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UNDERSTANDING THE ECONOMIC POWER OF OIL

By
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Understanding the Economic Power of Oil

by

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ABSTRACT

Oil has become a single global market in which oil price fluctuations now have the ability to rock the world economy. The purpose of this thesis is to examine the changing nature of this threat and by doing so, show that Saudi Arabia, which has acted as the primary stabilizing tool by American foreign policy makers, will no longer suffice in this capacity. Rather, Saudi Arabia, which has for the most part cooperated with the United States in helping to stabilize oil price and supply disruptions, will become increasingly less cooperative in a much shorter time frame than might be anticipated with regard to oil supplies. This thesis proposes possible avenues for U.S. national security policy by exploring pathways that might further ensure economic security and stability of the Middle East region in light of the new nature of the oil threat. The goal of economic security and stability can only be realized through an understanding of the oil producing nations and their relationships with the international community and world economy.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

With the end of the cold war, the dawn of a new era is upon us. This era brings with it much new thinking with regard to global military and political strategies. New factors are present in the equation that will give rise to the "new world order." One of the unfortunate highlights in the opening chapter of this new era was the Persian Gulf War. This war illustrated one of these new factors ushered with this new era of rethinking global strategies and that factor is economic power, and in the case of the Persian Gulf War specifically, the economic power of oil.

We are seeing a shift in thinking among world powers which is beginning to de-emphasize geo-strategic concepts of military power and show greater emphasis toward geo-economic power. As this shift takes place it will become apparent that oil will play an increasingly important role in the United States' goal of economic and national security. Thus, it follows that the control of oil presents an increasingly vulnerable area of U.S. national security and a potential threat if that control were to fall into the wrong hands. Although the U.S. has made efforts to diversify its oil resources and find alternative energy sources, the more subtle but much farther reaching effects have not been due to a shortage of oil supplies, but rather the economic effects that accompany fluctuations in oil supplies. Fluctuating oil prices that have accompanied severe supply disruptions have exacerbated the United States' most recent recessions as well as the country's current economic downturn. Indeed, oil price fluctuations now have the ability to rock the world market.

What current plans fail to address is the very essence of U.S. security interests in the region, and that may no longer be oil, but rather the world wide economic impact of oil supply disruptions. This aspect of U.S. interest in the Middle East is not a very clear one to the average American. Economic interests do not seem important enough to risk American lives over, nor do many Americans seem to support the idea of going to war for oil. In fact, however, oil has become a critical feature of the global economy. In theory, if any one entity controls too much oil, it can control the supply, the price, and the economic and military power that comes with it. This is the less revealed threat to U.S. national security.

This thesis examines the changing nature of this threat and by doing so, attempts to show that Saudi Arabia, which has acted as the primary stabilizing tool by American foreign policy makers, will no longer suffice in this capacity. Rather, Saudi Arabia, which has for the most part cooperated with the United States in helping to stabilize oil price and supply disruptions, will become increasingly less cooperative in a much shorter time frame than might be anticipated with regard to oil supplies. This thesis proposes possible avenues for U.S. national security policy by exploring pathways that might further ensure economic security and stability of the Middle East region in light of the new nature of the oil threat. The goal of economic security and stability can only be realized through an understanding of the oil producing nations and their relationships with the international community and world economy.

I. INTRODUCTION

With the end of the cold war, the dawn of a new era is upon us. This era brings with it much new thinking with regard to global military and political strategies. New factors are present in the equation that will give rise to the "new world order." One of the unfortunate highlights in the opening chapter of this new era was the Persian Gulf War. This war illustrated one of these new factors ushered with this new era of rethinking global strategies and that factor is economic power, and in the case of the Persian Gulf War specifically, the economic power of oil.

We are seeing a shift in thinking among world powers which is beginning to de-emphasize geo-strategic concepts of military power and show greater emphasis toward geo-economic power. As this shift takes place it will become apparent that oil will play an increasingly important role in the United States' goal of economic and national security. Thus, it follows that the control of oil presents an increasingly vulnerable area of U.S. national security and a potential threat if that control were to fall into the wrong hands.

The Iraqi invasion of Kuwait in August of 1990 and the crisis in the Middle East has brought into sharp focus America's continued dependence on foreign oil imports. This is the third reminder in the last two decades of America's vulnerability to oil supply disruptions. Although the U.S. has made efforts to diversify its oil resources and find alternative energy sources, the more subtle but much farther reaching effects have not been due to a shortage of oil supplies, but rather the economic effects that accompany fluctuations in oil supplies. Fluctuating oil prices that have accompanied severe supply disruptions have exacerbated the United State's most recent recessions as well as the country's current economic downturn.[1] Indeed, oil price fluctuations now have the ability to rock the world market.

It is for this reason that Persian Gulf security polices will again come to the forefront of U.S. national interests and present new challenges. In the wake of the Persian Gulf War and the collapse of the Soviet Union, analysts and strategists have scrambled to assemble a Persian Gulf/Middle East security posture to meet the needs of the new world order. From increased naval presence to the pre-positioning of troops and equipment in the region, military security proposals have been planned to the most minute detail to meet every possible military contingency. Military strategists are now emphasizing the ability to adapt to different scenarios such as regional conflicts and littoral warfare. What these plans fail to address, however, is the very essence of U.S. security interests in the region, and that may no longer be oil, but rather the world wide economic impact of oil supply disruptions. This aspect of U.S. interest in the Middle East is not a very clear one to the average American. Economic interests do not seem important enough to risk American lives over, nor do many Americans seem to support the idea of going to war for oil. The only way to gain popular support for military intervention in these areas, it seems, is to couch it in the language of deterring aggression and fostering a stable post-cold war world order.

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[1]Phil Kuntz, "Unstable Mideast Oil Supply Rocks the World Market", *Congressional Quarterly*, 5 January 1991, 21.

In fact, however, oil has become a critical feature of the global economy. In theory, if any one entity controls too much oil, it can control the supply, the price, and the economic and military power that comes with it.[2] This is the less revealed threat to U.S. national security.

The purpose of this thesis is to examine the changing nature of this threat and by doing so, show that Saudi Arabia, which has acted as the primary stabilizing tool by American foreign policy makers, will no longer suffice in this capacity. Rather, Saudi Arabia, which has for the most part cooperated with the United States in helping to stabilize oil price and supply disruptions, will become increasingly less cooperative in a much shorter time frame than might be anticipated with regard to oil supplies. This thesis will propose possible avenues for U.S. national security policy by exploring pathways that might further ensure economic security and stability of the Middle East region in light of the new nature of the oil threat. The goal of economic security and stability can only be realized through an understanding of the oil producing nations and their relationships with the international community and world economy.

[2]Kuntz, *Congressional Quarterly*, 21.

II. THE ROLE OF OIL IN DEFINING U.S. NATIONAL INTERESTS

A. OIL CONSUMPTION FACTS

Before turning to the economics and politics of oil, the geographic distribution and features of oil bear examination. The Middle East has been called the "hub of civilization", and for good reason. In addition to being flanked by the Atlantic and Indian Oceans, it is interspersed by five bodies of water; the Red, Caspian, Black, and Mediterranean Seas, and the Persian Gulf. Together these seas comprise the heaviest commerce and communications lanes in the world. They have also been the sight of numerous naval and military battles to control the main trade routes. The intense level of interaction between Europe, Africa, and Asia at this "hub" have led to the coining of such terms as chokepoints, crossroads, and critical interfaces with reference to such strategically located junctures as the Strait of Hormuz, the Strait of Gibralter, and the Turkish Straits. In addition to these important commercial transit lanes the Middle East is also home to the world's largest oil reserves. In order to formulate an economic or political or strategic perspective on policy with regard to the Middle East, an understanding of the importance of oil, how much is used, and where it comes from is essential. It has been estimated by some that the planet's oil supplies will be depleted within the next 80 years. This figure is popular in conversation but seems to attract controversy among scholars. This controversy can be dispelled, however, with a closer look at some simple facts. Estimates of oil supplies lasting roughly a century into the future come from the simple equation of current consumption rates, proven oil reserves, and estimated oil reserves. "Proven" oil reserves are those reserves which are known to exist. They consist primarily of crude deposits in underground reservoirs. The crude oil has not yet been refined, but the capacity of the reservoirs can be estimated with accuracy. Today there are 990 billion barrels of proven oil reserves. It is estimated that there are another 500 billion barrels of oil recoverable using conventional methods which remain undiscovered, with roughly half of this being under the oceans.[3] These figures taken together, that is, current proven reserves and reserves to be expected from future exploration suggest that at current consumption levels, conventional oil reserves will actually last about 70 years. This translates to an annual world oil consumption rate of slightly more than 20 billion barrels per year. Global distribution of the 990 billion barrels in proven reserves is highly concentrated. In fact, over 60% of the total figure lies in the Middle East, and nearly 80 % (of the above mentioned 60%) lies in a 500 by 800 mile region known as the Arabian Iranian Oil Province. Because of this great concentration of the world's largest oil fields, it follows that these huge reserves are concentrated in a small number of countries. In fact, only four countries together contain 80% of the region's reserves, and they are Saudi Arabia, Kuwait, Iran, and Iraq. Furthermore, nearly all of these largest oil fields lie virtually on the Persian Gulf.

Juxtaposed to these figures is the United States. Representing just 5% of the world's population, the United States is by far the world's largest oil guzzler, consuming almost 30% of the world's oil.[4] The United States is

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[3]Alasdair Drysdale and Gerald H. Blake, *The Middle East and North Africa A Political Geography* (New York, Oxford: Oxford University Press, 1985), 67.

[4]Kuntz, *Congressional Quarterly*, 21.

currently importing less than 20% of its oil needs though, but this figure will inevitably begin increasing soon, however, as domestic supplies constitute less than 1/30th of the world's proven reserves.

While the Middle East is home to more than half of the proven reserves of oil in the world, the United States has managed to reduce its imports of oil from this region to a figure averaging as low as 10%, and by some estimates as low as 6%. This reduction is largely the result of the first National Energy Strategy enacted by the U.S. administration, in which the goal was to reduce U.S. oil dependency on Middle East reserves. The question then seems to arise as to why the United States has such an interest in the region. This relatively small import figure would also seem to support critics of the U.S. administration's putting troops at risk to protect such a small percentage of imported oil supplies.

The answer to these questions lies in the fact that oil has now become a single global market. In economic terms, oil has become a "fungible commodity", which means that like precious metals or international stocks, when prices increase in one part of the world, the subsequent effect is that prices will increase world wide. Therefore, it does not matter so much where oil comes from or how much is being imported. What does matter is how much of the world's oil comes from a supplier who has driven the price up, thus driven up the price world wide. By one estimate, for every dollar increase in the per barrel price of oil, 3 billion dollars leaves the United States annually. This takes on serious economic implications considering the fact that the price of crude oil jumped from 20 dollars to over 40 dollars per barrel of crude after the Iraqi invasion of Kuwait.

Several national security challenges present themselves here. Energy needs, oil dependency, and the sometimes seemingly fragile economic balance associated with the price of oil all present complex global issues. The changing nature of the oil threat presents U.S. national security challenges that are not readily apparent. The National Energy Strategy enacted by the U.S. administration, although successful at meeting the perceived threat of oil dependency, does not apply today. The transition of this national resource to an international economic commodity presents a much more subtle threat that will require an equal transition in U.S. national security strategy. Furthermore, the nations of the Middle East are in a fragile balance. The Arab-Israeli peace process, although making headway, continues to present stumbling blocks on the path to stability in the region. The stability of the oil producing nations themselves remains of critical interest to the United States as well as potential regional conflicts on the horizon. The proliferation of arms to the region will also present security challenges in the future of this volatile region.

With this geographic and economic backdrop, the United States must reexamine its interests in the Middle East. There is no question that oil is one of the primary interests of the United States, and keeping in mind that the Middle East is home to nearly two thirds of the world's oil reserves, it follows that the U.S. has an obvious interest in the region. There is some debate, however, as to why the U.S. has such an interest in oil. There are those who profess that based on energy needs alone, the United States must continue to maintain its access to the world's oil. On the other hand, there are those who profess that the true security of the nation is not dependent on access and utilization of these petroleum resources, but rather on the protection of these resources from those who might chose to use it as an economic or political weapon. Through the use of embargoes or resource hoarding, oil has been used to gain an individual's or government's political or economic desires. Now that oil is a world wide trade commodity, the impact of these embargoes, and the associated price increases that accompany them affect the economies of virtually every nation in the world. It appears then that oil, having made this transition to a global market, now has an even greater attraction to those who might wish to control it or use it as a weapon.

It is from these two camps then that a clearer illustration can be drawn in defining U.S. interests in this lifeblood of the industrialized nations known as oil.

The first question that needs to be answered with regard to U.S. interest in oil as a natural resource is whether or not the United States can survive without oil from the Middle East. And as already shown, the United States currently imports roughly only 20% of the petroleum it consumes, and again, figures averaging roughly 10% represent that petroleum imported from the Middle East. It would appear by this low figure that measures enacted during the oil crisis of the early 1970"s have proven effective in reducing Middle East oil dependency, and thus U.S. vulnerability to the oil threat. Currently, 43% of U.S. energy needs are met by petroleum.[5]

B. RESERVE TO PRODUCTION RATIOS

In considering figures regarding oil supplies, there are two concepts that are helpful to understand. First, as mentioned earlier, proven reserves are

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[5]Kuntz, *Congressional Quarterly*, 21.

those quantities with which a reasonable degree of certainty, can be recovered from known reservoirs under existing operating and economic conditions. The second concept is known as reserve to production ratio. This figure is obtained by dividing the reserves remaining at the end of a given year by that year's production rate. The resulting figure then gives the length of time that those reserves would last if production continued at that level. The following table shows percentages of world oil reserves by region and their respective reserve to production ratios in years:

Region	Share of World Total	R.P. Ratio[6]
North America	5.7 %	9.0 yrs
Latin America	12.6 %	37.7 yrs
Western Europe	2.6 %	12.2 yrs
Middle East	54.8 %	85.5 yrs
Africa	7.3 %	29.3 yrs
Asia/Australia	2.5 %	14.3 yrs

This table shows how long reserves will last, by region, if the production in each region were to continues at the current rate. Latin America is the second largest figure at 37.7 years behind the Middle East. In other words, at current production rates, in 37.7 years the Middle East will have a complete monopoly on the world's remaining oil reserves.

This table also tells us that although the United States has managed to reduce the amount of oil it imports from the Middle East, that it is only

[6]Michael Cunningham, *Hostages to Fortune the Future of Western Interests in the Arabian Gulf* (London Oxford: Brassey's Defence Publishers, 1988), 9.

putting off the inevitable choices of either finding alternative energy sources or once again increasing its supplies from the Middle East. Furthermore, the economic implications of these reserve to production ratios are that the Middle East will eventually be the only supplier of this commodity, and thus have potentially total control of the market. This dominance could eventually lead to an economic monopoly, and some analysts have predicted that this will occur by the year 2020.[7]

Thus it can be concluded that reduction in the demand for oil and the emergence of alternative energy sources has at times made Persian Gulf security a lower priority for the United States than other areas of the world. The fact remains, however, that the Gulf holds the majority of the world's long term oil reserves, and bearing in mind the reserve to production ratios, will eventually monopolize the market. It is somewhat optimistic to assume that the United States, or any other nation, will become independent of oil for its energy needs before supplies have completely dried up. This assumption can be made based on costs. In the short term oil is still the least expensive fossil fuel. There is a short term break point at which the price of oil becomes greater than the cost of alternative fossil fuels. Analysts have estimated this figure to be approximately $24 per barrel in 1991. When oil prices exceed $24 per barrel it is no longer the most cost effective fossil energy source for the United States. Oil producers and suppliers are aware of this and realize that it is in their best interests to keep oil prices stable. The concept does not address the longer term and much greater impact of the infrastructure changes that will inevitably have to take place as alternative energy sources

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[7]Cunningham, 10.

become the primary propellants of industry and transportation. The cost prohibitive nature of this transition to alternative sources in the long term combined with the political realities of sustaining the industrial base and workforce lead to one conclusion. U.S. security interests will include the natural resources aspect of oil itself, and will continue to do so until supplies have diminished completely. It is the economic impact associated with this resource that will be examined here, however.

The United States' economic interests in the region, although diverse, have one common essential feature; oil. In securing gulf oil, and thus its economic interests, the United States has fostered a strong commercial and financial interdependence with gulf states, particularly Saudi Arabia. This interdependence has taken the form of U.S. exports of goods and services to the region, U.S. investments, repatriation of U.S. oil company profits and dividends,[8] and several hundred thousand jobs for Americans which exports generate. The Middle East is one of the fastest growing markets for U.S. goods and services. This interdependence has helped to relieve some concern of the Gulf states regarding their dependence on oil revenues, but as has been seen, the gulf states are certainly not immune to the effects of dropping oil prices. Oil producing states' vulnerability due to reliance on oil revenues for their economies was one of the motivating factors for some Arab countries to establish the Gulf Cooperation Council in 1981. This is a coalition of some of the more benign Gulf states, including some of the smaller oil producers, to attempt to align and diversify their investments and form viable economic

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[8]Peter J. Chelkowski and Robert J.Pranger, ed., *Ideology and Power in the Middle East Studies in Honor of George Lenczowski* (Durham and London: Duke University Press, 1988), 415.

policies. The GCC is favored by the United States in that political stability seems to be one of the results of the formation of this cooperation, and just as importantly from an economic standpoint. The United States has become dependent upon the Gulf states to the degree that revenue generated from U.S. exports to Arab states now totals more than five billion dollars per year. Additionally, investments from Saudi Arabia alone, primarily in U.S. government securities, is estimated at 70 billion dollars. The relationship between the United States and the Middle East, specifically, the oil producing states, keenly illustrates the definition of economic interdependence. The adverse effects of rising and falling oil prices, notwithstanding belligerent military intervention, can be combated with continued policies in favor of economic integration, both within the region itself, and between the region and the United States. Policies of this nature can not be expected to confront every scenario, however.

Clearly it is in the best interest of the United States to promote stability in the region through economic diversification and continued trade in order to ensure America's access to gulf oil, and prepare for the inevitable eventuality of diminishing oil supplies.[9] But more importantly, the United States needs to prepare itself for the combined effects of the Middle East region gaining a monopoly on control of the world's oil and possible attempts at exploiting this control. In order to understand the effects of such control, it is important to understand how oil operates in the world economic marketplace.

Since the earliest beginnings of the oil production industry in the 1860's, petroleum producing countries have comprised a diverse group of developed

[9]Chelkowski, 418.

and developing countries that have included a wide range of regimes and ideologies. In the 1930's a few of these countries became aware of the significance of this natural resource that they were endowed with. Consequently, they began to cooperate on an informal level. It was not until 1960, however, that five of the leading oil producing countries came together to form their first permanent organization. All developing countries, these first five members were Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela. The organization is, of course, OPEC, or the Organization of Petroleum Exporting Countries, and eight other nations have since joined.[10] The creation of OPEC was in response to price cuts made by major concessionaires that then were comprised of seven transnational companies, five of which were American. OPEC was conceived as a means of impeding or reversing such situations as 1) pricing and production policies of foreign concessionaires which could undermine the economic stability of the host country, 2) excessive economic dependence on major industrialized countries whose policies could keep oil exporting countries in a state of relative underdevelopment, and 3) compounding the instability of the energy market.[11] OPEC has made successes for its member countries. The nationalization of production facilities, refining plants, and ownership of the oil companies themselves has brought wealth and development to the member nations. The ownership and control of the world's largest oil reserves has, in fact, shifted from what was once known as the concessionaires of the major industrialized nations of the western world or, the

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[10]Zuhayr Mikdashi, *Transnational Oil Issues, Policies and Perspectives* (New York: St Martin's Press, 1986), 44.

[11]Mikdashi, 45.

"majors", to the host countries themselves. This transfer process has not been a completely smooth one, however. The member countries of OPEC do not themselves represent a homogenous state of development or natural resource endowment. On the contrary, they represent great economic diversity, and this acts as a divisive factor in their efforts toward economic unity. Excess capacity in some of the OPEC countries has led to a competition between them, and one of the results of this competition is the change in the price of oil.

C. OIL AS A COMMODITY

This introduces us to the concept of oil as a commodity. Oil now represents a world wide market in which the price is essentially one price. If for some reason the price of oil goes up in one area of the world, then effectively the price goes up everywhere. Understanding the basic laws of supply and demand for this commodity are essential to the formulation of a security policy which will address the economic power that the control of oil prices entails. The price of oil is essentially driven by the basic laws of supply and demand. In the short term, supply can be affected by any number of factors, ranging from weather to shipping accidents. The price surges of these short term effects can lead to speculation buying and this will subsequently push the price of oil up higher than alternative sources of energy. These short term price hikes are possible because of the preventively high costs of long term energy alternatives and the length of time required to bring these alternative energy sources on line.

The long term price of energy will be affected by factors that will require a structural transformation in societies, primarily in the area of public transportation. Price quotations for daily "spot" transactions for oil then are obviously more sensitive to the short term factors.

Until the mid 1970's, the largest part of transnational petroleum transactions were based on long term contracts between the network of major integrated oil companies. Shortages and surpluses did not appear on the open market because of the careful management of supplies to match the variations in demand. Most oil exporting countries had accepted these random variations in off-take as decided by their concessionaires (which were the major transnational companies). The nationalization of these concessions as well as the increase in the number of independent companies have contributed to the emergence of an open market in which sales now take place between unrelated companies.[12]

This growth in the number of independents has brought with it a transition of the price of oil from the "term" market to the "spot" market. This transition has increased the volatility of oil prices. In times of shortage, the independent actors nervously bid up the price of oil to obtain the required supplies. Conversely, in a surplus situation, independents are tempted to reduce prices to expand sales. The major companies can afford, however, to absorb these fluctuations through diversification, and the result is oil price wars.

This evolution of oil as a commodity has resulted in a multitude of factors that influence its price. While a country's natural resources, the structure of the industry, and corporate strategies represent important factors in

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[12]Mikdashi, 30.

supply and demand and the price of oil, the policies and actions of governments do too.

Before examining how governments intervene in shaping oil policies, however, one should have a basic understanding of the development of the oil market, the place in which oil, the commodity, operates. As early as 1945, oil supplies have been threatened by conflict. The Suez Canal was blocked in 1956, and in 1967 Israel attacked Egypt's armies and the Arabs threatened to embargo supplies to the United States. Again in 1973 and in 1979 the world economy shuddered as a result of events in the Middle East. While these conflicts may appear to be dated information, many of the markets and firms and policies that shape oil's response to those shocks are less than 20 years old. How the oil price, and thus the price paid by companies and consumers respond to crisis events like the Persian Gulf war depend on how the markets operate.

The development of the oil market began with the rapid rise in the consumption of oil following World War II. The consumption of oil is relatively easy and cheap in comparison to coal, and it is easier to transport than gas. From 10 million barrels per day in 1950, the world now consumes 65 million barrels per day. Tankers carried 11 billion barrels of crude and refined oil in 1989. That is more by weight than the world's next three most traded commodities, iron ore, coal, and grain combined.

Producers of oil have tried to overcome the volatility of this commodity as a resource, as already discussed, through attempted monopolies and cartels. These proved to provide only temporary relief, however, as has been shown, the volatile price of oil shifted from long term market transitions to the spot market. By 1982, more than half of internationally traded oil was priced according to spot rates. The reason for this is that violent changes in price make long term fixed price contracts too risky. The oil market is now built around three exchanges: the New York Mercantile Exchange, the International Petroleum Exchange, and the Singapore International Monetary Exchange. The oil market remains an immature one, and its weakness lies in the spot markets. Prices around the world are normally kept stable either through arbitrage or through adjustments in supply, as in the case of Saudi Arabia. Saudi Arabia is an example of a nation who is aware of the adverse effects of skyrocketing oil prices. If, as demonstrated in the Persian Gulf War, oil prices increase substantially as a result of a belligerent nation attempting to hoard or control more oil, then Saudi Arabia will increase production, thus increasing supply, thus reducing demand and reducing prices. Furthermore, after a crisis such as the invasion of Kuwait, some nations who own oil stock tend to hoard it or not even sell it at all.

One thing is certain, and that is that the oil production industry has not seen its last interruption. The question becomes then, how vulnerable is this industry and how vulnerable are the nations whose economies now revolve around this industry.

The effectiveness of Saddam Hussein's tactics regarding oil during the Persian Gulf crisis proved to be short of what the world might have expected. It is true that many western governments were spoiled by the oil glut of the 1980's and the balance between supply and demand is tighter than some had thought. As Hussein hoarded his oil, the world supply decreased. This decrease in supply created an increase in demand, and thus an increase in price. Again, if price goes up in one part of the world, then the price goes up on the world market, and virtually every nation in the world is effected. The issue then becomes one of how to restore supply, and hence prices, to pre-crisis levels. Many OPEC countries can easily produce more oil than they do currently, but if prices are high, it would seem that they have no incentive to produce more. The alternative then is for governments to tap into their strategic reserves or find an incentive for increased production for other countries,[13] or apply pressure to the producing countries either politically or militarily.

If in fact, however, some person or government is able to gain control of enough oil supplies to drive oil prices up, either for a short time or some sustained period, then the effect of this aspect itself deserves examination. The different nations of the world, although all part of a global economic market, will suffer different effects as a result of oil price increases. A measure of this vulnerability was done in one study in which the oil producing nations of the world were ranked in order of their sensitivity to oil prices. The quantitative analysis done measured the following factors: 1) Oil Self Sufficiency. This was measured by showing the net oil trade balance as a percentage of GDP. The bigger a country's net imports, the greater its loss of income to oil exporters when prices rise. 2) Energy Efficiency. This measure showed the consumption of energy (in tons of oil equivalent) as a ratio of GDP. 3) Oil Dependency. In a short term price increase, economies which are most dependent on oil will be hit the hardest. 4) Trade with OPEC. This figure compares the relative amount of a country's exports to OPEC countries (other than Iraq and Kuwait, embargoed at the time of the study). These four indicators were then ranked for each country from 1 (being the least

[13]*The Economist*, "Breathe in and Squeeze", August 11, 1990.

vulnerable) to 16 (most vulnerable). These were then added together, doubling the values for oil imports and oil efficiency to reflect their relative importance. The three relative winners (those who would be least hurt by price hikes) were Australia, Japan, and Argentina. The three countries ranked most vulnerable were Turkey, Czechoslovakia, and South Africa. The United States got a score of 7, again with 1 being least vulnerable and 16 being most vulnerable.[14] A study such as this might be used as an indicator or predictor should another crisis occur, and certainly can be used as a preventative tool for the future of the economies of the world. The study falls short, however, if we reconsider the concept of reserve to production ratio. This concept again forecasts that within thirty to forty years the Middle East could hold a complete monopoly on oil reserves, in which case a nation's vulnerability would be more a function of imports and consumption, rather than the other factors.

The solution to this problem lies in the following concept. As oil prices rise, oil companies are inclined to hoard supplies, keeping the price high. The rising price reaches the break point, however, where, as discussed, the use of an alternative energy source becomes more cost effective. It is true, as mentioned earlier, that the transition to a completely new technology is prevented by both cost and time, but in the short term, gas and coal can act as a substitute for oil in many industries. In fact, many power plants have the ability to operate on different fuels. Furthermore, the more moderate oil producing countries have the foresight to understand the law of diminishing returns. The higher the price of oil, the more incentive industrialized nations

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[14] *The Economist*, "Who Dares Wins...and Loses", September 1, 1990.

will have to begin the search for alternative energy technology. As structural changes occur in societies as a result of these new technologies, the demand for oil will begin to drop. The conclusion that we can draw from this is that it is in the best interests of the oil producing nations to keep prices at a moderate level. In the long run, the basic market forces of supply and demand will aid in keeping prices moderated. It is the short sighted belligerent that is looking to make a quick buck, or trying to use oil as a weapon that poses a threat. And if, as some have predicted, the Middle East does in fact soon hold a monopoly over the world oil market, it would seem to be a much more attractive target for a potential belligerent.

III. U.S. RESPONSE TO DIMINISHING OIL SUPPLIES

We have established that the United States is vulnerable, at least to some degree, to both the diminishing supplies of the world's oil, and in particular, the economic effects that accompany disruptions to those supplies. The response to those vulnerabilities, and their effectiveness is what will be examined in this chapter.

The oil price hikes of the 1970's led to an unprecedented federal effort toward a national energy security policy. Although many energy laws were enacted that decade, it is arguable that none seem to have had any long term comprehensive effect on the nation's current energy security needs. Today, nearly 20 years later, the current U.S. Administration is debating the National Energy Strategy for 1992/3. As mentioned in the introduction, the Persian Gulf war is the third time in the last 20 years that the United States has become vulnerable to oil supply disruptions. The Arab oil embargo of 1973 led to the passage of a number of measures aimed at protecting the nation from the adverse effects of these disruptions. Some progress was made during the seventies in the areas of energy conservation and efficiency, but these efforts failed to address the issue of short term vulnerability, and only acted to forestall the inevitable depletion of oil resources. Another result of the oil shocks of the seventies was the creation of the International Energy Agency. One of the concepts behind the IEA was that in the event of an interruption to OPEC oil supplies, each of the signatories of the agency would call for a pooling of energy resources to guarantee a supply sufficient to meet energy requirements to an agreed minimum. The offspring of this concept was the development of the Strategic Petroleum Reserve. The reserve was designed to contain enough petroleum to sustain normal consumption for ninety days. The concept of the SPR is to maintain a safety margin in the event of an interruption to OPEC oil flow, and to act as a deterrent to the use of oil flow restrictions as a political weapon. Today, the U.S. Strategic Petroleum Reserve holds about a seventy day supply of oil.[15]

1979 saw the flow of oil again reduced as a result of the Iranian revolution. Then in 1986, world oil prices dropped, discouraging the development of alternative sources and technologies, and discouraging investment in U.S. oil exploration. Since 1985, the amount of oil imported each day to the United States has more than doubled, but it was not until the Persian Gulf crisis that the oil dependency issue again gained enough "popularity" to lead policy makers into action, and call for a renewed federal effort in reaching a comprehensive energy policy.[16]

A. NATIONAL ENERGY STRATEGY

In July of 1989 President Bush and Energy Secretary James D. Watkins announced their plan to draft a "National Energy Strategy", promising to stress conservation and efficiency.[17] Eighteen months later, in February of 1991, the Administration plan was unveiled, and it advocated increased domestic energy production, reduced energy demand, promotion of new foreign supplies of oil, and some energy conservation measures.

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[15]Sarah Orrick, ed., "National Energy Policy", *Congressional Digest*, May 1991, 130.

[16]Orrick, 130.

[17]Holly Idelson, "Senate Filibuster Deals Blow to Plan for New Policy", *Congressional Quarterly*, 2 November 1991, 3191.

The impetus for this effort toward the National Energy Strategy was clearly the Persian Gulf War. As a result of the crisis, energy policy was once again front page news. When soldiers began returning home, however, the panic of the crisis in the Gulf had turned to a heroes welcome, and public concern about energy security was fading.

As a crisis recedes then, impetus for any far reaching legislation gives way to regional and political interests. The outbreak of the 1973 Arab Israeli War and the October OPEC oil embargo provided for the response from the Nixon Administration to call for a goal of zero oil dependence. The result was the establishment of the Federal Energy Administration and an emergency rationing plan; a far cry from zero foreign oil dependence. In February of 1977 President Jimmy Carter held a "fireside chat" on the energy crisis, warning of natural gas shortages. The resulting legislation was a watered down version of Carter's plan, adopting some conservation measures. In 1980 at the outbreak of the Iran Iraq war President Reagan called for federal support of a synthetic fuels program, and faster development of nuclear power. In 1981 with the release of American hostages held in Iran, congress allowed the synthetic fuels program to die.

And then in 1990 Iraq invaded Kuwait and oil prices jumped. The following month the Strategic Petroleum Reserve was expanded. It seems that the Administration is somewhat hesitant to use the reserve, however, and some are questioning its usefulness. In 1978, Mr. David Stockman, impatient with President Carter's energy hysteria, said that the government needed but two policies: strategic arms and strategic reserves. Experts and congressmen argued that it was time to tap the reserve.

The Strategic Petroleum Reserve legislation gives total discretion to the President to declare an energy emergency. That term has not been defined. Another stumbling block in the process is that a SPR drawdown must be agreed upon by all other IEA members holding reserves. Other claims about the reserve are that its heavy high sulphur crude is difficult to refine, and that there are physical problems pumping it out.

Policy reasons for hesitancy in utilizing the reserve also exist. The Administration would prefer to exert pressure on other producers to make up for lost oil, or that oil companies draw on their own reserves. The question as to whether or not the SPR is effective, it seems, will only be answered if oil prices somehow manage to stay high long enough. At the relatively high cost of 27 dollars per barrel, and an annual maintenance cost paid by taxpayers, it may appear that the SPR is simply letting other producers off the hook.[18] It seems clear then that efforts in the area of domestic energy policy are in fact simply a reaction or response process, and one that simply loses its momentum as a function of public interest and crisis management.

This has been the evolution of what today we are calling our national energy security policy. One might argue that a sense of urgency is really not needed, at least not yet, and that the efforts and policies in place, although slow, are steady and making headway in a comprehensive energy strategy. Conversely, one might point out that worries in Washington about U.S. energy security have dwindled after the defeat of Iraq in the Persian Gulf War, and that the war summed up the U.S. Government's unstated security

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[18] *The Economist*, "Oiled", September 22, 1990.

policy, which can be seen as simply defending shipments of imported oil, by force if necessary.

According to some analysts, since the oil price shock of 1973, the world's economies have increased in their preparedness for such shocks, and have reduced their vulnerability to the same. This conclusion is drawn through an analysis of GNP transfer. Whatever the oil price might jump to as a result of supply disruption, its impact should be smaller than in the past. To produce a dollar of real GNP, industrial economies now use 40% less oil than they did in 1973. Higher oil prices have encouraged consumers to shift to other fuels. The age of computer technology means that industries consume less of all commodities, including energy. In both the previous two energy shocks OECD economies had to transfer roughly 2% of their income to OPEC producers. Even if oil prices were to rise by the same percentage as they did in 1978–79, the transfer of GNP would be no more than 1%. Additionally, in the two oil price shocks of the seventies, the deflationary impact of this initial loss of actual outcome was enhanced because of the fact that OPEC countries could not spend all of the extra petrodollars immediately.[19]

This coupled with the fact that financial markets are more competitive tells us that the world's economies can prepare themselves for oil price hike shocks, rendering the use of oil as a weapon less effective. The result is that one argument shows that even if there are supply disruptions and prices do skyrocket, that the economy can potentially absorb it. Additionally, we have determined that because soaring prices force consumers and consuming nations to cut back on demand by increasing efficiency, switching to other

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[19]*The Economist*, "Third Time Lucky", August 11, 1990, 13.

fuels, developing alternatives and increasing domestic production, that it is in the best interests of the oil producing nations to keep prices stable.

The upshot of this is that if a belligerent nation attempts to use oil as a weapon, they can hike prices up in the short run, but these high prices simply cannot be sustained. There might be a more serious effect if the belligerent was able to control too much oil, however, as is the case in the second argument, in which it is predicted that the Middle East will soon hold a monopoly on the world's remaining oil. As in the Persian Gulf war, the panic that drove prices up initially was the fear that Hussein might gain control of some or all of the oil fields in Saudi Arabia. This poses a greater threat in that one of the price stabilizing mechanisms in a price shock is to have the friendly OPEC countries increase production. Barring this, and of course, the use of force, the only back up plan is the use of the Strategic Petroleum Reserve.

With regard to a domestic energy strategy, it seems that there is simply not enough incentive to make the shift to an alternative energy source before the oil runs out. The oil will, in fact, run out. It may take longer than some have predicted if consumption is reduced, but the high cost of exploring and extracting yet to be discovered oil reserves will not prove as cost effective as an alternative. History of the domestic energy strategy clearly indicates that efforts in reducing oil dependency have been in response to oil price shocks. If, as we have concluded above, these shocks can be increasingly absorbed by the world's economies, then that reduces the incentive to find alternative energy sources even further. If, however, one belligerent government or individual is able to exploit the predicted monopoly scenario, then there may not be a friendly OPEC country to increase production.

One can assume then that the industrialized nations of the world will continue to use oil before turning completely to another energy source. This brings us back once again to the concept of reserve to production ratios. Assuming that market forces, government policies, and military forces all act to continue to stabilize the price of oil for the next forty years, what will happen when all of the oil remaining on the planet is in the Middle East? If we take what we know about the current oil market and try to extrapolate that information into the future, what will the world look like if the Middle East has a total oil monopoly? Will the financial, political, and security interdependencies between the oil producing states and the superpowers act to facilitate a stable world, or will the market be completely in the hands of the nations of the Middle East and the rest of the world will be at the mercy of the oil pricers?

There is no question that oil will be a key factor in either the rivalry or the cooperation among nations for at least the first half of the twenty first century, and countries and companies concerned about the longer term will have to demonstrate the capacity to adjust to changing market conditions to maintain stability. They will also have to develop the skills necessary to confront and solve problems that arise in the world's ever changing socio-political environment. A brief historical analysis of policy responses follows.

B. U.S. POLICY TOWARD THE MIDDLE EAST

Historically, the three main reasons for the United States' concern with the Middle East have been 1) the containment of the Soviet Union, 2) the "special relationship" with Israel, and 3) guaranteeing access to its oil resources. Since World War II these reasons have provided the essence of America's interest in this strategic region.

Beginning with the containment of the Soviet Union, U.S. policy has historically been predicated on combating the spread of Soviet influence, and the assumption of Soviet expansion with regard to the vulnerable Middle East. With the end of World War II and the onset of Soviet-American rivalry, U.S. goals grew in pursuit of a grand containment strategy of the Soviet Union. The Truman Administration first developed a containment plan directed at the Soviet Union in northern Iran and later against communist plans in Greece and Turkey. Every subsequent administration has in one way or another built on this containment policy, with the Middle Eastern emphasis on the Soviet border, or the "northern tier " states as they are known.[20] Keeping Soviet expansion at bay in the northern tier has taken the form of military and economic aid, and has been done without major contradiction, being couched in the principle of self-determination. Since 1979, several events have focused American attention sharply on the Gulf region, including the fall of the Shah of Iran, the Soviet invasion of Afghanistan, and the Iran-Iraq war. These events highlighted further fears of Soviet expansion in the region, and in 1980 President Jimmy Carter declared that the United States was willing to use any means necessary to defend the vital interests of the United States in the Gulf region.[21] This policy has continued with Presidents Reagan and Bush.

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[20]Peter J. Chelkowski and Robert J. Pranger, ed., *Ideology and Power in the Middle East Studies in Honor of George Lenczowski* (Durham and London: Duke University Press, 1988) 433.

[21]Drysdale, 34.

The Soviet Union then, has obviously overshadowed the politics of the Middle East. Containment of the Soviet Union has been the prime driver of American foreign policy since the end of World War II. The collapse of the Soviet Union then brings new concerns to the forefront, and will require a restructuring of U.S. foreign policy. One of the more significant concerns is the void of Soviet-American competition and the subsequent moderation of formally pro-Soviet states. To some degree, what was a "balanced" competition for influence in the region may now appear to look more like U.S. imperialism. That is to say, the influence of the United States previously exercised in the region could be couched in the language of self-determination, and that the balance of thwarting the Soviet menace may now look more like the United States grabbing up the spoils of the cold war. This "power vacuum" as it has been called, now forces by default, the character of U.S. foreign policy to shift away from blocking Soviet expansion to some new, and as yet to be determined appropriate policy.

The second reason the United States is concerned with the Middle East is the "special relationship" with Israel. There are over six million Jews in the United States who play a key role in shaping U.S. policy toward Israel and the Middle East.[22] This is a simplified observation and does not address the multitude of complexities that explain U.S. ties with Israel or the Middle East, but from a very basic standpoint, this represents the essence of the "special relationship." The next logical observation then is the Arab-Israeli conflict and the consequential strain on the United States to attempt to promote positive relations with both the Israelis and the Arabs, specifically

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[22] Drysdale, 33.

the Palestinian Arabs. On the one hand, Israel has a place as a strategic stronghold for the United States in the Middle East and to whom the United States has supplied large amounts of arms to; on the other hand, it is the Arab countries, primarily Saudi Arabia where most of the United States' third vital interest in the region lies, oil, and with whom the United States has fostered economic relations with in order to ensure the continued flow and price stabilizing effects of oil supplies.

The making of American policy toward the Middle East, and Saudi Arabia in particular, has been dictated by two nearly opposing forces. One is determined by the politics of oil, and the other by the special relationship Israel enjoys with the United States. This has created a dichotomy that has made American policy toward the Middle East very difficult to manage. Support has been given to both Arab and Israeli objectives in the region making both parties suspicious of favoritism. Israel is considered by many to be a strategic as well as an ideological partner, and conversely, many Arab countries see Israel as one of the prime regional threats. The resolution of this conflict has been a foreign policy dilemma for nearly every U.S. administration since the establishment of the state of Israel. These opposing forces promise to continue to hold the attention of U.S. foreign policy makers at least as long as the U.S. holds other interests in the region, and the conflict remains unresolved.

U.S. political responses in attempting to reduce the vulnerability of the oil fields have included economic and military assistance in key states. Military assistance has been balanced back and forth between belligerent regional states, and states along the northern tier directed at the former soviet threat. Other policies, such as the establishment of the International

Energy Agency, have been aimed at ensuring adequate oil supplies in the event of a halt of gulf oil shipments. These policies, however, have been short term in nature and have not addressed the eventuality of oil supply depletion.

Part of the difficulty in managing Middle Eastern policies has been the unpredictability of revolutionary upheaval in some of the oil producing states. This may be due in part to the lack of understanding of U.S. foreign policy makers with regard to the inner dynamics of the Islamic world and the concerns of its policy makers. Policy concerns with regard to the Arab Israeli conflict present some of the same dilemmas. 1978 saw some of the first serious strains of this nature on the United States in trying to maintain gulf security while also maintaining Israel's preferential status. Attempts by congress to maintain this even-handedness in military aid to both Saudi Arabia and Israel in the form of F-15 and F-16 fighter jets drew much opposition in congress from Israeli lobbyists. Similar disputes ensued over AWACS radar planes being placed in Saudi Arabia.

The prospects for peace in the Middle East are then of critical national interest. The fact that soviet competition for the strategic prize has all but vanished does not lessen but increase the United States' interest in the region. Diplomatic innovations made here may have applications in a more far reaching sense, beyond the region itself, and this prospect alone is deserving of greater comprehensive foreign policy attention. As the backbone of the pro-western oil producing states, however, Saudi Arabia seems to be the most prominent figure as partner to the United States in pursuing its national security interests in the Persian Gulf. Strides have been made by Saudi Arabia with the smaller moderate states of the GCC in forming military and political alliances, and as evidenced by the Persian Gulf War, Saudi Arabia has taken on an increasingly pro-western orientation. If Saudi Arabia is to continue to act as a moderating force in the Gulf and as a cooperative partner to the United States in seeking their mutual interests, then this resource rich country deserves close attention.

IV. THE IMPACT OF THE OIL INDUSTRY ON SAUDI ARABIA

An assumption made here, as the previous chapters have demonstrated, is that Saudi Arabia is the primary vehicle through which the United States has implemented its Persian Gulf security policy. This assumption is based on 1) as holder of the world's largest oil reserves, Saudi Arabia is of obvious national interest to the United States, 2) its moderate posture with regard to maintaining oil supply, and thus oil price stability are in keeping with U.S. national interests, 3) Saudi Arabia's economic interdependence with the U.S. acts to further supplement cooperation through mutually beneficial investments of both capital and labor, and finally, 4) Saudi Arabia has acted most recently as a critical military partner in the pursuit of U.S. national interests.

If this critical and cooperative relationship is to remain strong and intact, a basic understanding of this country's development from an international perspective is essential. This chapter will examine how the oil industry has impacted the development of Saudi Arabia. More specifically, it will examine how an "imposed " industrial revolution brought on by the discovery of oil in Saudi Arabia has enhanced or hindered the social mobilization process, and thus the development of Saudi Arabia as a nation. This will prove to be of critical interest in the near future as the Middle East begins to gain a monopoly on the world's remaining oil reserves. We will define social mobilization as that intermediate step between pre-industrial and industrial society in which, as a part of modern development, a greater demand for public participation is prompted in both political and economic arenas. We might expect Saudi Arabia, as an experiment in rapid industrialization, to exhibit diminishing tribal or ethnic orientations, and ultimately a growing orientation toward stable nationalism, particularly in the case of a state with an abundance of a natural resource.[23]

Conversely, for third world governments, others might expect social and economic development to carry the risk of political instability, particularly if it is effective enough to bring disparities into prominence.[24] In this sense, the process of development and industrialization might be viewed in temporal stages. That is, the stability, the degree of participation, and the degree of social mobilization might all be a function of what "stage" of development a state is in. A state undergoing development might exhibit unrest and instability as a natural prelude to stability, in other words, those states exhibiting unrest may simply not have reached what we in the West call a mature stage of development in the context of industrialized nations. Some authors have called this process the democratization of an authoritarian regime. This "process' through which a states goes as part of modernization and industrialization, and its effects on social mobilization, is certainly worth close scrutiny in the case of Saudi Arabia.

A. FORMATION OF THE KINGDOM

The formal foundation of the Kingdom of Saudi Arabia took place in 1932, when the majority of the world powers recognized the sovereignty of the new country. One year later King Abdul Aziz granted the now-historic right to the Standard Oil Company of California (SOCAL) to prospect for oil in the

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[23]Ernest Gellner, *Nations and Nationalism* (New York: Cornell University Press, 1983),72.

[24]Yezid Sayigh, *Aldelphi Papers 251, Confronting the 1990's: Security in the Developing Countries* (Brassey's for the IISS, 1990)

Kingdom. By 1939 oil was being pumped from Saudi reserves. Prior to World War II these resources were being exploited completely by western companies, however, under a program of concessions. In exchange for these concessions, which had nearly unlimited access, the host countries were granted modest royalties.[25] Prompted by the desire to protect national interests, host countries have sought to gain effective control over their oil sectors since WW II. Not until December of 1950 did Saudi Arabia and ARAMCO make the first major change in the concession plan by concluding a 50/50 profit sharing agreement. Foremost among these strategies is, as already mentioned, OPEC, the Organization of Petroleum Exporting Countries, established in 1960. The organization serves as a collective defense mechanism for developing countries heavily dependent on oil exports, and since its inception, member countries' share in the production of their petroleum production has risen from a mere 2% to over 75%.[26] This increase has resulted mainly from the purchase or nationalization of oil assets previously owned by major transnational companies. Today we know that Saudi Arabia alone contains 27% of the world's proven oil reserves.

Conditions in the world oil market changed markedly in the early 1970's. First individually and later collectively, OPEC member states began taking the initiative in obtaining better treatment in their relations with the concessionaire companies. Prices were increased, foreign companies were nationalized, and conservation laws were legislated in several member states. OPEC

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[25]Zuhayr Mikdashi, *Transnational Oil Issues, Policies and Perspectives* (New York: St Martin's Press, 1986),3.

[26]Mikdashi, 16.

countries were assisted by several factors in this, among them, the increasing dependence of the industrial countries on cheap OPEC oil, and failure to discover comparable reserves elsewhere.

The turning point came in October of 1973 when two separate decisions were made which changed the course of the international oil industry and eventually had a major impact on the Arab states and the world as a whole. The first was OPEC's decision to set oil prices and production unilaterally, and the second was to reduce supplies to those states that were aiding Israel.

As a result of these developments, OPEC states had gained almost complete sovereignty over its most important asset, and hence the price of this asset. The huge influx of cash provided extremely high rates of economic growth. Despite the positive contribution of this influx of wealth, however, it can certainly be argued that this same influx has resulted in the loss of social and economic opportunities.

It was during this time frame under the reign of King Faisal (1964–75) that Saudi Arabia saw its first enormous increases in oil wealth, and the Kingdom's industrial development began in earnest. For this reason, we might expect that the origins of today's successes or failures of Saudi Arabia's industrialization might be traced to these beginnings.

To his credit, King Faisal was aware of the ramifications of his country's natural resources. His conscious decision to modernize saw the birth of his five year development plans, in which, according to one author, the four steps required to maintain a technology based export economy were included. King Faisal was able to accomplish three of the four, acknowledged the need to complete the fourth, but was unable to do so. The four elements are 1) an economy that can attract technology, 2) an ability to convert technology to higher levels of capital formation, 3) an economy that can produce capital goods instead of only consumer goods, and the fourth critical step is the ability of an economy to generate its own technology. Of this step, King Faisal had this to say:

> It is within our power, for example, to erect an enormous plant, but can we run the plant properly or get the desired results from it? In my opinion it is far better to equip ourselves with the ability to do things on our own without relying on foreigners or anyone else.[27]

Saudi Arabia's abundance of resources and the vision of King Faisal have combined to help Saudi Arabia meet the first three steps, but the fourth, according to this analysis, may be the obstacle preventing Saudi Arabia's socio-economic structure from reaching more mature stages. This may be due in part to the manner in which development has taken place in most oil rich countries.

Developmental projects have been oriented toward three areas, infrastructure, industrialization, and social welfare. Metropolitan areas have usually received precedence over rural areas in budgetary allocations, and often emphasis is placed on large "showy" projects whose beneficial effects on society have been questionable. Lack of care and mismanagement has led often to redundant facilities and unfinished projects. One of the by-products of this misguided development is inflation. This inflation simply compounds the social costs by increasing demand in a society unable to domestically satisfy these needs.

[27]Mikdashi, 64.

B. THE RENTIER CONCEPT

The fact that some countries derive much of their prosperity from unearned income has fostered a "rentier" mentality. This has discouraged entrepreneurship and hard work and has promoted a spirit of easy gain. Let us now define the term "rentier." States that derive the majority of their income from rents rather than from the productive capacity of their citizens are known as rentier states. Other typical features of a rentier state are 1) the majority of the states revenue is derived from rents on a natural resource, 2) the extraction or exploitation of the resource is a technologically intensive undertaking which employs few members of the indigenous economy, 3) the rents received from the export of the product are concentrated in the hands of the state, 4) the technical skills required for the extraction of the resource are concentrated in the hands of a few technicians from industrialized states, and finally 5) the rents derived are from the sale of a non renewable resource. Certainly Saudi Arabia, as well as many other Gulf oil producing states falls into this category of rentier economies.[28] And Certainly, the discovery of oil has provided for many advantages which Saudi Arabia enjoys over less fortunate third world states in terms of resource endowment. Economically, the rentier state enjoys the capital required to build an infrastructure of roads and communications networks, and to train and educate its population in its transition from an agrarian to a modern industrial economy.

Rentier states might also enjoy political advantages over their less prosperous counterparts. The distribution of the wealth over all segments of the

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[28]Robert W, Stookey, ed., *The Arabian Peninsula, Zone in Ferment* (Stanford: Hoover Institution Press, 1984), 26.

population may enhance the legitimacy of its leaders. Additionally, the huge capital available to the economy requires little or no taxation necessary for development programs.

Finally, the available capital allows the leaders of such an economy which can allow for the purchase of a security system which can further enhance stability and legitimacy.[29]

It has been hypothesized, however, that despite these advantages experienced by a rentier economy such as Saudi Arabia, that the exhaustion of these precious oil resources will mean that this time of prosperity will only be temporary. Even though Saudi Arabia has undergone massive development in many areas, the rate of economic development in terms of productive capacity in non petroleum areas has not been enough to build a self sustaining industrial economy. This, according to one author, is the result of imported equipment and labor, and the work values of the Saudi Arabian people.[30]

At the basis of a modern industrialized society is a workforce of skilled and semi-skilled laborers. This force provides the link between the planners and engineers and the unskilled manual labor force, and is an essential component of a society's productive capacity. It is this component, as some have asserted, that is missing from Saudi society. There seems to be a reluctance of the Saudi population to become involved in the manual skilled and semiskilled trades.[31] The stereotypical western view of this notion is one of

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[29]Stookey, 25.

[30]Stookey, 30.

[31]Stookey, 31.

simply lacking an industrial work ethic. A population that, at least in part, has undergone a transformation from agrarian or Bedouin to one of enormous capital influx and unheard of wealth in the span of only a few decades, and expresses a general disdain for manual labor might very well be perceived from a western point of view as simply unwilling to work. This notion is certainly not a mysterious one. Simply put, it seems reasonable that one might chose not to work if one is already enjoying the benefits of great wealth. Other manifestations of the traditional Islamic work ethic are asserted by another author, in which we might see a connection between those traditional views of Islamic work ethic and a more modern day version of what we see in the Middle East today. He asserts that there are three factors which represent the work values of traditional societies. First is the idea that manual labor tends to be regarded as shameful. In societies of tribal origin, such jobs as carpentry might be disdained. Second, the attachment of traditional individuals to their extended families precludes their willingness to relocate, hence preventing the establishment of a mobile workforce. Reinforcement of traditional family values are thus strengthened, and so is the reluctance of an individual to accept a low prestige job. Third, members of traditional societies, according to one study, tend to place less emphasis on goal or achievement oriented behavior, and more on conformity and group acceptance. In Saudi Arabia the extended family structure remains the norm.

Indeed, it has been asserted that whatever the human costs, there can be little doubt that there is a strong link between an achievement oriented population and economic development. In traditional societies, valued people maintain the status quo. And societies favoring conformist values over individuality lack the psychic energy or drive necessary to transform their primary economies into diversified industrialized economies.[32]

One study suggests that the relationship between monetary and prestige incentives is one that presents an obstacle to change in behavior patterns in Saudi Arabia. The study proposes, essentially, that two factors will sustain current behavior patterns in Saudi society, and keep the government from succeeding at its attempts to break the rentier pattern. The first factor is that in a rentier state, ironically, as money becomes more readily available, it tends to lose its incentive value. In a rentier state one simply does not need to work as hard or sacrifice traditional values in order to enjoy an acceptable standard of living.

The second factor is that in these traditional societies in transition from non-industrialized to industrialized ones, there is more motivation toward gaining prestige, as perceived by one's peers and family, than in gaining wealth. The author of the study attempts to show through a survey of Saudi university age youth, that a greater incentive for prestigious work, that is, the avoidance of a low prestige, or manual labor job, exists, rather than for the monetary reward associated with the job.[33]

In the west, our industrialized society might simply reduce this to the notion that again, "why should one work if one does not need to?" This notion, combined with the extended family structures still present in Saudi Arabia and the accompanying desire for prestige and authority in that structure could seem to explain, at least in part, the lack of participation in the

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[32]Stookey, 25.

[33]Stookey, 32.

industrial workforce by the indigenous population. Another much more complex explanation for this apparent lack of ability of Saudi Arabia to build its own indigenous workforce may lie in the political arena.

One author proposes that while economic and material evolutions of large parts of Saudi Arabia have been extremely rapid, social development has been patchy, and political development has been almost nil.[34] According this view, the lopsided economic growth has actually militated against the achievement of economic maturity, and furthermore, oil wealth has served to put a halt to growth in Saudi Arabia's political system since oil wealth has become concentrated in the hands of the ruling family. The ruling family, then, uses the wealth as an instrument for securing its monopoly of political power. Certainly a factor that cannot be overlooked with regard to political power in Saudi Arabia is its relationship with the United States. The U.S. oil industry and U.S. diplomatic service has extremely close contacts with the government of Saudi Arabia, and these links have ensured that the first point of reference for Saudi Arabian leaders in virtually all foreign affairs other than those concerned only with religion is the U.S. The U.S., of course, sees Saudi Arabia as its principle source of moderation within OPEC and political stability in the Arabian Peninsula.

In this light, it might be in the best interest of the ruling family to shelter the country from radical change, to preserve its political power through actually subsidizing tribal notables and purchasing political support in rural areas. In fact, as late as the 1980's, Saudi Arabia was reporting no

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[34]Richard Ian Netton, ed., *Arabia and the Gulf, From Traditional Society to Modern States* (New Jersey: Barnes and Noble Books, 1986), 91.

less than 60% of its indigenous work force in agriculture.[35] This was due to government incentives and subsidies which actually provided incentive for the indigenous population to remain in agriculture.

The government, it seems, although making efforts to reduce the country's reliance on oil wealth, is reluctant to employ its indigenous work force and bring this sector into its political realm. But rather, continue to subsidize agriculture and maintain its heavily skewed economy toward the primary sector. This is further evidenced by the fact that only 4.2% (1985) of the work force is in manufacturing and the work force as a whole (24%) is still involved in agriculture. At conservative estimates, foreigners comprised some 43% of the labor force in 1985. These facts taken together with the relatively low skills and moderate health standards among the Saudi population just serve to highlight the reliance of Saudi Arabia on oil revenues and the poverty of real domestic labor resources. The maturity of the economy then would seem to be a function of the ruling family maintaining stability. The irony of this is that while maintaining this, that is, disallowing mobilization in order to maintain tribal loyalty, it undermines the growth of an institutional power base. It has been argued as well that tribal powers have been replaced with regional governors, but that the royal family has managed to systematically keep lines of authority within its grasp.

The political reality of Saudi Arabia is that all major decisions have been and continue to be made by the senior princes of the royal family. The tribal nature of Saudi Arabia's political structure and its lack of resemblance to any known political model make analysis difficult. The implication is, however,

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[35]Netton, 97.

that any opinion outside of the ruling royal family's circle is illegal. This obviously shows a lack of any official channels for expressing dissident views through any western style political process. The result of this is the formation of underground opposition movements. None of these movements have had any significant impact, but have gotten the attention of the royal family because of their attractiveness as a manipulative tool for more radical neighboring Arab states.

If these domestic opposition elements can find external support, they have the potential to transform their ideas into a threat to the regime. These elements have been suppressed, but could find potential in an outside actor that wished to influence the Saudi regime. One vehicle for this type of influence is the expatriate worker.

A rapid increase in oil income of the oil producing nations of the Arab peninsula has induced governments to launch ambitious development plans. The speedy undertaking of various projects in the absence of a national skilled labor force has compelled a number of countries to use expatriate manpower on a massive scale. The benefits of the oil wealth have been primarily geared toward, as expected, nationals. Foreign residents have in many cases been denied citizenship or permanent residency even if they have been established for decades. Along with these there are further costs to the expatriate in civil rights, education, property and business ownership, and other social welfares. Saudi Arabia, it would seem then, is caught in a dilemma. The ruling family wants to maintain its power, and does so in several ways. First, it helps to maintain and reinforce the tribal ties and relationships through regional governors. These governors have no real political power, and the ruling family's political hold over them is strong. Second, through subsidies and incentives, the ruling family has encouraged the indigenous population, at least to some degree, to remain out of the industrial workforce, and in the agricultural sector. This, in turn, alleviates the need for broad based education, and again in turn, if we follow the Gellner model, the need for political participation. Third, the importation of the industrial workforce, that is, the expatriate population, is kept from any political participation through rules set down by the royal family. The cost of maintaining this power, however, it would seem, is approaching its limits.

C. THE DILEMMA FACING THE SAUDI REGIME

It might be concluded then that the evolution of Saudi Arabia from a traditional to a modern society is far from maturity. The material successes that have come with Saudi oil wealth have been impressive. The infrastructural developments in transportation, communication, and other areas have been completed in a span of only a few decades. In the area of social development, however, the Kingdom seems to have yet to take on mature structures. With regard to the concept of rentier economies, one might conclude that although the Saudi government continues to make efforts to diversify its economy, prevailing behavior patterns will present an obstacle to this. If the majority of the Saudi population remains distanced from the productive sector of the economy, then no amount of capital infusion will produce an economy capable of sustaining itself without continued oil rents.

The Saudi government has attempted to meet this problem of creating an indigenous workforce through vocational schools and programs, however these have been rejected by much of the Saudi youth.[36] If the Saudi population continues in its pattern characteristic of a rentier economy, that is, not becoming involved in the workforce and in the development process, then one might conclude that the state will soon become totally dependent on rents and foreign labor.

Further, one might conclude that the continued influx of foreign workers may actually be adding to the strength of tribal ties, and thus preventing this population from becoming available for new modes of socialization. This concept becomes even more difficult to achieve considering the concepts of Saudi/Islamic work ethics, and the tendency of the population to hang on to these traditional roots.

As the world passes from the oil era to the next, the dilemma for Saudi Arabia becomes even more acute. Without a fundamental change in economic and social orientation from a one resource economy to a more diversified one, Saudi Arabia will remain at the mercy of a volatile international commodity whose future prospects are not very stable. Yet in counteracting this instability, the ruling family has virtually denied the social mobilization that the indigenous population needs in order to build a self sustaining economy. Despite the rapid modernization of Saudi Arabia, its rulers have managed to avoid the social and political dislocation that accompany development and industrialization. Unless changes are made in this arena, certainly any state of maturation by western standards can not be achieved.

This, of course, begs the question as to whether or not the ruling family wants to make these changes. Certainly what we are talking about here is the

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[36]Stookey, 22.

democratization of a monarchical regime, which may not be necessarily desired by those in power. Another theory includes the actors of the international community. The cooperation between producers and consumers is an important one, and the intimate relationship between the United States and Saudi Arabia can not be discounted as extremely influential in Saudi Arabia's domestic policies, and the stability of Saudi Arabia is certainly of interest to the United States.

The total dependence of Saudi Arabia and other OPEC member states upon oil revenues simply postpones the day of reckoning. We must assume, therefore, that foremost among the objectives among these states is the diversification of their economies. Policies and objectives that might act as solutions in the economic arena seem fairly identifiable. The more subtle and complex issues remain, however, in the political arena.

As for social mobilization and its accompanying nationalism, it seems regrettable that King Faisal's vision for his people has not been completely realized. If, however, as some authors have predicted, the middle class continues to grow, it would seem inevitable that the royal family will soon be obliged to grant some sort of political participation to the growing class. The reassessment of policy may be forced on the regime considering greater mobility of the middle class and a rise in education.

V. POTENTIAL FOR REVOLUTION IN SAUDI ARABIA

This chapter will focus on the potential for revolution, or the unstable prelude to revolution, in Saudi Arabia. In a broad context, this topic deserves attention from a U.S. national security standpoint in that Saudi Arabia has acted as a partner to the United States in many ways. Certainly, and most recently, in the Persian Gulf War, Saudi Arabia was not only a staging and launching area for U.S. military forces against Iraq, but also an important ally in many other ways. Saudi Arabia continues to help stabilize oil prices, and thus the economic effects that accompany these stable prices. Indeed, Saudi Arabia is now the only large pro-western state in the Gulf. Saudi Arabia is the only major Persian Gulf oil producer that is aligned with the west. Its wealth and influence with OPEC have made Saudi Arabia the only regional power that can offer an effective security effort to protect the more moderate Gulf states. The importance of establishing and maintaining relations between the United States and moderate Gulf states becomes front page news, it seems, only when the stability of this region is threatened. The challenge that faces the United States is maintaining this stability. American military power and political power has traditionally provided a safeguard for Saudi Arabia in its vulnerability to external regional threats. A growing threat that this chapter will examine is of another nature, however, and that threat is a revolutionary movement from within Saudi borders. External threats will be included in this examination to the degree that they might act as a catalyst for internal opposition activity.

The assumption made in this chapter is that Saudi Arabia is the key foreign policy tool for the U.S. in maintaining stability in the Persian Gulf region. The hypothesis is that Saudi Arabia is growing increasingly vulnerable to a destabilizing revolutionary movement that will prove to be a threat to this stability and invite even greater potential for threat from regional actors.

To quickly summarize the forces at work in developing the aforementioned assumption and hypothesis and illuminate this chapter in the context of the thesis, recall these points: 1) the concept of reserve to production ratio and the potential for a monopoly of the world's oil held by the Middle East by approximately 2020, 2) the concept that this monopoly will not just be on oil as a resource for industrialized nations, but more importantly as a worldwide economic market, and thus as a greater potential threat, 3) that policies thus far instituted by the U.S. to meet the challenges that diminishing oil supplies present have been directed at reducing import dependency, particularly from the Middle East, which, although effective in one respect, have not addressed the true nature of the threat, 4) that the impact of the oil industry on Saudi Arabia has only acted to reinforce a regime which will inevitably be obligated to accommodate its rising middle and working classes and forced to resolve its problems with the conflict presented between the indigenous and expatriate workforce.

In making an analysis for the potential for this destabilizing activity in Saudi Arabia, it is helpful to first define revolution, and those who might act as revolutionaries. Crane Brinton defines a revolution as a "drastic sudden substitution of one group in charge of the ruling of a territorial political entity for another group by violent uprising."[37]. Those who would be called revolutionaries, as defined by Greene, seek a major alteration in the prevailing distribution of wealth, status, and power.[38] Techniques used by those revolutionaries may range from terrorism through guerrilla warfare and general strikes to a coup d'état. Although these definitions are useful in this analysis, what is of greater concern here are the factors that might lead to a revolution. The process or means of the destabilizing activity leading up to a revolution, rather than a revolution itself is the focus of this analysis. There are numerous models and theories on revolution, their causes and outcomes. A theory or model only becomes useful, however, if it can act as a predictor. Presumably, if a particular nation exhibits those preconditions of revolution that fit a model or theory, then one might predict or even prevent a revolution.

Certainly Saudi Arabia exhibits many of the characteristics found to be preconditions of revolution shown in many theoretical models. This relatively young nation has in a very compressed time period undergone a transformation from an isolated desert kingdom to a key position in the international community, and there are those who contend that considering factors weighing against a successful and stable development that Saudi Arabia has done very well, that the steadfast purpose of government and people of Saudi Arabia, despite the inevitable social strain of change, are creating a modern society which remains entirely consistent with the teachings of Islam.[39] This

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[37]Crane Brinton, *Anatomy of a Revolution* (New York: Vintage Books, 1960), 4.

[38]Thomas H. Greene, *Comparative Revolutionary Movements-Search for Theory and Justice* (New Jersey: Prentice Hall, Inc., 1984),15.

[39]Fouad Al-Farsy, *Saudi Arabia A Case Study in Development* (London, New York: KPI, 1986), 213.

view also comes to the defense of Saudi Arabia's system of government, claiming that rather than the stereotypical western perception of an autocratic monarch, that Saudi Arabia is based on a unique consensus basis. The Saudi system of government, according to this view, is based on the Royal Family, the consensual basis of the Ulama, and the tribal chieftains, all of which are considered on important matters, and which act to allow for public participation.

Opposing these views, however, are many theoretical models of revolution which point out for example, that the simple combination of a technological and industrial revolution and the accompanying urbanization will give rise to middle and working classes which will at some point require public participation. Certainly Saudi Arabia is a unique case with regard to potential for revolution. With many complex variables, the first place to begin an analysis is with basic demographics.

The population of Saudi Arabia is approximately 11.5 million people, 4 million of which are non Saudis. Most indigenous Arabs are Sunni Muslim making the Arab population primarily homogenous. Of the Muslims in the country, all are Sunni Muslims with the exception of less than 1 million Shiite Muslims. The population of the country can be divided into three basic categories. They are 1) major tribes of the country, 2) natives of the cities, towns, and villages, and 3) the foreigners living and working in the country. These three categories can be broken down further by corresponding regional differences which are 1) the desert interior, 2) the cosmopolitan port cities and pilgrimage sites, and 3) the technological oil centers of the eastern province.[40]

The Saudi political leadership is dominated by the house of Saud, or, the Royal Family. It has been estimated that the Royal Family has in excess of 5000 members, but the major political decisions remain in the hands of roughly 12 princes. Under one king there is no formal system of checks and balances other than Islamic law, but rather than an absolute monarchy, Saudi Arabia claims that the Royal Family serves as the political constituency of the kingdom. The king is the head of the family and he acts as both the chief of state and head of government. Saudi Arabian military forces consist of approximately 67,000 personnel.

The essential focus is whether or not Saudi Arabia can maintain its stability. Instability arises when political, social, and economic institutions of a country fail to meet society's expectations.[41] In Saudi Arabia expectations are rapidly rising. These rising expectations are partly the result of greater education opportunities and mass communications which have propelled this once isolated desert kingdom to the center of Middle Eastern and world politics. Another obvious influential factor in these rising expectations is the massive oil revenues which have made yesterday's luxuries into today's necessities in Saudi Arabia.

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[40]*MERI Report*, Saudi Arabia, Middle East Research Institute, (London, New Hampshire: Croom Helm, 1985), 18.

[41]*MERI Report*, 26.

A. STABILIZING FORCES

In the face of these expectations the strongest foundation upon which Saudi stability rests is the society itself. Although changing, the Saudi family remains a strong institution which provides identity, direction, and a social sense of purpose. The extended family remains the core of society and it is common to have several members of the extended family living together.[42] The strong Islamic values held in Saudi society have provided a moral direction and a bulwark against other Middle Eastern countries lacking this quality as evidenced by the resurgent Islamic fundamentalism found in Iran for example.

Another factor when examining the stabilizing forces of Saudi Arabia is regime legitimacy. The Saudi regime holds two claims as a basis for legitimacy which have helped to maintain its stability. The first is that the regime lays claim to the 200 years old Wahhabi movement. Secondly, Saudi Arabia has never been directly governed by a colonial or occupying power. Together these two factors combined with Saudi Arabia's status of wealth, give the Saudi regime the self assurance in the arena of world politics that is often lacking in third world countries.

Another contributing factor to the stability of the nation falls under social services. Behind the military, education and health represent the second and third largest budget allocations for Saudi Arabia. Saudi health care services are better than any in the region with over 100 hospitals. Although not compulsory, education is free to all Saudis. There are 14 universities; 7 for men and 7 for women, with upwards of 70% of the population

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[42] *MERI Report*, 6.

aged 5–19 enrolled in school.[43] The rapid development of the infrastructure has provided Saudis with many modern services and jobs in transportation and communications.

B. DESTABILIZING FORCES

Juxtaposed to these stabilizing forces are of course the destabilizing forces. An overview of some of the destabilizing events of recent Saudi history help to organize an analysis. Certainly in some cases of the Royal Family, the need for reform and the granting of some sort of public participation has been recognized. However, few reforms have been implemented. Neither the severity of social and political tension nor any singular act of opposition to the Royal Family has been cause enough to enact any significant reforms.[44]

In 1955 a coup was planned by army officers who were experiencing delays in being paid. These officers, it has been suggested, were inspired by both the Nasserite revolutionary model and by reports of the corrupt monarchical regime. Oil workers expressing similar sentiments went on strike in 1953 and 1955. Both the coup and the strikes were quickly quelled.

Similar feelings shared by others gave rise to secret societies and military conspiratory cells. The National Reform Front of 1954, and the Free Saudis of 1956 were examples of this frustration. Up through roughly 1958 the main sources of this discontent were western educated commoners and others incited by the Nasserite model. In response to these uprisings the royal family put a prohibition on studies abroad and a ban on strikes.

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[43] *MERI Report*, 8.

[44] *MERI Report*, 43.

Further instability was evident as a result of infighting in the Royal Family. Attempts to exploit this situation were made by Egypt. Following 1958 up through their defeat in the Six Day War, Egypt sustained Saudi opposition with activity designed to subvert the Saudi regime. Nor could Saudi Arabia ignore revolutionary activity occurring in Yemen, Sudan, and Libya in 1969. Iraq was soon to follow with the emergence of the Baath state dedicated to the destruction of reactionary monarchies.

Further opposition organizations resulted in Saudi Arabia from both internal and external tensions, and in June of 1969 an attempted coup was thwarted. Again military officers were involved along with conspirators from the PDRY. Saudi Arabia has not been immune to opposition activity, nor is it today. Following is a summary of some of the contemporary potentially destabilizing forces and opposition elements.

First is the Saud family itself. The propriety of the Saud Family rule is by no means universally accepted in the country, and it is likely to appear increasingly unacceptable to rising generations. Infighting among family members has occurred, and in some cases rivalry among position holders in various ministries has hindered smooth government. Factional debates occur within the royal family with three basic groups making up these factions. They are the western oriented faction, the pan-Arabists, and the religious faction.[45] One of the ruling family's claims of stability is, as discussed, Islam, and the fact that the government operates within the confines of Islam adds to security and stability of the system.

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[45] *MERI Report*, 19

Islam is one of the political forces that can sometimes fall under the heading of potential opposition activity, however, and this is found in the trend of Islamic Fundamentalism. With the ousting of the Shah of Iran in 1979, the Ayatollah Khomeini ushered in a revitalizing fervor for what the west calls Islamic fundamentalism. The basic concept advocates a return to sources (the Koran) as a basis for daily life. It has an ideological following in many Arab countries and much of the religious turmoil that has accompanied it has in many cases become violent. The Hamah Massacre in Syria, the assassination of Sadat in Egypt, and turbulence experienced in Iran can all be traced to the resurgent Islamic movement. Indeed Islam is a potentially destabilizing force, and in many cases Islamic militancy has become a means of expressing opposition to the regime. Certainly Saudi Arabia is not immune to these forces. Saudi Arabia sees itself as having a particular responsibility to the Islamic world as it is home to two of Islam's most holy places, Mecca and Medina. Islam is more than a religion. It is a way of life, providing the political ideology of the regime as well as the constitutional base for the legal system. It may not be a large threat, but considering the fact that between 40% and 60% of oil workers in the eastern province are Shia Muslims, they might be a likely candidate for recruitment from nearby Iran in this regard. Also attractive to potential opposition forces is the notion that power or political influence might be gained through control of the oil fields of the region. There have been reports of pipeline sabotage and some reports of Shiite unrest. Some of these reports could be the result of Iranian disinformation campaigns aimed at destabilizing the Saudi government.

Saudi Arabia remains one of the few countries in the region in which the military has not played a significant role in government. Surrounding monarchies of the region being overthrown by military dictatorships has certainly gotten the attention of the Royal Family, however. Dissatisfied military members, as previously discussed, have occasionally expressed their frustrations, and coup attempts have been reported. Low pay and poor living conditions relative to their civilian counterparts were and in some cases continue to be sources of tension among military members. Beyond simple repression, the Royal Family has essentially paid to guard against further opposition. Military salaries were doubled in 1977 and the government has continued to spend large amounts of money on military infrastructure and equipment to insure loyalty.[46] The Saud Family has also encouraged military careers for many of the younger princes.

These are some of the reasons for ambivalence on the issue of military build up. They have also served as a warning on the limits of military expansion.

Yet another dilemma faced by the Royal family in the rapid industrial development of Saudi Arabia is providing the workforce to enable this growth. Initially, a lack of skilled and semi-skilled workers forced Saudi Arabia to import labor to work in the oil fields. The resultant revenue generated has allowed for mass industrialization and the employment opportunities to go with it. The lack of skilled workers has resulted in the continued importation of this workforce. The solution to this problem is presumably to begin building a skilled indigenous workforce through education. This, of course, falls into the same dilemma in that this rising skilled workforce is the seedling for

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[46]Anthony H. Cordesman, *The Gulf and the Search for Strategic Stability* (Boulder, Colorado: Westview Press, 1984), 227.

eventual motivation toward political participation. The alternative, which is the expatriate workforce, presents its own problems. The constraints put upon the expatriate workforce, has created social, religious, and ethnic tensions.

Attempts at reform seem to have only compounded the problem. Greater constraint on the expatriate workforce has only created greater frustration. Most expatriates live in relative poverty compared to Saudis.[47] Saudi Arabia has the largest expatriate population in the Gulf, and the disparities in living conditions and social services coupled with discrimination has only acted to build further tension. Illegal immigration has been another result of the pressure on expatriates. In discouraging further immigration of foreign workers, Saudi Arabia has created a huge vacancy in employment.

In trying to fill this gap Saudi Arabia has implemented manpower and training programs, but obstructing these efforts is a lack of interest in the critically needed employment skills. A serious problem is the obsession on the part of the Saudis with management careers. These careers are more lucrative and offer better advancement, and have attracted the bulk of the educated male population. The result is an imbalance in manpower development and bloated management sectors of industry.

We can presume that at some point, whatever factors the Saud monarchy claims as its basis for legitimacy, either religious, or the fact that it has never been under colonial rule, or its great wealth, or a combination of these, that sooner or later the regime in power will be obligated to make reforms to accommodate political participation. Ironically, as the Saudi Family has been

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[47] *MERI Report*, 35.

faced with the King's Dilemma, so has the United States met with a similar diametrical challenge. U.S. intervention has been intermittent in the region, and while supporting other interests in the region such as Israel, the U.S. has not built a strong trust with the Arab world. Strides made during the Persian Gulf War certainly speak well for the relations of Saudi Arabia and the United States and their mutual interests. Conversely, however, western presence in the region has and continues to be greeted with skepticism and distrust and U.S. presence is viewed by many Arabs as wanton imperialism. Political pressure is another force at work here in that U.S. policy makers are subject to criticism for their support of this monarchical and, as some might contend, repressive regime.

Some analyses claim that western presence in the Middle East in any large scale or overt way can actually place at risk those regimes it is attempting to protect.[48] The very presence of U.S. military forces could and has inspired violent action. A further illustration of the King's Dilemma, in this sense being the burden of the United States as well as Saudi Arabia's, falls under the heading of economic development. The United States has contributed to numerous economic development programs in support of Saudi Arabia. The urbanization and modern industrial changes resulting from these projects have certainly acted to stimulate massive social changes. Traditional social groupings are eroding and giving way to new groups with aspirations for freer expression and political rights. These ideas are further nourished by Saudi students returning from the United States, and by daily contact with

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[48]Cunningham, 110.

U.S. workers.[49] Presumably it is less in U.S. interest to see reforms take place through violent means. Clearly, western presence is a factor in the stability of the Middle East and deserves attention in U.S. foreign policy decisions.

C. APPLYING THEORY

All of the aforementioned potentially destabilizing forces seem to in some way fit into most theoretical models for revolution, and those destabilizing forces which do not fit into generally accepted models, can be presumed to act as only adding further to the forces of potential revolution. In most cases of the destabilizing forces it seems that the Saud family has in some way either repressed expression of frustration, or bought the loyalty of potential opposition. Indeed, the very development that has taken place has been used to deal with local unrest. Development projects have been used to essentially funnel dollars to tribal and village leaders.[50]

The purchase of loyalty can not last forever. Even the great wealth of Saudi Arabia and its very high per capita income can not withstand the pressures of social mobilization much longer. Even if the regime was able to repress opposition activity through equitable distribution of the kingdom's wealth, it could not do so indefinitely, and it could not deal with many of the previously mentioned forces of opposition in this manner. The expatriate worker situation or the forces of Islamic fundamentalism for example, are much more difficult forces to repress.

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[49] James H. Noyes, *The Clouded Lens Persian Gulf Security and U.S. Policy* (Stanford, California: Hoover Institution Press, 1982), 104.

[50] Cordesman, 229.

If, however, reforms are not enacted quickly enough, and the Royal Family continues to use its wealth as a repressor, then one might turn to a theoretical approach for an alternative. According to Huntington, three possible strategies are available to the monarch. He, or in this case, the Saud Royal Family, could attempt to reduce the role of the monarchical authority and make efforts toward a constitutional monarchy in which people, parties, or a parliament would have authority. A second option could be a combination of monarchical and popular authority, and finally, the monarchy could be maintained and efforts made to minimize the disruptive effects of a broadening political consciousness.[51]

These options, however, do not, as Huntington explains, apply to 20th century monarchies. The success of the 20th century modernizing monarch, according to Huntington, is measured by the size of his police force. The inevitable conclusion that is reached is that the combination of reform and repression means the centralization of power, and the centralization of power means a failure to expand to accommodate political parties, and the end result is revolution. Thus if this theory is followed and the assumption is made that revolution is unavoidable, then three possibilities exist. The first is a coup d'état in which the ruling monarchy would become an oligarchy. The second is a coup which would dispose of the monarch and the monarchy, but fail to produce an institution of legitimacy, which would result in a praetorian condition, and the third possible event would be a full scale revolution to a modern party dictatorship.

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[51]Samuel P. Huntington, *Political Order in Changing Societies* (New Haven and London: Yale University Press, 1968), 177.

If one assumes this model to be an indicator of what may actually happen in Saudi Arabia, then the conditions that currently exist in Saudi Arabia might be an indicator as to which of these possibilities might occur. Internal opposition in Saudi Arabia has yet to mobilize in any significant manner. Although all of the elements of revolution are present in Saudi Arabia according to most generally accepted models, Saudi Arabia has managed to avoid major insurrections. It might follow that an outside actor could be required to generate an amount of opposition activity large enough to overthrow the government. Huntington points out that a revolution is not likely without foreign intervention.[52] It might also follow that if, in fact, there are frustrated sectors of society in Saudi Arabia who are unable to mobilize, or lack organized champions to act on behalf of group liberation, then this may be the perfect spawning ground for terrorist activity.[53] Furthermore, the terrorist relies on the idea that by provoking a righteous wrath, he will achieve the results of official overreaction. He must, therefore, commit an act which will achieve the greatest publicity.

Thus, by combining these concepts, the following conclusions can be drawn. First, one of three types of revolution will occur in Saudi Arabia. Second, because Saudi Arabia has been able to repress opposition activity, terrorism is a likely outcome as an attempt to inspire mobilization. Third, also because of Saudi Arabia's ability to repress opposition activity, it is likely that opposition activity will come from an external source. This is not to say

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[52]Huntington, 305.

[53]Richard E. Rubenstein, *Alchemists of Revolution Terrorism in the Modern World* (New York: Basic Books Inc.),4.

that an outright invasion will not occur, as might have been the case with Iraq. Rather, what is being established here is how internal opposition activity might be inspired and organized. Finally, it has been established that Saudi Arabia, as holder of the world's largest share of petroleum reserves, and thus the power to control the world market, it is an attractive target for individuals or groups wishing to share in this power or wealth, and certainly an attractive target for insurrection or terrorist activity.

The challenges before the Saud regime are formidable. Political evolution in Saudi Arabia, although unique, has been slow, and relative to modern structures of government, negligible. Continued liaison with families, religious leaders, and technocrats by the ruling group has given Saudi Arabia a unique means of achieving a limited political consensus. And as keeper of the holy places of Islam, close underwriting from the United States, and a growing internal defense force, Saudi Arabia has maintained some degree of immunity from dangerous internal and external pressures.

The traditional channels for consensus are eroding, however. Family and tribal groups are giving way to new groups. Students returning from abroad have new ideas and rising expectations. The indigenous and expatriate workforce are both under increasing strain. Saudi society is becoming increasingly divided and this division is reflected in the ruling family. All of these factors together seem to present the conditions which might lead to revolt, but in addition to these, Saudi Arabia is also subject to the pressures if Islamic fundamentalism from a formidable force in Iran. Its great oil wealth makes Saudi Arabia a vulnerable target for opposition activity, and as oil supplies around the world diminish and Saudi Arabia gains a greater monopoly over the world's remaining oil, it will only increase in its vulnerability and attractiveness to opposition activity.

For the survival of the regime there is no alternative. Reform must take place to preclude revolution. New social groupings and classes must be assimilated and ultimately granted participation in the political process. If they are not, then the conclusion drawn here is that the worst case revolutionary scenario will take place, and that will be an outside force financing and equipping an ad hoc coalition of internal opposition forces and attempting a violent coup d'état.

VI. CONCLUSION

The age of oil will be a relatively short one. Much of the planet's petroleum resources will likely be depleted within a century. Even with the unpredictable ebb and flow of oil, it is inevitable that the increased scarcity of this resource will produce an increase for its demand. Disturbances in the relatively stable and natural laws of supply and demand (barring unforeseen interruptions) for oil, however, have proven to be of an increasingly grave nature to world stability. This thesis attempts to illustrate this gravity by first examining specifically how much oil is consumed by the industrialized nations of the world. This leads logically to the requirement for us to understand how much oil remains on the planet, where it is located, who controls it, and, of course, who controls the price of it. Simple math suggests that the planet's oil supply will be depleted within 70 years. This figure is actually conservative considering the fact that it includes oil that has not yet been discovered and will surely cost much more to extract and refine than oil produced at current production facilities. An important and subtle factor that is revealed in an analysis of the world's remaining oil is the concept of reserve to production ratios. Reserve to production ratios on a global scale suggest that within approximately 30 years countries of the Middle East will hold a monopoly of the world's remaining reserves. This monopoly will not occur overnight either. Over the course of the next 30 years it will become increasingly apparent that as reserves from countries other than the Middle East diminish and become increasingly costly to extract, the Middle East's grasp over the remaining reserves will be reinforced and Middle East oil will be in increasingly greater demand.

An analysis of the world's oil reveals yet another critical link between this resource and world stability and that is the transnational oil market. Not only has oil fueled the industrial revolution and continues to be an essential feature of every industrialized nation's infrastructure, but also in the past three decades it has emerged as a worldwide economic commodity. Oil has made a transition from the term market to the spot market in which the price per barrel of oil is now a single world wide price which fluctuates daily and can greatly impact world economic trends. Combining these two concepts, monopoly control of the world's remaining reserves and the commodity price structure of the oil market suggests that those Middle Eastern countries with the most oil will also have sharply increasing price control power and thus power over potentially drastic global economic fluctuations. More than any other Gulf state, Saudi Arabia must coordinate oil production and pricing policies. This is because the range of Saudi oil production is so large that swings in the production level have an impact on international oil prices.

An analysis of the United States' national energy strategy shows that the aforementioned issues have not been addressed. The next generation of Americans will face the end of an era that has propelled the industrialized nations through modern history. The magnitude of the changes that will have to take place in the world's transition from oil to another energy source will be on the order of magnitude of the entire industrial revolution itself. Every automobile, every truck, every train, every ship, every airplane, indeed, every infrastructure of every industrialized nation on the earth runs on some derivative of oil. Conservation, alternative energy technologies, the Strategic

Petroleum Reserve, and new oil exploration simply have not even begun to make a hint of progress relative to the size of the challenge. There is no doubt, as the cliché goes, that necessity will be the mother of invention, that ingenuity, technology, and capital will answer to the call of necessity, and when the oil is gone, there will be another source or sources of energy. Until the oil is gone, however, simple economic laws tell us that while oil is still the most cost effective way to fuel the industrialized nations, it will continue to be consumed until there is none left. Until this eventuality is upon us, however, the more contemporary issues of oil will dictate the direction of U.S. policy. The national energy strategy of the mid 1970's was successful given its original intention. The United States was able to reduce its dependency on foreign oil, particularly on Middle Eastern oil, significantly. Since the Arab oil embargo, the United has managed to reduce its imports from the Middle East to less than 10% of its total consumption. However, this strategy of dependency reduction does not address the issue of oil as a worldwide economic commodity. It has become clear that the control of this world market and the power that goes with it has resulted in an unforeseen national security challenge. In response to this challenge, the United States has correctly fostered a strong relationship with Saudi Arabia, the world's largest oil producer, and potentially soon to be largest shareholder of a four country oil monopoly in the Middle East. Saudi Arabia has been able to stabilize the volatile price of oil through increasing or decreasing production, thus the supply, and thus the demand for oil. As a pro-western country and key member of OPEC and OAPEC, Saudi Arabia has been able to influence many of the GCC oil producers in continuing price control efforts toward stable world prices. It would appear that Saudi Arabia, in its role as Middle East oil price stabilizer, that it not only is acting in the best interest of the United States, but may in fact be the key vehicle for the United States in maintaining stability of the world market. The issue that comes into question is by what means does the United States maintain this relationship with Saudi Arabia and what threats to this stability might exist.

In an examination of Saudi Arabia this thesis illustrates that the impact of the oil industry on Saudi Arabia has given rise to disparities in Saudi society both economically and politically. Saudi Arabia has been shown to be nearly a classic case of the rentier concept. The Saudi Royal Family realizes this trend, and also realizes that it is in their best interests as well to maintain stable oil prices. The dilemma that the Royal Family is faced with, however, is that with industrialization comes social changes. It is these social changes that present the greatest challenge to Saudi stability. And finally in chapter 4, this potential for instability is examined.

As Saudi Arabia and the rest of the Middle East draws increasingly closer to holding a monopoly over the world's oil, it's attractiveness to potentially destabilizing actors also increases. Individuals or nations seeking wealth or power will now have a much greater opportunity to do so in Saudi Arabia. Saudi Arabia contains within its borders all of the elements necessary for revolution. Furthermore, Saudi Arabia is surrounded by regional actors who may and have sought to influence one or more of these elements for their own gain. These regional actors remain the greatest threat to Saudi stability, but it is with the combined effects of internal opposition and Saudi Arabia's attractiveness as holder of world economic power that will finally bring this instability to the surface.

Thankfully, the Persian Gulf War was short lived. But because of its brief mark on history, it has also faded from our memories quickly. If it is forgotten too soon, indeed one might not recall that it was the first war of the last decade of the 20th century. It was also the first play for power in the post cold war world in which Iraq made its daring attempt to break out and become a regional superpower. It was the first war in this century that an Arab has invaded an Arab. And the Persian Gulf War was the first war for the United States since Viet Nam.

When Saddam Hussein invaded Kuwait, he controlled 19% of the world's oil. If he had been able to continue through to Saudi Arabia, he would have been in control of another 25 % of the world's oil. This thesis has attempted to show that the kind of power associated with the control of this much oil is now a far cry from its value as a resource alone. The economic leverage associated with this control is now world wide. Furthermore, this economic power will increase at an alarming rate as oil supplies around the world diminish, become more difficult to produce, and thus more expensive, and the Middle East remains as the only supplier of relatively inexpensive oil.

One must not forget either that the large majority of the coalition military effort to suppress Saddam Hussein came from within the borders of Saudi Arabia. The pre-positioning, staging, and launching of the huge U.S. military effort from Saudi Arabia was critical to a U.S. victory, to make no mention of the logistical and command and control support from behind friendly Saudi lines. And now the United States is undergoing its largest military drawdown and force reduction since World War II.

U.S. military presence in the Persian Gulf in the oil era has been rampant with controversy and contradiction. Factors influencing this presence have traditionally rested on four U.S. interests in the region and they were 1) continued access to gulf oil, 2) containment of Soviet expansion, 3) pursuit of peace in the Middle East, and 4) continued existence of the state of Israel. In pursuing these goals through military means, some would contend that the U.S. has actually acted to undermine its own interests.[54] Arab faith in U.S. support has been hindered by the continued support of Israel. The idea of U.S. forces stationed in the region has traditionally been greeted with distrust from the Arabs in that they might actually act as a focal point for unrest and a target for revolutionary forces. Intervention in the Iran Iraq war by the U.S., according to one source, may have only acted to endanger the states it sought to protect.[55] Some would contend that for the United States to maintain stability in the region, that a greater sensitivity to the complex regional issues is in order and that an over-the-horizon deterrent posture would best represent U.S. military presence. The Persian Gulf War in many ways represented a sharp contrast to this idea. Although U.S. presence in Saudi Arabia represented great strides in their mutual interests, some would contend that in order to preserve the gains made in this mutual effort, that the U.S. should now withdraw and continue to underwrite Gulf security from a distance.

President George Bush stated at the outset of the Persian Gulf War that one of the four Guiding principles of U.S. policy was to maintain the stability of Saudi Arabia. It has become clear that there is now a new addition to the traditional list of U.S. interests in the Gulf, and that is the protection of oil

[54]Cunningham, 100.

[55]Cunningham, 102.

prices through relations with Saudi Arabia. The question becomes whether or not this new goal can be achieved through military intervention, or through diplomacy, or through some combination. Certainly the Persian Gulf War demonstrated that direct intervention, and much more than support of a GCC security force, was needed to defeat Iraq. Conversely, continued forward U.S. military presence could put at risk the very regimes it is attempting to protect. Furthermore, if the U.S. were to support future arms sales to Saudi Arabia and the moderate GCC states in building up an indigenous Gulf security force, it may help to fuel the possibility of a coup in Saudi Arabia. So threats to Saudi stability could come from both external regional actors or from within Saudi borders, or a combination of the two.

If a coup were to take place in Saudi Arabia, be it from a military sector or otherwise, certainly oil prices would soar, at least temporarily. Eventually, however, the laws of supply and demand would proceed naturally, and whatever group ended up in control would soon realize that oil must be sold, and if those in control have a sense for the long term vision, they will realize that it is in their best interests to keep oil prices moderate and stable. The United States would at some point embrace the new regime to the mutual benefit of both countries.

The next possible scenario, were a revolution to occur, would be a belligerent force or person (internal) whose lack of long term vision could potentially keep oil prices high for an extended period, and require some sort if U.S. intervention. If military intervention was required, it would not be required to be on a large scale, but it would certainly meet with anti western sentiments, and could potentially be protracted indefinitely because of this. With a strategic petroleum reserve of roughly two months supply, the U.S.

would have no choice but to intervene if stability was not in sight. The resulting relations with Saudi Arabia and likely most Arab nations would be severely damaged, and probably require enormous efforts to restore, and the cost of keeping in place some sort of interim government would likely also prove costly to the U.S.

The next scenario would involve invasion from a regional actor. This is the scenario experienced in the Persian Gulf War. The Saudis welcomed U.S. presence, at least temporarily. U.S. support of the Saudi regime and perceptions of western commitment to the Arabs boded well for U.S.-Saudi relations. On the negative side, however, a large U.S. force was required to quell Iraqi forces, and without Saudi support the Iraqi defeat might have proven much more difficult from a tactical and logistical standpoint.

The last scenario would be a revolution in Saudi Arabia inspired and supported by a regional threat. If this regional actor was able to co-opt enough indigenous support, and had a plausible military force, this would prove to be the worst case for the United States. Not only would military intervention be required, but depending upon popular Saudi sentiment toward the opposition movement, U.S. presence would likely be unwelcome. Further, if the outside actor were heavily armed, Iran for example, the U.S. forces required to meet it would have to be formidable. Assuming the new revolutionary regime were neither pro-western nor interested in stable oil prices, the potential for a protracted conflict is high.

Certainly sensitivity, on the part of the United States to the inner workings of the Arab world needs to be raised if continued stable relations are to be achieved. Anti western sentiment among Arab countries is easily incited, and the U.S. has in many cases not acted in its own best interests in gaining

Arab confidence. Indeed western presence in the Persian Gulf, perceived in the west as stabilizing and peace keeping forces, has been perceived by the Arab world as imperialistic, and reminiscent of colonial rule.

A disregard or lack of understanding of the Arab world will certainly not help the United States in peacefully achieving its goal of continued access to Gulf oil. And in the event of a threat, either external or internal, the U.S. will only make for more ease of intervention if it is also armed with knowledge of Arab concerns and sensitivity to western presence. Conversely, while this overtly "hands off" underwriting of Gulf security may ease Saudi-U.S. relations and actually allow for greater stability of the region, it is also imperative that the U.S. be prepared to meet the worst case scenario.

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