it is surprising that the West reacted so strongly to the embargo, taking it as an energy crisis rather than as an increase in oil prices. Had their vision not been skewed by an antagonistic perception of OPEC as a malicious cartel, the West might have weathered the storm of the embargo with fewer damages.

Part of the reason the West perceived the embargo as an energy crisis was that OPEC developed this misconception by pushing the West to erroneously believe that oil is a limited resource and thus the gap between supply and demand would inevitably continue to widen. More specifically, Kissinger summarized the developed world's perception at the time by saying that

"the increased growth in world-wide demand accelerated at a greater rate than the supply incentives of any 'oil handling' nation." (SOURCE?)

This narrow-minded misconception can also be better understood if one takes into account the decreasing production of both oil and natural gas that occurred in the US. In the area of oil, oil fields had been clumsily explored and their reservoirs heavily damaged. In the area of natural gas, the industry was heavily subsidized and a certain level of demand was artificially maintained due to a below-the-market governmental setting of prices. Thus, a rise in price was met by an inelastic demand curve which led a widening of the supply/demand gap, and thus a worsening of the undersupply problem. In order for the US to solve the energy crisis, it sought to import gas. The US was subsidizing tankers as an incentive to transportation of natural liquefied gas (NLG), which was mostly purchased in Algeria at higher than domestic gas prices ($1.38 for Algerian natural gas) (PER BARREL?). The West paid expensively for its belief that a world of energy shortages was to come. (figures based on shortage predictions needed here). In a final example of the West's misperception of the situation, the US buying natural gas from Algeria actually meant that its price was being dictated by OPEC, though this was done in an effort to bypass OPEC control.

The State Department's soothing statements following the signing of the Tehran Agreement, that "the oil market would settle down" (SOURCE?), were counterbalanced by its adopting the opposite position a few months after the Agreement was signed. The State Department had come to believe that "OPEC can make oil both expensive and scarce" (Adelman, p. 16). Furthermore, it was falsely believed that it was in OPEC's and especially in Saudi Arabia's best interest to keep oil, a limited resource, underground to service its own needs

during more difficult days to come. The West thus believed that the Saudi's should be given an incentive to continue production in the form of a price and/or a tax increase.

In May 1972, James Akins turned his own belief into the official one, stating that: 1) it was against the Arabs' interests to increase production, 2) Persian Gulf resources were bound to decrease after 1980, and 3) Saudi Arabia and Venezuela would follow Libya's and Kuwait's leads in decreasing their production (HE STATED THIS OR BELIEVED THIS?). The reality was quite different. Kuwait's fall in output was due to an unsubstantiated fear regarding its reserves' life span. Iran, to satisfy its expansionist tendencies, took advantage of its balancing player role and doubled its production levels. Saudi Arabia, although playing the role of the good guy to the West still increased prices, supposedly because of Iran's bad guy pressure. Iraq decreased production so as to match the increased price. Venezuela's energy program imposed a penalty if underproduction occurred. Saudi Arabia, being the leader of OPEC due to its large reserves and capacity to flood the market and undercut the price, not only increased its price but initiated a five-year production expansion program entailing a $500 million expenditure. Saudi Arabia's aim was to increase its product from 8 mbd to 20 mbd. These actions were clearly in contradiction to their propagandist speeches concerning low prices and production in the name of a better future. Furthermore, Saudi Arabia's well completion rate tripled from 1973 to 1978 (CHECK DATE AND SOURCE). Nevertheless, the West still remained blind to these hard facts and believed the Saudi promises for a decrease in prices and an increase in production.

The October 1972 Yamani visit to Washington DC should have been indicative of Saudi Arabia's and OPEC's intentions. Yamani proposed to establish a "special place for Saudi oil: the US market." (SOURCE?) In other words, the Saudis needed a market outlet for their ever-increasing crude production. In addition, they wanted to portray their commodity's value by

deviously emphasizing that its limited availability would have to go to the US to the detriment of Japan and Europe. By promoting the oil-dependent nations' anguish, OPEC strengthened its position. Japan paid $780 million for 22.5% stake in the Abu Dhabi offshore exploration platform. A clearly over-priced bid if one takes into account that BP was ready to offer up to $200 million.

During these years, the Saudi role, be it as an effective leader or ineffective antagonist, was crucial to OPEC. Not that its leadership was always internally effective, but it gave OPEC the impression of being more unified than it was, an impression that effected how the MNCs dealt with the members. Of course, in some ways what Saudi Arabia did actually hurt some of the members. Libyan and Venezuelan fields were being strained with Venezuela's output falling by 9% and Libya's by 31% between 1971 and 1973, while Nigeria, Indonesia and the producers of the Persian Gulf provided the bulk of the additional supplies. Saudi Arabia's inability as a leader to narrow the economic gap among individual members led to a weakening of the cartel. In addition, their lack of recognition that a commodity such as oil, which in the short-term is inelastic, can become more elastic as time goes on if its price is maintained too high for too long by promoting non-OPEC development of both oil and alternative energy sources, which weakens the control over oil production and pricing and diminishing the market share of the OPEC cartel.

Finally, in order to better understand how OPEC used the economics of oil and more specifically the posted prices, it is necessary to examine the economic dynamics of the early 1970s. The economic situation in early 1972 was as follows: There was a general tendency toward oversupply in the market and thus a decrease in profit. More specifically, Algeria and Libya had just discounted prices in order to maintain their production levels. Mediterranean oil, due to heavy tax burdens, was priced out of the market and the tanker rates went back to normal,

decreasing even further Middle Eastern profits. In addition, Persian Gulf crude output, especially in Iraq, decreased substantially. All OPEC countries sought the maintenance of their profits and output levels, but pursued this goal in different ways. Venezuela tried to sell the idea of a hemispheric energy policy to the US. The proximity of their markets and the stability of this OPEC country up and against its Arab Gulf colleagues made the hemispheric energy policy suggestion appealing to the US. For Venezuela, this energy proposal would enable her to maintain a steady flow of oil and income that would in turn be used to continue the development of Venezuela's economic structure.

In contrast to Venezuela, Iraq chose a more aggressive route in order to ensure an increase in production. Iraq demanded from the IPC a guaranteed 10% yearly production increase, which the IPC refused. Accusing IPC of under-investment, Iraq retaliated by seizing, in June 1972, 62% of IPC's production, and offering to sell it at a reduced competitive price into the open market in the form of spot or long term contracts. The other OPEC members, however, offered to help the Iraqis weather this production storm, while also helping themselves by avoiding a price decrease and a loss of revenues that the Iraqi open market auction would have caused. Thus, while the West saw this act as a gesture of friendliness among the OPEC members, it was actually a recognition on their part that they had to help one another in order to help themselves. Regardless of the motives, the cartel was strengthened.

The IPCs refusal to raise production followed the law of supply and demand of competitive economics. The MNCs were facing a competitive market where supply greatly exceeded demand. Any further supply increase would have just widened the gap between these two variables and put a downward pressure on prices. This action would lead to a loss in

revenues not only in the exportation and production arena but also in the downstream MNC activities such as marketing and refining.

One might rightfully question (unlike the West at the time) why the Iraqis and other OPEC members, when faced with the same market variables as the MNCs, sought an increase in production. The answer is simple: the producing countries were trying to create a producers' monopoly. The OPEC members used cartel economic, thus increasing the cartel power by "managing to reap rewards of a seller's market by creating a producer's monopolistic market" (Adelman, p. 8). Even during the excess supply market of 1971 – 1972,OPEC was still seeking to increase its take. The OPEC nations maintained and increased price by imposing tax raises which in turn were based on posted prices. The posted price mechanism helped create a double floor. The higher tier (the MNCs) and the lower tier (OPEC). In disguise, the posted price mechanism kept the companies hostage to the host governments while simultaneously placing both the MNCs and OPEC on the same side of the fence for pursuing an increase in price (SOURCE?)

The posted price mechanism functioned as follows: "Realized (actual market) prices had only the near cost of production as the price floor" (SOURCE?). However, working on the basic of the posted price, say $41.80 per barrel, the situation is very different. The company then pays the government half the difference between the cost of production (20 cents) and the posted price ($1.80), or 80 cents. This means that the company has a minimum tax paid cost of production of $1 per barrel which sets an absolute floor to its price. It cannot go out into the market and dump its oil. It will have to sell at a price considerably above $1 in order to make a decent profit. This is why prices are absolutely vital for the producers' governments (IS THIS WHOLE THING A QUOTE BY ADELMAN, p. 4?)

Regardless of the able diplomatic mechanism of posted prices, the OPEC world was changing rapidly as the organization sought to accelerate its ascendance to power. Year-old agreements such as the Tehran Agreement were bound not to hold. As Kissinger wrote "The Tehran Agreement set a world record in the scale and speed of its violation" (Adelman, p. 9). The five-year proposed posted prices were surpassed in five months. One of the reasons for this was that although Tehran Agreement price calculations included world-wide inflation and thus devaluation, the posted price mechanism only allowed for the devaluation of the dollar. However, a substantial amount of Persian Gulf crude transactions were performed in lira sterling. Thus, the creation of a double market was inevitable as well as its short term existence (SOURCE?)

OPEC added to its psychological manipulation an array of complicated pricing policies and mechanisms that further kept the West in the dark and enhanced the outsider's perception of its unity. By using the supply and demand variables as well as the posted vs. price floor elements, OPEC was able to increase the credibility of the cartel's unity and strength. It used real or perceived numbers and transformed them into tools for OPEC's own advantage.

When a cartel is fully functioning, no dichotomy exists between cartel and market price. Being able to impose a price on the market is a clear sign of absolute cartel power. However, this power is often diminished by a cartel's inability to control supply. In such instances, conflict replaces collusion as each member tries to sell more by decreasing its price in order to increase its individual profits and market share at the expense of other members. Saudi Arabia, due to its large low-extracting-cost reserves has the potential to flood the market and create loss for the other members of the cartel. The fear of this potential helps maintain the unity of the organization. The more powerful members, however, are the greater losers if the cartel collapses.

Thus, the tool of "sudden production increases" is used only when necessary. Through prudent use of this tool, collusion can help keep conflict in check. In other words, collusion and conflict – though antithetical – can co-exist in one entity through the powers that cohese the cartel.

OPEC embodies the nature of a cartel in that increased profits lead members of a cartel to both collusion and conflict. Collusion allows cartel members to raise prices above competitive levels. However, conflict often results during distribution of gains. In sum, cartels are short-lived because conflict overrides collusion and/or supply cannot be controlled.

OPEC, however, was able to temporarily overcome these difficulties by emphasizing to the world the perception of its unity. The world consequently misperceived the cause of price fluctuation, thereby misunderstanding the demand/supply and price links. Namely, OPEC provoked a price increase in 1973 for the following reasons: 1) to meet the real market price level, and 2) to extract the revenues required both to form a diversified economic structure and to satisfy OPEC members' greediness. Although OPEC was aware that it was servicing an over-supplied market, its decisions did not take into account the market from a standpoint of an oligopolist. The West, on the other hand, was so convincingly immersed in OPEC's projected image that they also did not realize that price was not responding to the earl market supply/demand requirements, i.e. a price increase provokes a demand decrease. The increased oil produced by non-OPEC countries, contrary to what many have thought, as not due solely to price increases. The production step-up was caused by a rise in consumption as well as by fear of dependence on OPEC. The reason for this misperception was that most oil analysts believed that it was through higher prices that their extraction activities would become cost effective. In reality, however, even prior to the embargo in 1972, oil exploration activities were planned for and were underway. Investors believed they could get a payback because of a world-wide trend

for a continuing increase in oil consumption. To the demand growth was added a price increase provoked by the oil embargo of 1973, which served as a "capital pool provider." (SOURCE?)

As one can see the years of 1970 – 1973 signified a major shift in the direction of OPEC and its countries' relations with the oil companies. Major concessions were granted, arrangements found that increased oil revenues, and participation got off to a huge beginning. These important steps led to the years of dominance – 1974 – 1981 – OPEC's most profitable and complex era.

Dominance – 1974 – 1981

The year 1973 ended with more general feelings among the members of OPEC that the Tehran and Tripoli agreements needed to be revised. The inflation in the industrialized countries had continued an upward spiral, and it was cutting into the members' revenues. An increase in posted prices was the remedy sought, and individual negotiation between the members and their companies was the method of administering the remedy.

Two days before the planned meeting in October 1973 to spell out the revisions to the Tehran agreement, the Arab-Israeli war broke out, with Egypt and Syria attempting to reclaim land lost in the war of 1967. The importance of this war in determining the future of OPEC can not be exaggerated. To begin with, the conflict brought an air of uncertainty into the oil world, which immediately shot prices up due to the already tight supply. Second, the anger of the members due to the United States' immediate and massive support for Israel became an important element in the establishment of policy.

As the prices increased during the war, the demands of the members for higher posted prices increased in size as well. New OPEC members demanded an immediate 100% increase in

the price, that there be a quarterly revision of the price based on the International Monetary Fund wholesale price index of the 12 industrialized countries, and that the relationship between posted price and market price at 40% higher. The oil companies agreed that there should be a fixed percentage relation, but wanted 15% to be the maximum. Increasingly, the messages of the two sides were missing each other by ever-wider margins.

The OPEC ministers of the six Gulf countries met in Kuwait on October 15 and unanimously raised the posted price from $3.011 per barrel to $5.119 per barrel. This was designed to keep the relationship between real and posted prices what it was prior to the Tehran agreement. They also set the relationship between the two at 40% above.

These were important steps. Finally, OPEC had simply raised the price, instead of letting the oil companies do it or asking them for a price increase. The relationship between the real and posted price was also a critical move for OPEC hegemony.

There were even greater gestures of independence directly ahead, however. Two days later, the members decided to use “the oil weapon” against the United States and they instituted the oil embargo. This constituted a decision to cut the overall production by 5%, or around 900,000 barrels per day (Ghanem, 144). The embargo, however, did not treat all equally. Countries were broken into categories based on their support for the Arab cause: friendly nations (most of Europe), non-friendly nations (the United States and Netherlands) and the rest of the oil consuming world. The friendly nations were not effected by the embargo. The non-friendly nations suffered a complete embargo. The other countries received less than what they used to get simply due to cutbacks in production. Iraq did not participate in the embargo, thinking that stronger measures were in order (like complete nationalization of American oil companies and

withdrawal of oil funds from American banks). Before 1974 even began, oil production had fallen more than 30% (Ghanem, 145).

More price increases were on the way. Libyan crude rose to $20, Iranian crude reached $17.35, and Algerian crude $16 per barrel. The Iranians wanted to continue pushing the price upward, but the Saudis were preaching caution, and stated that the prices should not be increased. Meeting in Tehran at the end of 1973, the members voted in a 130% price increase, bringing Arabian Light of 24 API degree to $11.651 in January 1974.

The oil embargo was in many ways the main cause for this increase in price. As the United States continued to pressure the Arab countries to ease the embargo – by promising to negotiate with Israel to give up land to the Palestinians, by promising monetary benefits to the Arab countries in the future, and by talking of the possibility of military action – the pressure became too great. By March 1974 oil was again reaching the United States.

As the OPEC governments continually increased the excise tax, the oil consumers anticipated a price increase. So, in order to protect themselves, the consumers increased the speculative demand which led to overbidding. Expectations and fear drove the prices up. The relationship among supply, spot price, and OPEC price change grew increasingly disproportionate. The uncertainty of the future caused the companies to avoid selling oil to third parties. This same uncertainty led the US to form the International Energy Agency (IEA), which inevitably proved to be inefficient. The Agency's goal was to form a united front of oil dependent nations that could counteract any of OPEC's aggressive oil cuts. The threshold for emergency action was set at 7%. This goal was not met, however, because the efforts were spent on determining where the threshold was and who would administer the action. The misconception of the embargo's force (oil had in fact continued to flow into the US from non-

OPEC sources), the belief in a monopolistic price of oil and the fear of an ever-increasing excise tax trend led the West to overstock its inventory and assume a defensive stance vis-a-vis OPEC. On the other hand, OPEC's belief in the notion of a monopolistic pricing of oil did not let supply and demand guide its price level.

Israel, like the excise taxes and participation, served as an additional tool in attaining OPEC's goal of increased revenues. It was in fact a convenient political excuse for masking OPEC's greediness. The production decrease lasted only until December 1973. By January 1974, the 10% increase in production (3 mbd) decided upon during the December 25, 1973 meeting in Kuwait was in effect. Punishments for over-production were conveniently forgotten.

By 1974 the oil stockpile was as large as in 1973 and rapidly increasing. In August 1974 the surplus production was 6 mbd. Due to the large disparity among OPEC members, a simple decrease in production would have been met by discontent, eroding OPEC's cartel cohesiveness. OPEC needed to develop a strategy in which a decrease in production would be somewhat compensated for by an increase in price. Because of OPEC's economic structure, i.e. a high price floor, restraints had to be applied to something other than price. Therefore, the price level rose mainly because of the excise tax and participation demands. The companies had to remain content with a $.20/bl (Kuwait) and $.50/bl (Saudi Arabia) of a lifting bonus.

Price cuts in November 1974 in response to this glut showed that the producing countries were gaining unconditional power over the price of oil. OPEC ascendance can be linked to this new power, but challenges remained. Uniting the members remained a challenge. The newly established International Energy Agency was a challenge. And reaching consensus and real progress on the three areas of most concern to all members – the price of oil, royalty and income tax levels, and participation, became the theme of the era (Ghanem, 148).

As OPEC continued to reap high revenues from its higher prices, the demand for OPEC oil started to slip in the mid-1970s, sewing the seeds of future problems for the organization. 30.729 million barrels of oil had been produced in 1974 compared with 27.155 million barrels in 1975, stopping the trend of a near 10% increase in production since OPEC's beginning. Several reasons are given for this decrease. To begin with, the world was in recession. Secondly, conservation programs began popping up in the main importing countries. Third, other sources for oil – such as Alaska and the North Sea – began to be exploited. Finally, the International Energy Agency began attempting to support reduction in demand for OPEC oil.

After a brief lived two tier pricing system, in which all member countries raised their prices by 10%, but Saudi Arabia and the UAE raised their by 5%, a system that lasted only six months due to the divisions it engendered, the Iranian Revolution broke out in 1978, and, like the Arab-Israeli war, this conflict greatly influenced the oil market. Iran's production dropped by almost 2/3rds, and, despite increases in production by Saudi Arabia and Iraq, the market remained skittish.

Saudi Arabian leadership became important as well in these crucial years. Its role in times of distress was important, difficult, and somewhat successful given the circumstances. The Saudis have been able to steer OPEC through periods of recession and expansion, making mistakes, but attempting success. It has tried to fulfill the West's requests without provoking its own internal politics.

For instance, Saudi Arabia fully understood the grimness of the global recession in 1975, when the industrial activity indicator was at –3% in relation to 1974 and an inflation rate of 14% worldwide. An increase in oil prices would have retarded any recovery potential, and the Saudis knew that.

However, OPEC had seen its production dramatically decrease. In mid-1975 (?) it was less than 27 million barrels per day – a 17% decrease from 1974 with a Saudi production of 7.1 Mbd, 4.7 mbd below capacity. Both the US and OPEC because of this situation had lost revenues.

At the Doha December meetings of 1976 – 1977, all economic indicators pointed logically to a price increase. Namely, industrial activity had risen by 8% and inflation decreased by 11% relative to 1975. In addition, demand for OPEC oil had increased by 4 mbd. It was thus natural that the Minister of Petroleum of the UAE, Saud al O'Taiba, and the Shah of Iran proposed a 10 and 15% price increase respectively. The Saudi response was to adopt a zero to 5% price increase not subject to negotiation. Yamani's inflexibility represented King Fahd's stance. Thus, Saudi Arabia not only dictated the percentage of the price increase but also ordered the elimination of its production ceiling of 8.5 mbd, demonstrating its power within OPEC and assuring the members' compliance. As Saudi Arabia flooded the market, Iran's and Iraq's output decreased by 35%, from 6.6 mbd to 4.5 mbd.

Although Saudi oil production never reached the 10 mbd mark, due to low market absorptive capacity, the Saudis were still successful in coercing the other OPEC members to comply with the 5% increase due to the fear their market flooding scheme provoked. In January 1977 bad weather prevented the loading of oil in Saudi Arabia. Iran was able to benefit from the situation because of its geographical location, i.e. the Kharj Island was better protected than Ras Tanura, facilitating the lifting of oil. As a consequence, Iran could increase its production from 4.6 mbd in the beginning of January to 6.2 mbd by the end of February. Under pressure, Saudi Arabia decided to be in accordance with OPEC. On first glance it might appear as if the Saudis

were losing ground, but actually it was able to regain its position by persuading all OPEC members that a long-term approach and a moderate price increase was best for all.

As the spot market prices continued to increase far beyond the official price well into 1978, the members continued to raise their marker prices. As of April 1, 1979, the marker crude price was set at $14.54, but by the end of 1979, it was $24 per barrel. Every country began raising the prices without consulting the others. Official prices reached into the upper 20s and lower 30s, until the members decided to try to coordinate pricing. At the fifty-seventh OPEC conference in Algiers in June 1980, they set the price level for marker crude at a maximum of $32 per barrel. Finally, however, by January 1981, the price had reached $41 per barrel in some countries, the highest price it would ever reach (Ghanem, 155). Ignoring the forces in the world that were striving to limit dependence on oil, the market broke and the price began decreasing.

During this era, participation continued apace at a remarkable rate until most oil companies were partly or fully nationalized. As Ghanem says, “it became almost up to the country to decide whether it would prefer to own the whole of the producing companies or just to participate in only part of them” (158). For the most part, the arrangements, which were between total ownership (such as Saudi Arabia of ARAMCO) and partial ownership (such as Ecuador owning 37% of CEPE-Texaco), were to the benefit of the producing companies, who stayed on as operators and felt as if it stabilized the environment.

Finally, the unity that appeared in OPEC was mostly smoke and mirrors. In fact, the success that they saw during this time brought them farther apart. Each country was pricing according to its own whims and almost any price declared by a producer was likely to be under what was willing to be paid. In fact, the prices tripled between January 1979 and January 1981 (Ghanem, 160).

During this age of ascendance for OPEC, it was the rulers, not the rules that were changing. OPEC did not realize this, but the West did. The West saw OPEC taking on the power and modus operandi of the MNC's, but OPEC failed to take advantage of this new power. Essentially, they failed to study the market strategies of the MNCs in the short term and control of the market in the long term. At fault here was OPEC's vision of years of exploitation by the MNCs. OPEC was not interested in learning the decision-making process of the MNCs vis-a-vis the markets since it bore too large a grudge for their making it feel dependent prior to 1972. Instead, it chose an aggressive, secretive, and irresponsible policy of raising prices without any consultation with the companies, and, though it gained a great deal of money during this age, it inevitably suffered.

Had OPEC been more adept than the MNCs at using the "misperception of reality" tool – making it seem as if its actions were in the interests of the consuming nations – it might have increased its years of dominance beyond 1980. However, the consuming countries simply felt as trapped and dependent as OPEC did prior to their ascendance to power, causing the dynamics to switch fully in the other direction and bringing about strong anti-OPEC gestures by the consuming countries.

In conclusion, OPEC emerged from this era stronger than ever, but its excessive greed, its belief in its own capacities, and its lack of providing clear indications of the market's direction reduced its cartel power potential. The most destructive mistake that OPEC made is described by TM (?) as this: "to eliminate the super-symbiotic relationship to the producer government shielded the oligopoly from destructive competition" (Moran, 598).

Withdrawal (1981 – 1986)

The price that was agreed upon at the December 1980 OPEC conference - $36 per barrel with a maximum price of $41 per barrel – was the highest any OPEC meeting had ever agreed upon and the end of the price increases that had occurred throughout the 1970s. The problem was weak demand, which began occurring in 1980. The spot price decreased, production increased, and after them, the market price began dropping.

World energy demand, as mentioned, began slumping in 1980. World oil consumption, that was 64.1 million barrels a day in 1979 fell to 61.7 million in 1980, mostly due to global recession, energy conservation programs, alternative fuel development, and the increase in production by non-OPEC oil producers. OPEC production dropped from 30.928 barrels per day in 1979 to 26.878 barrels per day in 1980, while OPEC exports dropped from 26.838 barrels per day in 1979 to 22.88 barrels per day in 1980 (Ghanem, 166). Interestingly enough, Saudi Arabia benefited from the to the fact that its oil was underpriced compared to other OPEC countries.

The price increase that OPEC agreed upon in December 1980, to be effective until January 1 1981, showed how little it understood the market. It thought that the drop in demand was due to a temporary recession and that winter would bring an increase in demand again. As the year progressed, however, and the low price of Saudi oil and the high price of other countries' oils grew farther apart, the organization began to understand that the recession was not temporary and that the efforts of the International Energy Agency had been successful in cutting demand through energy conservation measures.

The countries began to panic, as many of them went entire days (Libya and Nigeria, for instance) without exporting any oil (Ghanem, 167). The conference in May 1981 was chaotic. Many blamed Saudi Arabia for keeping its prices so low, but the Saudis refused to raise their price. Production cuts of a minimum of 10% were agreed upon, with a ceiling price of $36.

This began Saudi Arabia's withdrawal from the policies of the organization. The Saudis felt that production, not price, should be cut, which, of course, with its large reserves was in its interest. The Saudis also felt that the market situation was proof that their policies had been wisest and that they, therefore, should assume the expressed leadership position of OPEC. Countries did, nevertheless, cut their prices throughout 1981 attempting to sell oil. After an emergency meeting in October 1981, at which it was agreed a unified pricing system would be instituted, all countries (except the Saudis, who raised their price by $2 per barrel) began reducing prices to meet the Saudi crude Arabian Light at $34 per barrel, effective November 1, 1981 (Ghanem, 168).

The price decreases did little good. In 1981, production of OPEC countries averaged 22.49 million barrels per day, almost 4.5 million barrels per day less than in 1980. World demand continued to drop as well as OPEC exports. The worst hit countries were Kuwait, Libya, Nigeria, and Algeria (Ghanem, 169). Finally, few countries obeyed the production cut mandate of 10%, though the market forced it upon them.

In January 1982, prices were cut again, and a price war ensued. Countries unable to sell their oil began offering discounts and processing agreements, better financial terms, and barter deals where "prices of imports were adjusted so as the crude oil sales, although signed at the official selling price, would be, in fact, discounted indirectly through the inflated import prices" (Ghanem, 171).

As the price of other countries' oil neared that of the Saudis, the Saudis began to suffer as well. A meeting in March 1982 attempted to institute production controls, but a figure could not be agreed upon. Therefore, the countries decided to keep production at exactly what it was. Then, in the first quarter of 1982, OPEC, for the first time since 1962, dropped off as the "free

world's biggest producer" (Ghanem, 172). Non-OPEC production was 21.6 million barrels per day, while OPEC was producing only 20.3 barrels per day for this time period.

The Saudis grew restless. The production limits that had been set had them producing 7 billion barrels a day, while other countries were confined to much less (Iran and Iraq to 1.2 million barrels per day, Libya to 750,000 barrels per day), but they still wanted other producers to lower their prices. Because of their low production, other producers were not ready to do this, and OPEC poised for another price war.

In 1982, the OPEC conference was unable to form agreement, as the Saudis refused to cut its production. The oil ministers at the meeting lacked the authority to make the decisions necessary, and so large decisions were put off. The status quo was maintained with production being set at 18.5 million barrels per day, though slumping demand kept it even lower. Even the Saudis could only produce 2/3rds of what they had in 1981 (Ghanem, 174).

In March 1983, the OPEC meeting in London began. It was obvious to all that an agreement needed to be made that involved a production ceiling, a given price, and national quotas that helped those countries that were suffering the most. After two weeks of meetings, a production ceiling was set at 17.5 million barrels per day. The Saudis agreed to cut their production and serve as a "swing producer." They would keep their production to a limit of 5 million barrels per day, but if demand should fall below the 17.5 million barrels per day, they would cut their production further. A system was established whereby production amounts were set as high as possible for those countries that were suffering.

Price cuts were also agreed upon. The price of the marker crude fell by $5 to $29. The problem of different prices for different crudes was also addressed by establishing an OPEC-

determined price structure for all the different crudes. The only country that refused OPEC control over the price of its crude was Iran.

Especially troubling to OPEC during these years were the actions of the North Sea producers, especially the UK. Aggressive production and marketing policies were stealing market share from OPEC. Throughout the early part of 1983, BNOC and Norway continued to announce price reductions of North Sea crude, cutting into the sales of Nigeria and Libya. Nigeria, for one, moved to align its prices to that of the North Sea crude, showing how scared OPEC had become. These fears brought an unprecedented event at the London meeting: consultation between OPEC and non-OPEC producers, which brought pricing arrangements that brought North Sea, Algerian, and Libyan crude prices in alignment.

The production agreements made at this meeting held into 1984 for several reasons. To begin with, the recession was ending, or was projected to be ending, in America, Japan, and Europe. Second, it seemed to be clear to members of OPEC during the last part of 1983 that the agreement made in London was working (Ahrari, 171). For instance, OPEC production increased by 16.3% over the first half of 1983. Finally, as spot prices continued to slump, which guided OPEC pricing behavior.

As 1984 arrived, the growth in the economies of the industrialized nations was expected to be 3.6%. OPEC expected this would increase the demand for oil, however, due to conservation programs, this did not happen. Further, cheating among its members continued, thus keeping spot prices low. Finally, whatever rise in demand occurred in 1984 continued to be met by non-OPEC members.

Near the end of 1984, Norway, Britain, and Nigeria cut their prices, bringing them to the mid $28's. This caused OPEC to take two measures. Because of cheating, the 17.5 million barrel

per day limit had actually brought forth up to 18.5 million barrels per day. Thus, the ceiling was lowered to 16 million barrels per day. Second, OPEC faced the problem of the controversial differentials between light and heavy crudes. Arabian Light had been set at $29 per barrel, while heavy had been at $26 per barrel, a token of a time when buyers were willing to pay premium prices regardless of quality.

Yamani headed a committee on what to do about the differential. He recommended that the price of heavy crude be raised to match that of the soft. This was done on optimistic demand forecasts. However, traders and companies were not so optimistic and they felt that the light marker should have been brought down instead.

Ahrari gives several signs that OPEC ministers and non-OPEC producers and analysts saw the market differently. To begin with, BNOC and Statoil were setting their prices monthly, not quarterly, indicating their sense that the market was volatile. Second, no non-OPEC producers except for Mexico and Egypt cut their productions alongside OPEC's reductions. Third, a significant number of OPEC members continued to violate agreements by overproducing and underpricing through discounts and deals. Finally, in the fourth quarter of 1984, Arabian Light, Norwegian Ekofisk, and UK's Brent continued to sell under their official prices, indicating a soft market (Ahrari, 176).

The important objective of coming to grips with enforcing production quotas was again addressed in December 1984. The monitoring committee was expanded, an executive council (chaired by Yamani) was created to monitor production and sales of all members, and this council was authorized to hire outside auditors who would have access to all transaction of the member states. Yet even these measures did not go far enough, as the discounting of refined products was not covered.

As 1985 emerged, the North Sea producers continued to cut prices, further threatening OPEC's stability and market share. The problem of differentials also continued to plague the organization. As Ahrari puts it, "because the oil states were able to sell their commodity by resorting to deep discounts, adjusting differentials was seen as a way to promote exports and insure that production quotas were not exceeded" (178). The problem, of course, was that all the countries wanted the differentials closed through policies that were most advantageous to their form of crude – Algeria, maker of heavy crudes, wanted higher price on heavies; Nigeria, maker of Murban and Bonny Light crudes, wanted higher prices on its lights. No solution was found therefore.

With production continuing to drop, mostly due to Saudi Arabia's production going down as low as 3.5 million barrels per day (Ahrari, 179), the North Sea producers – Britain and Norway – continued to send prices downward through their steady and increasing production. Further price cuts from OPEC ($1 reduction for Arabian Light) came in January 1985. An outside accounting firm, Amsterdam's KMG Klynveld Kraayenhoff and Company was hired to monitor all OPEC activities, though punishments were not laid out for noncompliance of production limits.

By mid-1985, with the closing of BNOC and the emergence of the Government Oil and Pipeline Agency in Britain to oversee all oil production, the spot market emerged as the arbiter of the price of oil. OPEC was not hostage to the market – something it had never wanted nor ever planned on. Adelman quotes *The Wall Street Journal* as saying "about the only thing that is propping oil prices is the Saudi willingness to take deep production cuts, which have pared output to a 17-year low" (222).

The Saudis, producing at this point as little as 2.5 million barrels per day, were losing their patience, however. They continued to argue that other members should stop discounting, that they should be allowed to raise their production, and that other members should stick to their production quotas. Prices were rising during the latter half of the year, however, partly due to attacks on Iran's export terminal at Kharg Island and partly because no one believed the Saudis' threats of increased production.

The Saudis made a move through what was called the FOB "netback value." This called for additional output, at first only for customers of ARAMCO, "priced at the spot product value of the barrel, less refining and transport cost" (Adelman, 225). Following this, the Saudis suspended official prices in order to compete with Britain, Norway, and the major suppliers in OPEC.

With prices falling (reaching $7.91 per barrel in May 1986) and the Saudis increasing production to gain more market share, other producers both inside and outside OPEC, continued to suffer. Libya, Algeria, and Iran were losing billions. However, the Saudi policies were very popular at home, thus discounts continued. Further, at the beginning of July, they pushed production to 6 million barrels per day (Adelman, 230).

In August at the OPEC meeting a production an agreement was hashed out that set the new limit at 16.8 million barrels per day, down from 20.5 million, with Saudi Arabia most importantly promising to stick to its old limits. Norway also agreed to limit output in order to stabilize prices. Adelman also points out that though China, the Soviet Union, Mexico, Egypt, Malaysia, Oman, and Angola all made a production-reduction promise, "none of them kept it" (231).

The goal as 1986 came to an end was higher, stable prices. In October, Saudi Arabia and Kuwait proposed a new Arabian Light marker of $18, achieved through production cuts. It was suggested that the new quotas be based "50 percent on reserves, 20 percent on producing capacity, and 10 percent on population" (Adelman, 232). After much haggling, complicated by the war between Iraq and Iran that brought the two countries' positions in OPEC into conflict, an agreement appeared on December 21, 1986. All members would cut back production by 5%, and first quarter 1987 production would be limited to 15.8 million barrels per day. Net-back pricing also came to an end, as members promised to stop making oil sales based on free-market prices.

ANALYSIS OF THIS TIME PERIOD NEEDED

Limbo (1986 – 1999)