

## Chapter 4: THE GCC OIL INDUSTRY

### Chapter Highlights

*This chapter discusses the overview of the GCC oil industry (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates) by illustrating the dependency of various economies on the National Oil Companies of the Middle East. Oil is a political instrument and the relations between oil producers and oil consumers have been strategic and are decided by the rules of engagement between National Energy Policy of oil producers and Foreign Policies of oil consumers and in particular their Middle East policy. Historically, Oil has been secured by political, commercial and military ties and oil is regarded as a Strategic Commodity and the industry a Strategic Industry. Several prominent analysts state that the world oil market has repeatedly performed in ways that appear to violate basic laws of economics as oil prices seem to move independently of supply and demand, and vice versa. The distortion in the predictive value of oil price is due to the shifting interests and objectives of the leading members of the OPEC. Middle East energy perspective is the convergence of economic forces and politics at OPEC. Nationalization of the oil industry in OPEC countries actually broke up the integrated circuits of oil trading, opening the vistas for competition and transparency, raising the importance of spots and futures market. There were also recent mergers and consolidation in the downstream business sector. This chapter presents the GCC oil and gas Reserves Estimate and also discusses the National Depletion Policies of the reserves and reserves-to-production ratio; further indicating its dependence on geologic, technological, economic and political factors. Risk propagation owing to oil price, market power and politics are highlighted in the discussion to understand the uncertainties in the industry. The challenges in the GCC economy from a hydrocarbon perspective is collated to comprehend the most pressing challenges and emerging opportunities in the GCC oil industry, from the following multidisciplinary viewpoints that has currently assumed greater prominence regionally: economic, finance, banking, infrastructure, strategic, human resources, energy operations, social, legal, investment & corporate governance. The final objective of this exploration is to understand the risks and challenges for consideration in the Enterprise Risk Management (ERM) framework in the GCC oil and gas entities.*

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## 4.0 The GCC oil industry

In order to appreciate the nuances in Corporate Governance, a historical snap shot on popular academic literature pertinent to the formation of the Oil Titans in the Middle East and in particular the GCC countries (See Fig. 4.1) is presented below.

Political economy of petroleum and crude power has been an area where many causal and manipulative factors influence the Arab oil industry as a whole, ranging from amazingly unique factors like - 'Early American & European interest in Gulf oil' (Doran, 1977; Odel, 1979; Yorke, 1986, Vo, 1994); 'Arab foreign policy and global Energy Security' (Quandt, 1981; Peterson, 1983; Noreg, 2002; Val erie *et al*, 2006); 'Oil and Islam' (Noreg, 1997, 2002; Jreisat, 1997); 'OPEC politics and the Middle East oil diplomacy' (Stone, 1977; Hartshorn, 1993; Val erie *et al*, 2006).

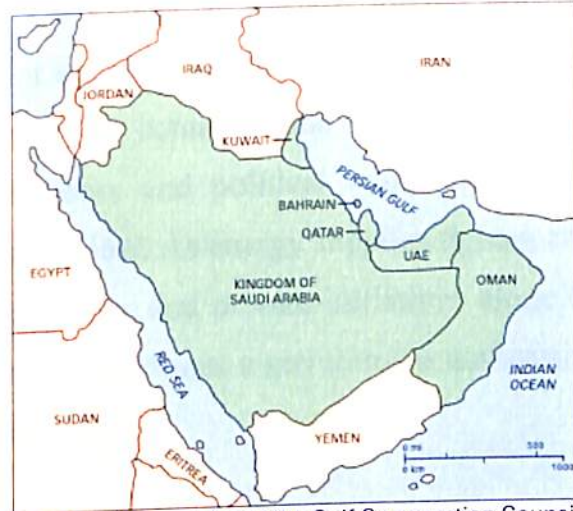


Fig. 4.1: Six countries of the Gulf Co-operation Council (GCC) - Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE

Jreisat (1997) and Noreg (2002) unmistakably state that the past shapes the present in their narration of oil companies in Middle East from the energy economics and cultural perspectives. A review of popular academic literature by prolific Western & Eastern writers on above themes reveal that *contemporary issues in historical perspectives shape today's organizational culture and thereby the business risk sensitiveness* of the Oil Titans i.e., the National Oil Companies (NOCs) in the Middle East.

### **Economic & political pressures by Western economy on Middle East NOCs**

Because of '*accidents of geology*', there is an uneven distribution of the world's hydrocarbon reserves and hence the imperialistic western powers and developing economies in the world are dependent on Middle East countries with oil exporting

capabilities (Noreg, 2002). According to fiction writer, Stevenson (2003), "Accidents of geology seem closest to the hand of God, do they not?" Economic and political pressures and the shifting relations between the major oil and gas exporters of the Middle Eastern region as well as outside powers cause oil market instability and oil prices to move.

In the west, National Energy Policies aim to secure energy supplies at moderate prices and it is nothing new in the world. However, the impact of western foreign policies matter to a large extent in order to secure such a scenario; as oil prices affect inflation rates, trade balances, macro-economic policies of all countries and historically even government re-election chances. Public forgetfulness and political complacency are remarkable when energy supplies are high and prices low. As energy supplies tighten and prices spike, it is not left entirely to the market forces and private initiatives alone to tackle the above economic condition and suddenly, it becomes a government matter and gets politicized at national and international levels.

### **Oil producers vs. Oil consumers**

Heiss (1997) acknowledges that two World Wars have been fought and have shown that *oil is a strategic commodity*:

- With great economic importance in peacetime
- With a significant military value in times of war

Heiss (1997) further states that for the above reasons, trading conditions and the division of economic rent are closely linked to the relationship between oil-importing and oil-exporting countries. While Bradley (1996) states that decisions to permit exploration of oil & gas blocks and extraction are discretionary. The political aspect of the oil industry is to a large extent explained by the following factors in the Middle East:

- Capital intensity
- Various risks commingled in the investment
- Long time horizons for investment projects
- Imperfect competition

For this reason, Bromley (1991) has clearly stated that several oil-importing countries try to make up for the lack of domestic oil reserves by controlling foreign supply sources, so that 'oil policy is essentially a foreign policy' for the West. In this way, *oil also becomes a political instrument*. For the imperial powers, oil and foreign policy have been inextricably linked, as cited below:

- ❑ The economic foundation of the British presence in the Middle East was oil investment, which also further motivated military presence.
- ❑ The American military presence in the Middle East is clearly motivated by the need for access for oil.

On the contrary, in resource rich countries like Argentina, Mexico, Venezuela, Iran and Norway, the control of domestic oil has been a key aspect of the assertion of national economy and political independence in relation to foreign interests of the UK and/or the US.

For oil-exporting countries, foreign dominance of their oil industry implies a technological and commercial dependence, so that foreign interests take decisions of crucial economic and industrial importance, and they are more responsive to consumer interests than to those of producers, compromising national sovereignty in economic matters (Bromley, 1991).

The above fundamental characteristic provides the answer to two contemporary issues in the Middle East oil companies as presented below:

- ❑ **Refinery Process Licensing**  
The reason why the major process licensors have TSAs established with most national oil companies; services from them distil down the management echelons for major decisions/policies till date.
- ❑ **Localization initiatives of Workforce**  
In the principal Middle Eastern oil exporting countries in the OPEC, the nationalization of the oil industry was also an assertion of national independence and a logical follow-up of decolonization.

Also, the nationalization of the upstream oil industry in OPEC countries actually broke up the integrated circuits of oil trading, opening the vistas for competition and transparency, raising the importance of spots and futures market. There are also recent mergers and consolidation in the downstream business sector.

### **Governments and International oil companies in the Middle East policy**

As a world super power, in the US, throughout the 20<sup>th</sup> century, *government policies manifested a disbelief in the ability of the market forces and private initiative to secure energy supplies*. Therefore as a counterpart, the energy industries use governments to promote their own business interests. *The risks involved for the consumers make oil a matter of government interest* in both producing & consuming countries. This is the reason for the close inter-play with the trinity forces:

- Energy use
- Oil market
- International politics

The energy industry needs government. In many cases the energy industry operates with a government license, giving it a privileged access to resources or markets, but also giving the government the right to intervene and to levy special taxes to share the profit. The energy industry and energy markets cannot function without regulatory framework, dependent on government and politicians. Energy investors need security to recover capital and often preferential treatment or protection against competition. The energy industry also needs government support to run businesses when operating in foreign countries. Many authors concede that in the relationship between government and energy, short-term opportunistic considerations often win over long term economic rationality (Sampson, 1975; Hartshorn, 1993; Jreisat, 1997; Noreg, 2002).

Leading oil importers such as the US, China, France, Italy and Japan obviously have a common interest in oil price moderation, but they are also rivals for:

- Supplies
- Trading positions
- Market influence

Similarly, oil exporters have a common interest in the oil price stability, but at different levels and they are also rivals for market shares. Noreg (2002) has identified six major forces affecting the interests of the exporters and importers in the oil market as discussed below.

- International oil politics.
- Political relations between leading foreign oil importing powers & major Middle Eastern oil exporting powers, destined to influence the Energy policy.
- Capacity utilization to extract oil and eventually invest in capacity expansion in the Middle East.
- Taxes and duties on oil products consumed in oil-importing countries as well as environmental taxes and duties on emissions of CO<sub>2</sub>, aimed at curbing oil demand and potentially harming oil exporters revenues.
- New challenges to oil demand, oil prices and oil exporters revenues through Oil Company restructuring.
- Rise of Natural Gas as a competitive fuel.

### **Securing oil interests by political, commercial and military ties**

Historically, leading powers in the world have secured their oil interests *by not relying solely on market forces*, but by establishing political and commercial ties and at times military presence too. Major oil exporters have asserted greater independence especially Oil Policy, but they have been *depending on foreign powers to assert their interests against neighbours* as highlighted below (Kemp *et al*, 1997):

- Iraq developed political and military ties with France and erstwhile Soviet Union until 1990.
- Saudi Arabia maintained and strengthened economic, political and military links with the US.

- US has had a dominant role in the Middle East (since the Gulf war), as the protector of Saudi Arabia, Kuwait and UAE and the reward was stable oil supplies for several years at moderate oil price.

Aburish (1997) acknowledges that for the US, UK and France, control of oil abroad has been and remains an important foreign policy objective. Similarly, according to Nowell (1994), for the US, UK and France control of oil abroad has been and remains an important foreign policy objective.

The economic foundation of British presence in the Gulf region was the oil investment, which also motivated the military presence. On similar lines, the current US military presence in the Gulf is motivated by oil. The objective is to secure positions in foreign countries to procure natural resources and trading privileges, seeking economic rent and excess profits through political dominance, with decision making across the institutional boundaries between governments and companies (Bromley, 1991).

The Western powers, France, the UK and the US have not competed in the oil interests but also kept other intruders like Germany and the erstwhile Soviet Union out of the region. (However, France and Italy are competing elsewhere in the MENA region). The fear of running out of oil has been a continuous driving force, providing a rationale for *seeking privileged positions with the Middle East oil companies and denying access to rival powers.*

### **The pending philosophical query on the Energy perspective**

According to Strange (1988), there is no general explanatory theory of oil and energy relating to Social Science, in spite of many partial studies and much available data. They are not of any great predictive value as insights into oil and other energy issues are fragmented.

While Verleger (1993) states that the world crude oil price seems unsustainable at any level; the sudden fluctuations representing risks to all parties concerned in the world economy. Durgin (2000) concedes that high oil and energy prices have found its place in the political agenda. Beaudreau (1998) states that, '*the basic philosophical questions over energy are unsettled.*' He says that there is no coherent general theory of energy that can be used to analyze the impact of increasing energy supplies on the political economy of different societies/countries. Mitchell et al (2001) conclude that there is no coherent theory to link oil demand, trading and supplies, and explain and predict oil price formation. Attempts at economic modelling of the international oil market have generally been unsuccessful, yielding few reliable predictive results. The essential economic variables are unstable as listed below:

- Constant revision to reserve estimates.
- Progress due to new technology in exploration.
- Scaled down cost estimates due to improved technologies.
- Varying demand pattern due to socio-economic factors.
- Changes in Trading patterns and mechanisms in price formations over time.

According to Hanneson (1998), the world oil market has repeatedly performed in ways that appear to *violate basic laws of economics* as oil prices seem to move independently of supply and demand, and vice versa.

Huettner (2000) explains about the '*distortion in the predictive value of oil price.*' Since 1970, total oil supplies to the world market have not been price elastic i.e., the oil price changes do not seem to affect global supply volumes. The leading members of the OPEC have shifting interests and objectives that at times during conflict; any supply side modelling does not render a predictive value. Unlike other markets, supplier concentration and power distort the oil market which is in an imperfect competition. In economic terms, the oil market has an oligopolic structure dominated by few sellers and intrinsically unstable, making oil supplies more volatile than demand.



Claes (2001) describes the Middle East energy perspective is the '*convergence of economic forces and politics*' at the OPEC. In the oil market, the major oil suppliers are governments (Claes, 2001) that often consider longer time horizons and more diverse concerns than do companies, because countries have more complex interests and agenda than firms. Middle Eastern governments working through the OPEC set oil supplies and prices, which makes the oil market a unique meeting place of economic forces and political forces with a flavour of the regional politics of the Middle East. According to Noreg (2002), 'OPEC' and 'Oil market stability' are '*hostages of the Middle Eastern politics*' as stated in many reports since the 70s. When OPEC does not agree on volumes (quota) or prices, the key member countries give conflicting signals to the oil market, often competing for market shares, undermining whatever stability might exist. Iraq which has the world's second largest reserves is currently the joker which is absent from OPEC deals since 1990 and with the US invasion remains pivotal to Middle east and oil market stability (Noreg, 2002). This is evident from the frequent alteration to the estimates of their sovereign and strategic asset (Broomley, 1991). This practice is evident as *reserves estimates of OOIP are frequently revised by OPEC countries to suit the market*. Iran, Iraq, Kuwait and Saudi Arabia have oil market power and there is economic rivalry amongst them, in addition to the so called military and political threats by Iraq and Iran.

According to Handy *et al*, (2008b), proven oil reserves are concentrated in a small number of countries (notably Middle Eastern members of OPEC and Russia) which, not being major consumers, have less incentive to invest and raise supply. This tendency is accentuated by the fact that the bulk of global oil resources are under the control of state owned oil companies influenced by '*National Depletion Policies*' that repeatedly see *oil in the ground as being worth more than money in the bank*. Oil prices are notoriously difficult to forecast even in the very short term, let alone over a 20 year horizon. However, long-term price scenarios offered by leading sources only point to a wide spectrum of possibilities.

### **Risk propagation owing to oil prices, market power and politics**

According to Noreg (2002), Middle Eastern politics directly affects the US and the rest of the world, at times in the most unexpected ways Oil is a key factor as it provided huge revenues for the rulers but neither political reform nor sufficient prosperity for the people. Since 1970, oil revenues have profoundly changed the Middle Eastern societies, but there has been little political change to cope with the ambitions of the more numerous and better-educated younger generations. The outcome is a society with rising social and economic inequalities and generational conflicts.

Moïsi (2001) interestingly states that the 'West is a victim of its own trap in the Middle East'. The extent and the intensity of resentment against the Arab rulers in place and their Western allies and protectors are difficult to grasp because of the limited freedom of expression in most, if not all, Arab countries. He adds that the by supporting corrupt and dictatorial regimes for immediate economic and strategic advantages, the West has prevented necessary change to stabilise the countries concerned through representative government. While Deegan (1994) suggests that at times the US supported by its allies has also actively destabilized Middle Eastern governments with a popular mandate as it happened in 1953 with Iran. In return for access to oil, the US provided military, economic and political support. However, till date Western oil interests and economic stability are shaky when dependent on moribund political systems and paralysed societies (Noreg, 2002). Aburish (1997) comments on the wisdom of the foreign policies of the West is of giving unquestioning support to corrupt and authoritarian regimes because they export oil and meet their energy demands is not obvious. But the error has been to equate secure oil supplies with regimes that were more dependent on Western backing than on a popular mandate, which one day can back fire as it happened in Iran (Noreg, 2002). From this perspective, Noreg (2002) propounds that the energy market is exposed to Terrorist, Security and Economic risks which translates as Price risk.

- **Terrorist risk:** Exposure to terrorist risk is exacerbated as long as the US continues to give unilateral support to the Israelis; leading to an escalation of

conflict between the Palestinians and Israelis. The effect of the 911 in 2001 has shown its ramifications on oil price.

- ❑ Economic risk: The economic risk is directly linked to oil and money.
- ❑ Security risk: The US dilemma is conflict between the need for 'Arab oil', 'Sympathy for Israel', 'Iraq', 'Iran's petro-confidence' and 'Strait of Hormuz'. All of these factors lead to security risk. The US dependence and global dependence at large on Middle East oil represents a security risk.
- ❑ Political risk: Hawary (2002), states that the Israeli military superiority is guaranteed by the US and the US is slowly losing political influence in the Arab Middle East thereby affecting the following: Middle East politics, Regional balance of power and Pattern of oil supplies.
- ❑ Oil price risk: Almost 30 years from the first oil price shock of 1973-74, oil still remains of critical importance to both consumers and producers alike. OPEC is still alive and going strong despite repeated announcements of its demise and occasional allegations of the irrelevance of oil in humanity's daily day-to-day needs. Despite technology ramp ups and extensive exploration, more than 50% of the world's reserves are found in the Middle East OPEC member countries.

As oil resources are largely concentrated in the Middle East, OPEC has control of the market when key members agree. From this perspective, the West has to depend on the Middle Eastern oil and its dependence is likely to increase and OPEC's power likely to strengthen in the near future.

Since the cheapest and the most plentiful oil reserves are located in the Middle East, OPEC has power to set oil prices. While Non-OPEC oil supplies are more precarious and are dependent on the OPEC set prices. Noreg (2002), also states the above reasons underline the importance of caution while dealing with Middle Eastern oil fields, regimes and societies and not only in the mitigation of risk due to terrorism. Therefore, Middle Eastern oil remains of vital political and economic importance to both American and other world powers. Examples of price fluctuations due to political instability are the

Trade Embargo (1973) imposed on US, Netherlands and Israel by the Arab exporters, Iranian revolution (1979-80), Gulf War (1990-91), Iraq invasion (2003).

### **Strategic agenda of the National Oil Companies**

The Middle East has for decades been the part of the world, most suspicious of the international oil companies and most protective of national oil companies (Val erie *et al*, 2006). The agenda in the minds of the leaders of some countries is that '*national oil companies (NOCs)*' will look out for the nation's interests better than '*international majors*' or '*international oil companies (IOCs)*.'

The authors have brought out the differences among the oil firms in Saudi Arabia, Abu Dhabi, Kuwait, Iran, and Algeria, but the main story is the same across the region: "*The companies are focused on the technical side of the industry rather than on politics; the firms take considerable pride in their business and technological expertise, and neither the national oil companies nor the local governments see the international oil companies as being particularly useful for achieving local objectives.*" Val erie *et al*, (2006) have further confirmed the important characteristic in their study, stating that:

- ❑ NOCs *do not provide much information* by which to judge their performance relative to that of international oil companies.
- ❑ NOCs *do not provide any clear means* to ascertain on their claims that they provide better benefits for society, such as skilled jobs for locals, while also maximizing revenue for the local government.

Middle East governments have pushed aside the privately-owned international oil companies such as Shell, Caltex, Exxon Mobil and others in favor of firms owned by the governments.

According to Handy *et al*, (2008b) Oil reserves are increasingly concentrated in a small number of countries. Oil reserves are increasingly concentrated in a small number of

countries (notably Middle Eastern members of OPEC and Russia) which, not being major consumers, have less incentive to invest and raise supply. This tendency is accentuated by the fact that the majority of global oil resources are in the control of NOCs influenced by *National Depletion Policies* as stated earlier. Furthermore, even if NOCs are willing to invest, NOCs ability to do so is often constrained by inefficiencies, high operational costs, and difficulties in accessing finance. Meanwhile political opposition to foreign investment has curtailed IOCs ability to access low cost reserves. While rising costs combined with shareholder demands, are making it less attractive for IOCs to invest in extracting higher cost oil reserves. More generally, the concentration of oil reserves in a few countries increases the risk of geopolitical disruptions to oil supplies and capacity expansions.

A recent Agence France-Presse report (2008) acknowledges the fact that despite record crude prices (*above US\$ 135 a barrel, as this academic work is written*), the major oil companies are struggling to access resources that are being jealously guarded by NOCs with whom *IOCs are forced to establish partnerships*. As paradoxical as it may seem, high oil prices do not mean golden age for the likes of ExxonMobil, Chevron, Total or BP. Although they may see profits with such high oil prices, the future has never seemed so uncertain for these IOCs. Their problem now is access to hydrocarbon reserves. The oil majors or IOCs now control less than 10% of world resources of gas and oil, against 70% in the 1970s (stated at World Petroleum Congress, Madrid, 2008).

Margonelli (2007) has studied four petrostates (Venezuela, Chad, Iran and Nigeria) and China where oil suddenly matters a lot. Oil has brought corruption to Chad; corruption, environmental disaster and political instability to Nigeria; a new strongman in Venezuela; extremism in Iran; and everywhere the widespread loss of national sovereignty to oil majors and international lenders – what Margonelli (2007) calls *'the external locus of control'* which is focused on the present oil quandary, in her kaleidoscopic narration of modern history of oil.

## 4.1 Overview of GCC Reserves Estimate

### GCC's Proved Oil Reserves

According to various Middle East business resources and commentators, in a growing debate over data transparency some increasingly searching questions are being asked by energy industry analysts about the *true level of world oil reserves and whether official and company statistics really stack up*. One of the principal dilemmas seen in the oil market is obtaining accurate information and even basic statistics.

A major reason for the skepticism results from OPEC's decision to change to a system of production quotas in the 1980s that is based on the size of each member country's reserves. The other is the conception derived from the National Depletion Policies on a strategic commodity (Handy *et al*, 2008b; Bromely, 1991). In oil exporting countries, oil policy has been a central issue, with national control of the resources and the major industry advanced as a top priority. According to Roncaglia (1985), an imperfect competition in the oil industry implies facing the following outcomes:

- Oligopoly, (Philip, 1982; Johnston, 1994)
- Cartel, (Philip, 1982)
- Cheating, (Doran, 1977; Axlerod, 1984)

It is to be noted that several factors control the magnitude of *Reserves-to-Production (R/P) ratios* like depend largely on geologic, technological, economic and political limitations. The current R/P ratios worldwide for oil, natural gas, and coal have been estimated to be 40 years, 62 years, and 224 years, respectively (Feygin *et al*, 2004). However, many 2007 reports/articles also *interpret* that the total R/P ratio for oil in the entire Middle East is in the range of 82.2 years. Nonetheless, several Middle East business resources & commentators maintain *the question mark over Gulf reserves remains*. Nearly one out of every three barrels of oil reserves in the world lie under just two countries:

- Saudi Arabia reportedly with 259 billion barrels (approx.) of proven reserves
- Iraq with 112 billion barrels

Iraq currently plays a relatively marginal role in global oil markets; this is not the case with regard to its oil reserves. The war-torn country sits on 11% of worldwide proven reserves of 1,050 billion barrels increasing its potential long-term significance for international oil supplies thereby having a greater impact in the R/P ratio and thereby the *price forecasting folklore* in the future after attaining political stability.

Based on the data gathered from various sources, a snapshot of the distribution of oil and gas within the GCC is presented in Fig. 4.2.

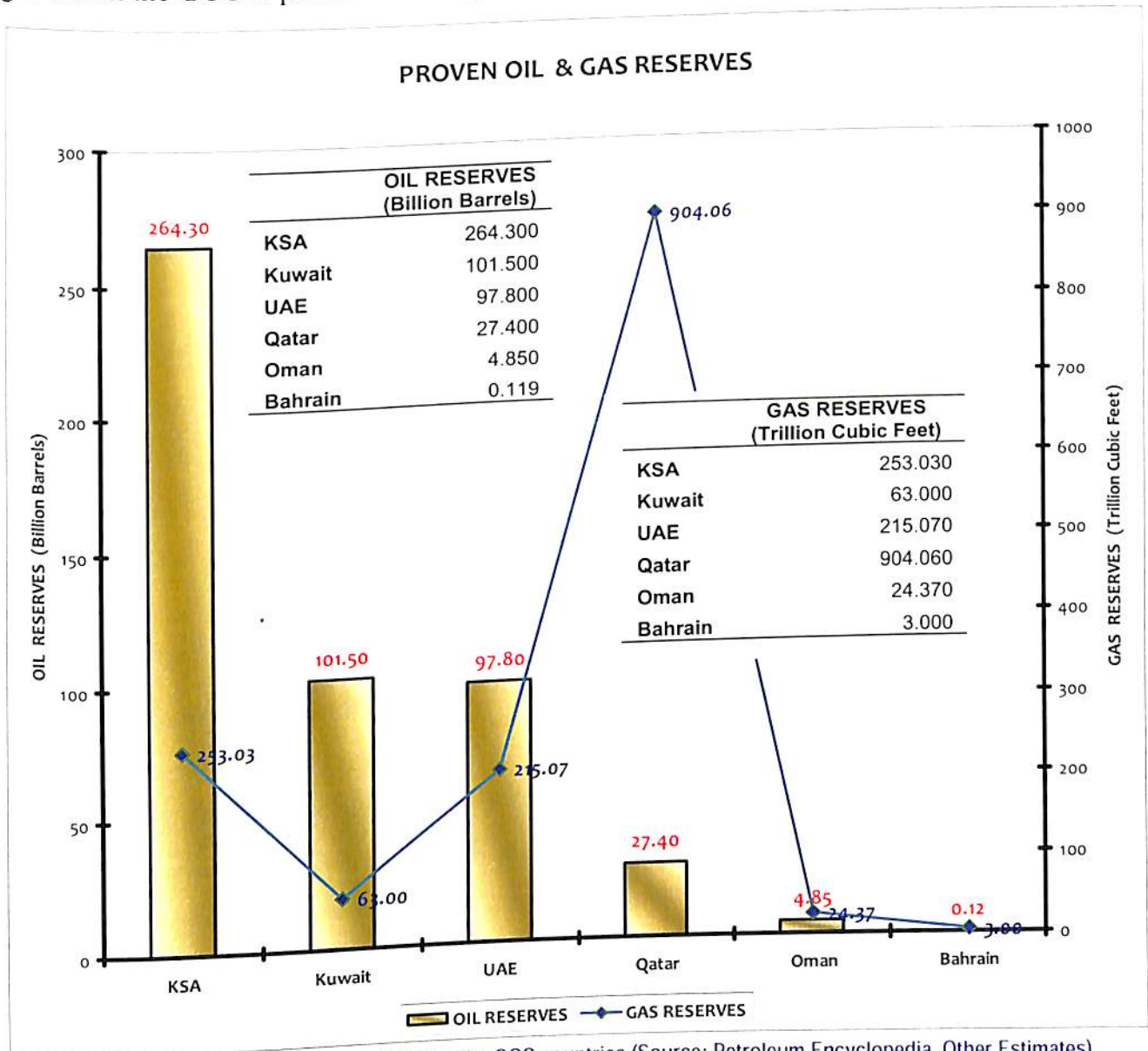


Fig. 4.2: Proven Oil and Gas Reserves (2007) in the GCC countries (Source: Petroleum Encyclopedia, Other Estimates)

Quoting Annual Production as a function of Reserves is a perfectly reasonable measurement. Ironically, the Association for the Study of Peak Oil & Gas (ASPO) has

acknowledged that the *two most commonly used weapons of those wishing to conceal the reality of Peak Oil* are references to:

*(A) Reserve to Production Ratio and*

*(B) Challenges*

Campbell (2007) argues and highlights the weakness in using the above metric through an example – ‘*The 2006 BP Statistical Review states, however incorrectly, that annual production in 2006 was 81.663 Mb (or 29.8 Gb) and that Proved Reserves stand at 1208 Gb. The calculation is simple:  $1208/29.8=41$ . This is widely misrepresented to mean that Reserves support Current Production for 41 years, which is absolutely not the case because all fields are subject to gradual declines. Obviously, Rate is not the same as Amount’ and the former is seldom exposed.*

Campbell (2007) further states that, ‘another more subtle weapon is the use of the word Challenge carrying the implication that it can be met by dedication, investment and courage. Thus the growing gap between falling oil supply and growing demand is often depicted as a matter of challenge to somehow take steps to produce more, when the real challenge is to get used to using less because there is less left to produce.’

Notably, many reports including recent reports from Earth Trends (2008) interpret that nearly all countries are expected to deplete their usable supply or run dry of oil before 2100. Within the broad concept of oil ‘reserves’ there are several key distinctions: ultimately recoverable resource; proved, probable, and possible reserves; and original oil in place (OOIP). Most data published are proved reserves. Globally, every effort is made to come up with a consistent series for reserves based on a common definition, however, in reality, different countries use different methodologies and the data have varying levels of reliability. Oil and gas production, consumption, imports and exports are presented in Figs. 4.3, 4.4, 4.5 and 4.6 respectively.



**OIL PRODUCTION & CONSUMPTION**  
(Million Barrels per Day)

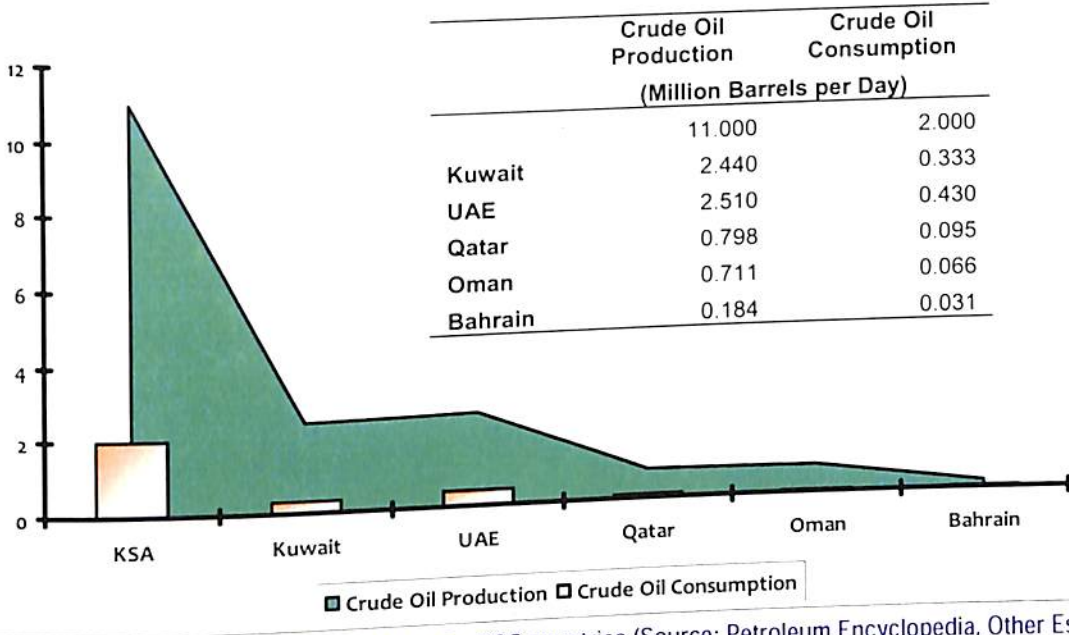


Fig. 4.3: Oil Production & Consumption (2007) in the GCC countries (Source: Petroleum Encyclopedia, Other Estimates)

**OIL NET EXPORTS & IMPORTS**  
(Million Barrels per Day)

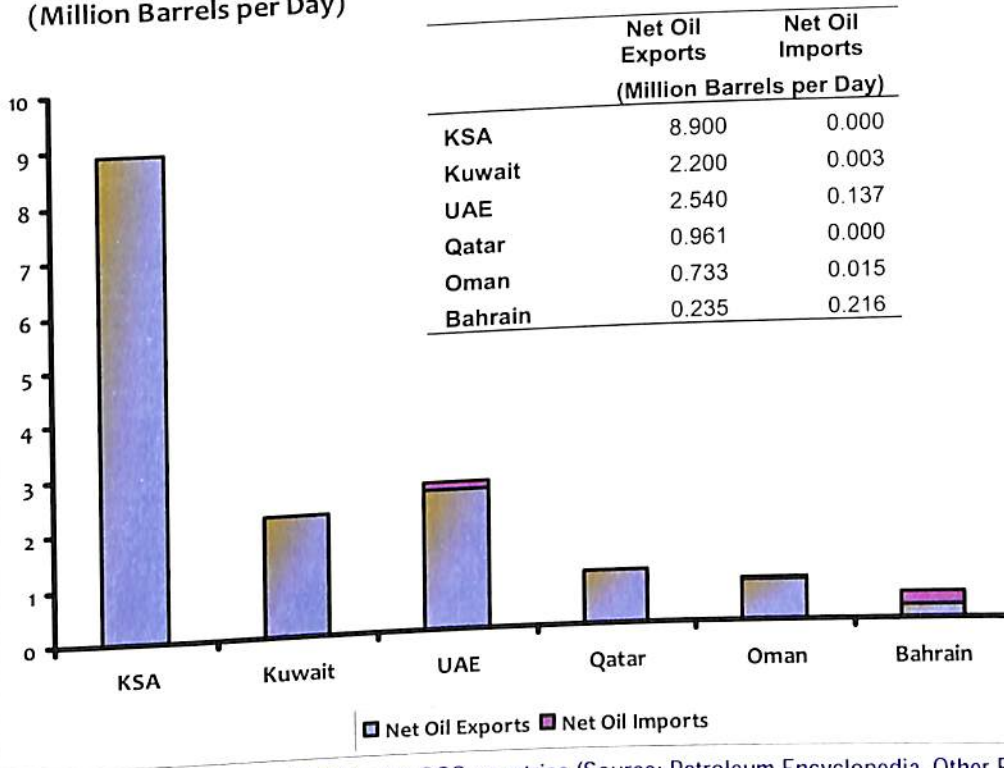


Fig. 4.4: Net Oil Exports & Imports (2007) in the GCC countries (Source: Petroleum Encyclopedia, Other Estimates)

Whatever the true level of GCC oil reserves is the *region seems destined to play an increasingly influential role in meeting world energy demands*. By 2020, the Gulf is

forecast to supply more than half the world's crude oil and possibly as much as two thirds. It is believed that oil and natural gas will be the main source of energy and chemical raw material for at least next 50 years. Oil resources are concentrated in the Middle East. Middle East reserves account for 62% of world's reserves and reserve-production ratio is also a long 82 years. There are 47 giant oil fields in the world with proven reserves well above 5 billion barrels and 29 are located in the Middle East with 11 in Saudi Arabia with the largest Saudi Ghawar field having reserves of 86.2 Billion barrels and an offshore Safaniya field having reserves of 41.5 Billion barrels. The top oil companies of the world are the most influential and mainly state-owned national oil and gas companies i.e., Saudi Aramco (Saudi Arabia); JSC Gazprom (Russia); CNPC (China); NIOC (Iran); PDVSA (Venezuela); Petrobras (Brazil) and Petronas (Malaysia). Saudi Aramco is the *world's self-appointed central banker of oil*, turning taps on when there is a shortage of global supply, and off when prices are falling below its comfort level (Vardy, 2007).

### **GCC's Proved Natural Gas Reserves**

According to BP statistics and other reports, the world's proven reserves of natural gas are estimated at 177 trillion cubic metres in 2007. Middle East accounts for 73 trillion cubic metres (41% of total world reserves). Globally, Qatar ranks third in gas reserves (14%) followed by Iran (16%) and Russia (25%).

The major gas fields in GCC countries are North Field, Qatar with proven reserve of 900 TCF, followed by Ghawar and Shaybah in Saudi Arabia with combined gas reserves of 105 TCF, Greater Burgan in Kuwait with gas reserves of 43 TCF, Umm Sharif and Bab in Abu Dhabi with combined gas reserves of 62 TCF. Saudi Arabia has the world's 4<sup>th</sup> largest proven reserves of gas but remain ranked 12<sup>th</sup> in terms of production. A recent EIA report in 2008 states that 'Despite high rates of increase in natural gas consumption, particularly over the past decade, most regional reserves-to-production ratios are

substantial. Worldwide, the reserves-to-production ratio is estimated at 63 years. By region, the highest ratios are about 48 years for Central and South America, 78 years for Russia, 79 years for Africa, and more than 100 years for the Middle East.'

**NG PRODUCTION & CONSUMPTION**  
(Billion Cubic Meters)

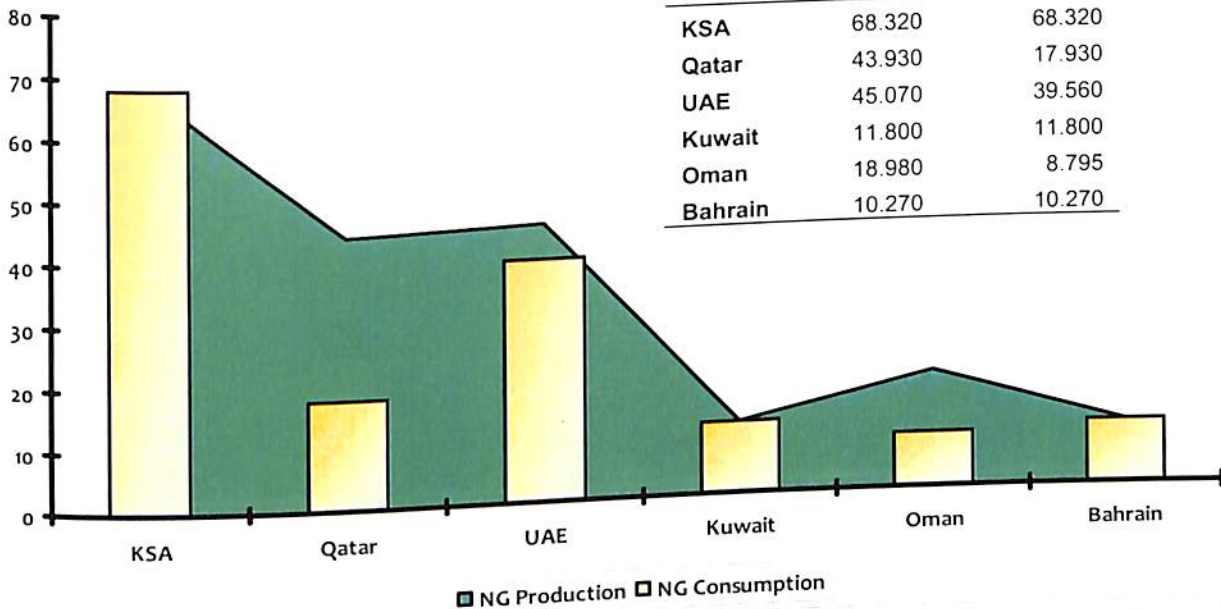


Fig. 4.5: Oil Production & Consumption (2007) in the GCC countries (Source: Petroleum Encyclopedia, Other Estimates)

Siddiqi (2005) states that, "Qatar, which has the world's third largest gas reserves, is now shifting the emphasis on the downstream industries" and "the scale of the mega projects in gas-rich Qatar is breathtaking, even by recent standards of the global energy industry."

**NG NET EXPORTS & IMPORTS**  
(Billion Cubic Meters)

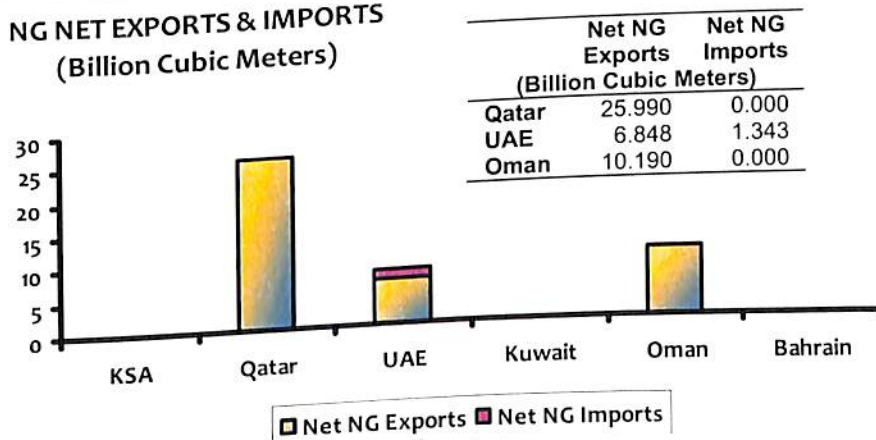


Fig. 4.6: Net Oil Exports & Imports (2007) in the GCC countries (Source: Petroleum Encyclopedia, Other Estimates)

With the huge deposits of gas in the giant North fields, there is no shortage of cheap feed stocks to underpin the growth of export-oriented industries such as petrochemicals, fertilisers, GTL, steel, aluminium etc. Huge investment plans have multiplier effect upon the non-oil sectors by increased consumption and capital spending.

GTL technology briefly, converts natural gas (Green-fossil fuels) into cleaner, high quality middle distillates like lubricants, sulphur-free diesel and naphtha that are easily exportable by tankers.

- It is reported that Qatar has attracted foreign investment commitment of \$20 billion into GTL ventures in order to capitalise on growing demand for energy alternatives. QP expects to produce 400,000 bpd of diesel, lube oil and naphtha for exports by 2012.

LNG technology briefly, converts the natural gas to a liquid form creating LNG (liquefied natural gas), and then can shipped out, safely and efficiently.

- It is stated that QP has plans to increase gas production from 11 billion cfd to 25 billion cfd. In terms of LNG, Qatar aims to become the world's top exporter by 2010 with an output of 77 million tons from its current expected production of 20 million tons.

Gulf Gas Grid briefly, is a pipeline venture is 51% owned by Abu Dhabi Government and 24.5% each by Los Angeles-based Occidental Petroleum Corp. & Total SA of Paris.

- Many reports state that the initiative is a \$3.5 billion cross-border gas project; is a strategic regional energy initiative involving the development of natural gas reserves from Qatar's offshore North Field, their processing onshore at Qatar's Ras Laffan and transportation by export pipeline of up to 3.2 billion cubic feet a day of refined product to the UAE.

## 4.2 Overview of the GCC economy

### Economic indicators of GCC

The GCC's projected and country-wise economic & financial indicators are presented in Figs. 4 and 5 respectively. According to Handy *et al.*, (2008a), the six countries of the Gulf Co-operation Council (GCC) - Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE are enjoying a spectacular economic boom, one that they expect to continue over the medium term. The GCC economy is set to surge past US\$1 trillion in nominal terms in 2008, marking a three-fold increase in only five years. This will push the GCC economy past that of South Korea and put it on a par with India.

Real GDP growth, which is expected to reach 8.2% in 2008, has tended to fluctuate in line with oil output (*since four of the six countries are members of OPEC*). The contribution of the non-oil sector has been more vigorous and more stable, and has been the engine of the current boom. Assuming non-oil GDP growth this year of 8.5%, the five-year average for the 2004-08 periods will be a robust 7.7%, a full percentage point higher than overall GDP growth.

	2004	2005	2006	2007	2008	2009	2010
<b>Real Sector</b>							
Real GDP growth (%)	5.7	6.8	6.2	5.3	8.2	8.1	7.6
Real Non-oil GDP growth (%)	5.0	7.3	7.9	7.8	8.5	8.6	8.3
Nominal GDP (\$ bn)	333.0	612.4	718.6	803.5	1151.6	1328.2	1519.8
Nominal GDP growth (%)	-2.7	26.8	17.3	11.8	43.3	15.3	14.4
Crude oil production (Million b/d)	13.9	16.0	16.0	15.4	16.2	16.6	17.1
Gas production (boe)	2.6	3.5	3.8	4.0	4.6	5.5	6.2
Dated Brent (\$/b)	24.4	54.4	65.4	72.5	120.0	135.0	150.0
<b>Financial Indicators</b>							
Fiscal balance (% GDP)	0.0	20.3	22.8	19.8	35.1	36.6	36.7
Consumer Price Inflation (Ave)	1.0	5.0	6.0	7.0	10.8	9.0	7.6
Domestic debt, gross (% GDP)	59.0	26.6	19.7	14.5	10.0	8.5	7.7
Domestic debt, net (% GDP)	67.8	23.3	12.7	1.8	-2.8	-5.7	-7.0
Current account balance (\$ bn)	31.5	166.7	196.7	188.3	463.4	554.3	647.5
Current account balance (% GDP)	9.5	27.2	27.4	23.4	40.2	41.7	42.6
Foreign assets (\$ bn)	1077	1410	1607	1795	2258	2813	3460

Table 4.1: GCC Economic & Financial Indicators (Source: SAMBA estimates & forecast; IMF)

Financial indicators are also impressive. The average fiscal surplus is expected to reach 35% of GDP in 2008, while the aggregate current account surplus will near 40% of GDP. Net foreign assets are expected to reach almost \$2.2 trillion in 2008.

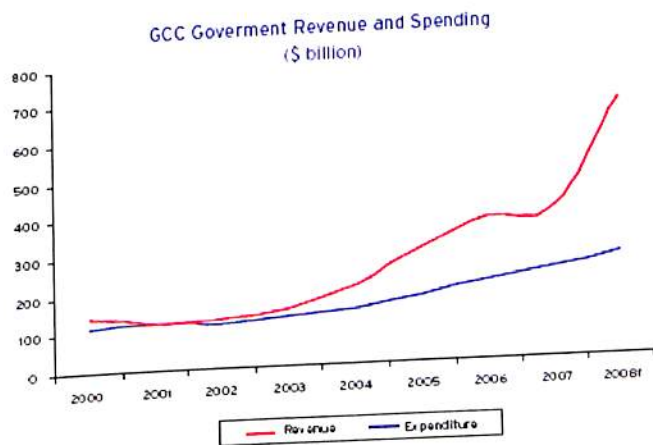
The economic outlook for the region is positive. Handy *et al.*, (2008a), anticipate further gains in global oil prices as strong demand (particularly from Asia and the Middle East) continue to outstrip incremental additions to supply. Robust hydrocarbons earnings will underpin government investment and private confidence, while the latter will be further supported by continued (albeit haphazard) economic liberalization. This should help to keep real GDP growth at around 8% over the medium term.

	KSA	UAE	Kuwait	Qatar	Oman	Bahrain
Nominal GDP (\$ bn)	376.2	189.3	116.9	62.4	39.0	19.7
(share of total)	46.8	23.6	14.6	7.8	4.9	2.4
Population	25.3	4.5	3.4	0.9	2.7	0.8
(share of total)	67.3	11.9	9.1	2.5	7.2	2.0
GDP per capita (\$)	14000	42500	34500	66500	14500	26000
Oil production (m b/d)	8.7	2.5	2.6	0.8	0.7	0.2
(share of total)	56.5	16.2	16.6	5.3	4.2	1.2
Oil & gas reserves (billion boe)	308.8	135.9	112.7	174.7	11.8	1.6
Oil & gas production per capita (boe/day)	0.4	0.7	0.8	1.9	0.4	0.5
Oil sector (percent nominal GDP)	54.0	34.4	54.8	61.1	47.2	33.9

Table 4.2: GCC Country-wise 2007 Economic Indicators (Source: SAMBA estimates; BP; IMF)

### Price volatility and GCC economy: As Oil price climb up and remain high

Various opinions from GCC analysts for the scenario when oil prices climb are presented below. The surge in oil revenue has been substantial and sustained, but GCC governments have only begun to ramp up spending comparatively recently (See Fig. 4.7).



Source: National Authorities; Samba estimates.

Fig. 4.7: GCC Government Revenue & Spending (Source: SAMBA estimates)

In the early part of this decade, '*caution*' was the watchword, with spending increasing by just 6.5% a year in 2001-04, despite a concomitant 10.6% annual increase in revenue.

*Instead of ramping up investment, GCC governments took the opportunity to:-*

*(A) Pay down domestic debt*

*(B) Build up foreign assets*

Nevertheless, there are a number of *risks and challenges* for policy. Foremost among them are:

- Rising inflation (which will surpass 10% in 2008)
- Supply chain bottlenecks and constraints
- Uncertainties stemming from the recent turmoil in international financial markets
- Weakening of the global economy

Handy *et al*, (2008a), however state confidently that *none of these risks is likely to derail the region's economic prospects*, but each could impair the business environment and act as a drag on growth. Handy *et al*, (2008a), however also state that the vulnerability stemming from the dollar pegs aside, the GCC's growth prospects are largely sheltered from the tribulations of the global economy for the following reasons:

- GCC banks' aggregate exposure to sub-prime debt is estimated at less than 1 % of total assets
- The non-oil sector, which is the main engine of growth, is not export oriented
- There is considerable scope for domestic debt issuance in the event of a sustained drop in oil prices
- The GCC's formidable foreign asset positions provide an additional cushion

## Price volatility and GCC economy: As Oil price plummet

Various opinions from GCC analysts for the scenario when oil prices hit the lower ebb

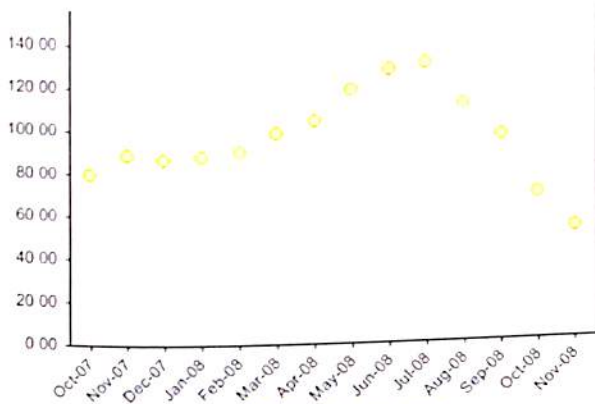


Fig. 4.8: OPEC Basket price, Monthly average in US\$ (Source: OPEC)

are presented below. Various recent regional studies, GFH reports and Emirates Business 24/7 commentaries state that, the global financial crisis has started to spill over into Gulf oil producers in terms of a sharp decline in crude prices (see fig. 4.8) and its full impact will be determined by their fiscal policy in 2009.

Recent GFH report on the GCC economy for Q4 2008 states that it expected slackening crude prices to weaken the strong aggregate demand in the region, reverse an upward trend in capital inflow, and prompt further central bank measures to ease curbs on lending. But it however, ruled out an immediate shift in the GCC policy to keep national currencies pegged to the US dollar on the ground this could cause a sharp volatility in those currencies. The study, nevertheless, maintained that such a shift remains a strong option in the long term.

The forecast fall in oil export revenues suggests that GCC economies will join the 4<sup>th</sup> and last group of countries mainly *commodity exporters* impacted by the global economic slowdown in 2009. In sequential order, the study noted that the evolution of the sub prime crisis has erupted in [1] the US, then spilled over to [2] other G7 countries via financial channels and has, recently, spilled over to [3] major net *commodity importers* in emerging markets, particularly China and India. The study has projected that the GCC's combined oil export earnings to tumble from an expected \$600bn this year to \$350-400bn in 2009. If GCC governments adopt a pro-cyclical fiscal stance i.e., cut expenditure in response to weaker revenues, the stimulus from fiscal policy will also decline in 2009. However, the study confidently states that, despite its earlier scenario of a cyclical slowdown in 2009, *GCC economies will remain exceptionally resilient* due to what it called the sizable accumulation of savings during the bull years. *Windfall oil inflows*



accumulated over the past six years will serve to *cushion against a systemic crisis* in 2009-10. According to Emirates Business 24/7 report, the Institute of International Finance (IIF) projects that the oil prices would probably begin to creep up to \$75-\$80 per barrel towards the end of the 2008, which is left to be seen as this academic study progresses.

### Index of Economic Freedom

The Index of Economic Freedom is a series of 10 economic measurements created by the Wall Street Journal and The Heritage Foundation to measure the degree of economic freedom in the world's nations. According to the 2008 Index of Economic Freedom, within the GCC, Bahrain is considered the freest and has clinched the 19<sup>th</sup> position worldwide. The report ranks Qatar finally within the GCC which came 66<sup>th</sup> worldwide. A snapshot of the GCC rankings is shown in Table 4.3.

GCC Ranking	Country	2008 Worldwide Index of Economic Freedom
	Hong Kong	1 <sup>st</sup> (Freest economy)
1	Bahrain	19 <sup>th</sup>
2	Kuwait	39 <sup>th</sup>
3	Oman	42 <sup>nd</sup>
4	Saudi Arabia	60 <sup>th</sup>
5	UAE	63 <sup>rd</sup>
6	Qatar	66 <sup>th</sup>
	North Korea	157 <sup>th</sup> (Least free economy)

Table 4.3: Index of Economic Freedom (Source: Adapted from GCC Focus, Gulf News, 20 Jan 2008)

### Infrastructure development from petrodollars

According to Handy *et al*, (2008a), the surge in oil prices, the shoring up of fiscal and external positions, and the improvements to the business climate have combined to produce a spectacular infrastructure boom. In May 2008 there was nearly \$2 trillion worth of GCC projects announced, planned or under way.

- **Construction sector** continues to dominate the project landscape, with **\$1.3 trillion** worth of projects in progress or at the planning stage, ranging from entire cities to individual real estate and tourism projects, as well as basic infrastructure.

- **Oil & Gas sector** is the next largest sector, with projects worth **\$266 billion** including regional plans to augment crude oil production capacity by some 3 million b/d over the next five years.
- **Petrochemicals sector** (most notably in Saudi Arabia and Qatar) command some **\$130 billion** worth of investment in projects.
- Lastly, **Utilities & Industrial sector** account for a combined **\$180 billion** for their projects.

### **Successful energy partnerships within GCC**

Dolphin Energy's Dolphin Gas Project sets a model for successful regional and international partnerships – an accomplishment for the 'Mubadala' programme, which has played a vital role in the UAE economic development sector. According to Assoumi (2007), this project is one of the most important projects in GCC and is considered the single largest energy initiative ever undertaken in the Middle East. Through its supply of natural gas from Qatar, it brings three GCC countries together – the UAE, Qatar and Oman in a regional energy network of strategic importance. The project comprises of 364 km sub-sea pipeline between Qatar and the UAE. The objective of the project is to have a single gas network from which several industrial projects in GCC countries can be developed and achieve high growth rates of the UAE's economy.

### **Diversification into non-oil and petrochemical sectors**

The Middle East in general enjoys an enviable and unparalleled advantage (Rooney, 2005) of energy and feedstock position; and the revenue from the oil & gas production supports further investment and development. The factors which support the diversification strategies as stated by Hamed (2005) and other columnists are discussed below. The competitive advantages of GCC countries towards development of industries including petrochemical industries are the following:

- Low-cost energy.
- Low taxation (tax haven environment).

- Good access to markets, since Middle East is positioned midway between world-markets.
- Availability of capital.
- Focus on privatisation.
- Commitment towards minimization of barriers to entry.
- Government's interest in developing heavy industries like aluminium, steel, automobile, petrochemical and related industries.
- Some of the industries are currently being wound-up in the US, Europe and are no longer competitive because of high taxation and high costs of raw materials and of labour.

The GCC can play a better role in the near future due to the above factors which tend to encourage US industries, promoting FTAs between GCC countries and other FDIs which are of strategic significance in petrochemical and other heavy industries.

### **4.3 Challenges in the GCC economy – hydrocarbon perspective**

#### **Challenges in Business Intelligence of Arab economies**

Mollerop (2008) states that middle east oil firms are anxious to enhance global performance. This industry generates mountains of valuable data that if analyzed and leveraged correctly, could make a significant difference in efficiency and profits. While Asoomi (2008a) cautions that, 'many strange phenomena have coincided with the developments in the Arab region.' Many experts have emerged in various fields like energy, oil, nuclear weapons, and radical movements including terrorism. The emergence of these tens of financial analysts and economists who give their opinions as if they were skilled and well experienced specialists have brought negative effects to the region. He states that this defect is caused by the lack of regulations governing licensing of analysts. These regulations would help develop effective sectors in Arab economies instead of

losing direction. Hence it is imperative to exercise caution when exploring and citing as all the studies may not have the appropriate credence to their analyses. Several analysts have made many scenario forecasts with the theme of key risks posing the GCC's economic stability is affected by: Soaring inflation, inadequate infrastructure, property price bubbles and oil price volatility. Against this backdrop, Country Risk analysts have projected several macroeconomic projections and domestic indicators.

### Inflation challenge and the fiscal prudence of GCC's oil windfall

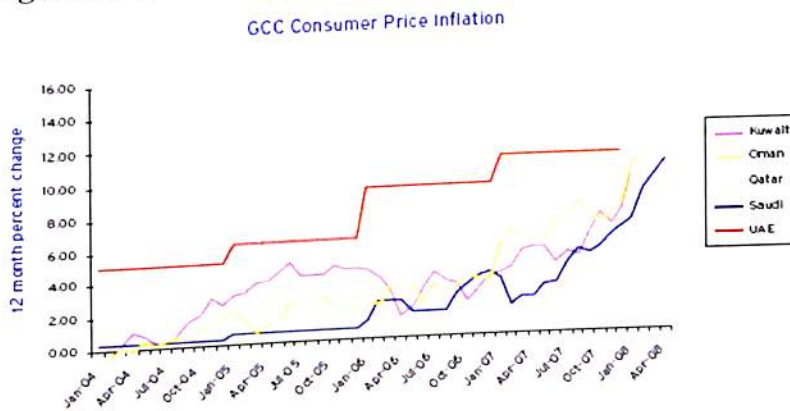


Fig. 4.9: GCC Consumer Price Inflation (Source: SAMBA estimates)

According to Handy *et al*, (2008a), the most pressing challenge facing GCC economies is inflation. Inflation data are weak in many countries and are often understated by the inclusion in the basket of items subject to regulation or control. Two years ago, most GCC countries had inflation rates comfortably below 5%. Based on the official indices, **consumer price inflation is now running well above 10%** in Qatar, the UAE, Oman and Saudi Arabia, and **is nearing 10%** in Kuwait and Bahrain, and the trend is steeply upward in all countries (see fig. 4.9). The reasons for this growth in prices are attributed to the following:

- 1) Firstly, Government spending has been rising rapidly and this has been the main source of rapid liquidity growth across the GCC. Although overall fiscal positions are in surplus, these surpluses do not mean the same thing as in diversified economies where 'domestic tax revenues counteract the liquidity caused by

government spending.' In the GCC, domestically sourced fiscal revenues account for a very small proportion of total revenues (which overwhelmingly come from hydrocarbons exports). Hence, in the case of the GCC economies the *correct measure of the impact of the budget on domestic liquidity is total fiscal spending less those revenues sourced domestically* (i.e. the non-oil fiscal deficit). It is noteworthy that government efforts to deal with the symptoms of inflation (through e.g. public sector salary hikes, cuts in tariffs and subsidies) add to the non-oil fiscal deficit and may thereby be counterproductive.

- 2) A second factor contributing to demand pressures is the *rapid growth of bank credit to the private sector*, reflecting the greatly expanding role of the private sector in the regional economic and investment boom. A combination of promising investment opportunities together with highly liquid financial institutions have propelled annualized rates of credit growth to 35% or more across the region.
- 3) A third factor bearing on *inflation stems from the fixed peg to the US dollar*. The recent descent of the dollar relative to other global currencies has compounded the underlying increase in the prices of commodity imports (particularly food) pushing up domestic prices in the GCC states, most of which are both pegged to the dollar and are largely dependent upon imported non-fuel commodities. Furthermore, the dollar peg has compelled the authorities in GCC countries to reduce interest rates in line with the actions of the US Federal Reserve. While monetary easing on the part of the US has been motivated by a desire to avert recession, the GCC has followed suit at a time when their economies are overheating.

Analysts at Gulf Research Centre attribute inflation to other major factors such as the structural economic rigidities like lower absorptive capacity amid huge liquidity, domestic currencies pegged to sliding greenback and prodigal welfarism resulting in unwanted fiscal expenditure.

### **Economic challenge for reforms**

Boer & Turner (2007) state that during the oil price surges of the mid-1970s and early 1980s, most of the GCC states were newly founded and lacked institutions that could absorb a six-fold increase in revenue. Today, disciplined fiscal regimes and debt reduction policies suggest that the region's governments have the political will to cope with this latest oil windfall. Beyond political will, three powerful factors are pushing reform forward:

- a) Falling per capita oil and gas production
- b) A growing mass of unemployed youth
- c) An inefficient financial system that allocates capital poorly

The high price of oil presents the leaders of the GCC states with a singular opportunity to *diversify their economies beyond hydrocarbons* (Boer *et al*, 2007). While some analysts argue that the current high prices actually present an *impediment to reform*. Boer & Turner (2007) however argue that oil revenues will *serve as a catalyst* to continue the reforms needed to break away from the boom-and-bust cycles that volatile energy prices create. According to Boer & Turner (2007), 'the GCC's pace of reform has been uneven, and one crucial factor is the ratio between oil and gas production and the number of citizens. Countries with relatively little oil and gas production per citizen will find it increasingly difficult to sustain their standard of living. It may come as a surprise that Saudi Arabia, the world's largest oil producer, falls in this category: its production per citizen is one-sixth of the UAE's, so its oil revenues are spread much more thinly across the population.'

Saudi Arabia's rapid population growth far outpaces oil production, and the kingdom faces increasing pressure to reform its economic and social model. In response, it has adopted a two-track approach: fixing the old and creating the new. To fix the old, Saudi Arabia has joined the WTO, cut import duties, privatized telecommunications, and prepared to liberalize the airline industry. To create the new, it has embarked on a \$200 billion initiative to develop new cities and economic zones with regulations that are friendly to the private sector; creating a new Saudi economy. Taken together, these

initiatives show a major commitment to decentralize power away from the conservative heartland surrounding Riyadh.

Bahrain, which similarly has a low level of oil and gas production per citizen, has also moved forward, embarking on deep political and economic reforms highlighted by the adoption of a constitutional monarchy, in 2002. It held its second parliamentary elections this past November and is modernizing its labor and property markets, as well as its health care and education systems.

### **Challenges and Opportunities through GCC Currency Union**

Elevated rates of inflation pose a challenge to GCC currency union (Handy *et al*, 2008a). Formally, all states bar Oman are committed to introducing a single currency in 2010 (though Kuwait's adoption of a more flexible exchange rate system in 2007 suggests some ambivalence about its position). More broadly, the ongoing upsurge in inflationary pressures across the GCC—as well as creating pronounced financial tensions—indicates that a key criterion for monetary union will be difficult to meet.

The convergence criteria mirror those used by the EU member states for the euro. Most of the criteria now lack relevance given the GCC's booming economies and robust financial indicators. ***Convergence on inflation is a critical aspect of successful currency union***, since the average inflation rate will influence the economy's real effective exchange rate, and thereby help shape the GCC's competitive position within the global economy. Similarly, large differences in relative prices between member states would make it difficult to find an appropriate level for policy interest rates. The problems posed by accelerating rates of inflation are a timely reminder of the opportunities—as well as the challenges—presented by the currency union project. GCC inflation is fundamentally a product of buoyant domestic demand conditions; however, prices and wages are also being pushed up by undervalued currencies. Thus, currency union presents the GCC with an imperative to define a more appropriate level for their exchange rates to ensure that they establish a realistic starting point. ***A satisfactory initial alignment of exchange rates is an essential***, if not sufficient, condition for the viability of a GCC

common currency. The end result of this currency union would likely be more stable and predictable price growth, laying the foundations for sustainable, investment led economic growth over the long term.

### **Infrastructural challenges despite massive oil windfall**

Several reports by Ernst & Young, Emirates Business 24/7 and Zawya state that Infrastructure development in the GCC countries has not kept pace with the rapid economic growth. According to Listana (2008), with the construction costs rising and financing squeeze hitting the GCC (*survey made during Nov 08*), infrastructure needs are rapidly outstripping the region's public resources despite experiencing years of massive oil windfall. According to the Bridging the Gap: Private Investment in Middle East Infrastructure report, *even the wealthiest countries in the Middle East are now challenged to meet a rapidly growing need for capital to fund infrastructure projects.* The report cites, 'Rising costs of commodities such as steel and cement are increasing the costs of infrastructure projects. Projects have increased in size, scope and cost, from construction of bigger airports and ports, to development of entire new cities....'. The study, obtained by Emirates Business, complements the recent finding from the United Nations Conference on Trade and Development (Unctad), which says *infrastructure development in the GCC countries has not kept pace with the rapid economic and population growth* in many cases. The Unctad's World Investment Report 2008 earlier said that unless the current level of infrastructure spending in all infrastructure industries is increased to match the projected investment needs, GCC countries would face a serious challenge in meeting their targets for growth and development.

Some MEED reports even include *waste water disposal plant, desalination plant* and *power generation facilities* in their commentary on GCC's lack of infrastructural development. In order to meet the growing demands of the region's swelling population, MEED reckons an additional 60,000 megawatts of new power capacity - around 80% of currently installed capacity - will be required across the Gulf by 2015. The massive undertaking, which also includes the need to develop the GCC's desalination



infrastructure, is estimated to cost anywhere between \$70 billion and \$120 billion. A recent 2008 Morgan Stanley report state that more *gas infrastructure* is needed in the Middle East. There is a pressing need for more natural gas infrastructure to be put in place for electricity generation and for a growing petrochemical industry. Although the Middle East has 40% of the world's remaining gas reserves, it only represents only 12% of the current production. An emerging feature of the 2008 Morgan Stanley report was that the core oil producers are consuming more. The outlook for economic growth and oil demand appears relatively robust, based on a young population, subsidies and oil process greater than \$60/b and strong current accounts. The greatest challenge in the gas sector is in meeting the increasing natural gas demand. This is hindered when the *majority of the gas reserves is tight or sour and therefore requires additional capex and time to develop*

### **Strategic challenge at the *Strait of Hormuz* and regional geopolitics**

The strategic challenge cannot be highlighted any better when many reports suggest that even warships elevate their security levels in preparation of the worst in these territorial waters. This strait handles 40% of the world's oil transport by sea. Owing to this strategic importance, the strait has been a cause of tension between Iran and the USA over the threat from Iran to attack Israel. In light of the likely sanction from US, there is always an imminent threat from Iran to close the strait which has ramifications on the oil price (Marten, 2008). However, the territorial waters are claimed by both Iran and Oman. The world cannot afford to lose oil if there is a crisis in this strait. In a fungible world oil market, any disruption in the supply affects everyone, because the price would go up for everyone (Caruso, 2006).

According to Soussa *et al* (2008), the region will be affected by the evolution of key geopolitical risks, due to the following triggers, which have been rising over the past two years.

- The security situation in Iraq remaining bad
- Tensions between the US and Israel
- Iran over the alleged Iranian nuclear weapons program

- Ongoing precariousness of Lebanese politics
- Situation in Palestine through clashes between Hamas and Fatah

The above create a tense regional political environment that has an impact on the economic and political stability of the Middle East, and the Gulf region in particular, for a variety of reasons.

### **Challenge in tackling the industry skills gap**

A recent Booz report (2008) states that, there are four major factors that are contributing to the skills crisis in the GCC oil industry. The study found that the ageing workforce, the need for specialized skills, an increasing workload and escalating costs are the causes of the gap and opportunities for improving the talent challenge in the industry.

The industry is witnessing a huge decline in job capability coupled with a lack of proper remuneration for the skilled workforce. The ageing workforce combines with the lack of job-ready skills among undergraduate recruits, where rising salary costs also play a role. There is increased competition for skilled workers, i.e., workers are quick to resign for a position with greater remuneration.

The study additionally highlighted that effective management of 'People Issues' is now a strategic business challenge, and that short term gains will not deliver long term solutions to the problem. Therefore, some oil and gas companies are now focusing on recruiting, resourcing, developing and retaining talent, but more importantly, 'changing the method of doing business, thus positively reducing the magnitude of demand for talent in the first place, in the following ways.

- *Simplifying Operations:* This can be achieved by using more technology and reducing bureaucracy (example: corporate services and reporting style).
- *Changing ways of working:* Another very effective tool for closing the skills gap is to change ways of working, (example: in both engineering reviews and maintenance execution in mature fields).

- *Implementing new technologies:* greater emphasis on automation - thus a reduction in the need for man power (example: smart wells use remote operation of well-head valves and allow for field data collection and transmission).
- *Outsourcing:* Outsourcing some support transactional activities within an organization can reduce demand by up to 40% in certain areas (example: contractors, consultants).

### **Operational challenge in energy co-operation**

In the Gulf region, during the oil extraction process, associated gas is flared which has been carried out in oil wells across the world for around 30 years. Technological advancements have addressed this issue by separating associated gas from oil and reuse it.

Asoomi (2008b) states that this technology is yet to be used optimally in the gulf oil fields. According to Western reports, associated gas worth \$10 Bn is flared every year in the Middle East, which is a waste when most of the region's countries face a shortage in natural gas for power generation, the need for which doubles every decade. The Gulf needs to tap associated gas from oil wells through energy co-operation in the region. The \$10 Bn worth of flared associated gas would make a difference to the situation. The region needs to coordinate efforts to make use of this wasted wealth by building proper infrastructure to utilize gas. Gas pipelines have become one of the most important assets of energy supply due to growing demand in natural gas.

### **Challenges in Project Financing**

Ironically, although the GCC is awash with liquidity, it has become more difficult and expensive for regional investors to raise project finance in dollars (being the traditional currency for such funding).

- *Market expectations of currency revaluations* in the GCC have caused dollar liquidity to shrink and led regional financiers to avoid lending in US dollar assets.

- In the wake of the *global credit crunch*, funding margins have risen as global banks put increased emphasis on risk identification and pricing (typical wholesale financing costs are currently running at around 100-150 bps over Libor).
- There are also indications that *lenders are invoking the “market flex” clause*, which allows them to increase margins and fees if they are unable to sell down their exposure.

Nevertheless, Handy *et al*, (2008a) state that the current constraint on capital will prove binding. The GCC’s economic fundamentals (massive energy reserves, rapid population growth, financially sound public sectors with long-term capital expenditure programmes) are sound. As such, Western banks are unlikely to shun well-conceived projects, particularly in the energy sector. In addition, other sources of finance are plentiful: local banks, Islamic institutions (Ijarah structure) and Japanese banks are all extremely liquid, while Export Credit Agencies are willing to fill in where necessary.

### **Business challenge due to impact on Gulf Business Confidence Index**

Inflation, weak dollar and high oil prices have taken their toll on regional economies, as business confidence has dwindled according to the latest survey by HSBC. From a base level of 100 in the first quarter of 2007, the index has fallen to 96.8 in third quarter of 2008. Saudi Arabia, Bahrain and the UAE experienced the biggest decline in the business confidence index. Oman and Kuwait experienced the least change since last year. More than 50% of businesses believe that revaluation of the dollar pegging would have a positive impact on the index.

### **Organizational Culture challenge in a Traditional Society**

Elmusa (1997) presents a profound cultural change in the Arabian Peninsula in *The Middle East Journal*, with particular reference to Saudi Arabia. From the bedouin encampment, tent, mud-house, and camel have yielded to the city, cement house, high-rise building, and all the trappings that modern technology can supply to the Arab society

through the advent of oil wealth. There is an *alliance of religion and politics* as a tradition and culture. The Saudi culture for instance is bereft of background and foreground, as if having descended from the heavens on a society that was not culturally prepared to receive it. The oil wealth and technology have also had a spoiling effect on the once desert-hardened Arabs, rendering them soft and unwilling to perform demanding work. According to Albers (1989) states that the culture in most entities can be summarized in a nutshell as Technocrats in a Traditional Society where etiquette takes precedence over efficiency, social imperative over economic rationality. Furthermore, Punctuality is something neither to praise nor to frown upon. Elmusa (1997) also states that some of them do not engage in deliberate planning. If they do not actually worry that such planning is counterproductive, they fear it may tempt fate. According to Jreisat (1997), Arab leaders vacillate between incremental changes and radical changes and fall sometimes in the *extremes of laissez-faire*.

However, based on field exposure, the struggle between modernity and tradition can be expected to drift apart and new patterns of culture have indeed started to evolve. Furthermore, according to Handy *et al*, (2008a) historically, Gulf businesses have faced a serious shortage of indigenous workers, stemming from shortcomings in educational curricula, and high expectations among indigenous workers about pay and conditions. As such, the vast majority of indigenous entrants to the labour force continue to seek employment in the public sector. This typical Arab characteristic is a bottleneck in terms of human resources constraint. The ready supply of *expatriate workforce* is therefore *critical to the business model of the GCC's economies*.

### **Strategic challenge in saving the EU-GCC trade pact**

A successful Free Trade Agreement (FTA) has wide ranging implications. The GCC is the EU's sixth largest export market and the EU is the GCC's first trading partner.

Koch (2008) states that many pundits often criticize that the EU and GCC have been negotiating a FTA for almost 20 years to date, without result. The secretary general of

GCC has threatened to pull out of this long negotiation over an FTA. While the EU refers to clauses dealing with democracy and human rights in the treaty, the GCC view as interference in their domestic affairs and indirect criticisms in their ruling systems (Koch, 2008). The inability to conclude has today become a symbol of an EU-GCC relationship that is failing to live up to expectations in spite of geographical proximity and many common political, economic and strategic interests. GCC leaders should understand that it is a statute in the EU governance clauses and EU cannot adopt different standards to the GCC than those it would in the case of other FTAs. While the EU is preoccupied with the Irish 'no' for the Lisbon Treaty, it should not lose sight of the medium to long term damage for relations with the GCC states if the FTA negotiations are allowed to fail.

### **Business challenge due to weak Arbitration in oil & gas sector**

Traditionally, international commercial arbitration and particularly arbitration in the oil and gas has been beset with many problems. They are mainly cultural, legal, institutional, and didactic annotations. Despite recent positive response to the global movement towards modernization and internationalization of arbitration, there still persist many difficulties in certain countries, which merit special consideration.

According to Angell (2006), the legal systems in this area have a complicated and rich shared history. One starts with the legal developments reflected in the Old Testament, culminating in the directives revealed to the Prophet Muhammad set forth in the Quran, which laid the foundation for the great Arabic jurisprudence that developed through seven or eight centuries after the death of the Prophet. Thereafter came the strong influence of Ottoman legal scholarship and practice, followed in the nineteenth century by the introduction from Europe of the Napoleonic Code into Egypt. As other Arab legal structures have been developing during the twentieth century, the Egyptian influence has been very strong, although the British and other European colonial powers also had some influence.

It is noteworthy to mention that the *recent transformation of the legal systems in all six countries* reflecting the various strands of this historical tradition was a by-product of the post World War II nationalistic and independence movements combined with the discovery and exploitation of oil and its generation of substantial revenues and two decades of very rapid economic growth.

Except for the very important oilfield supply and service business sector, *the world of oil and gas in the Gulf countries exists to a large extent outside the ordinary structures of business and law*. It is largely conducted outside the private sector by the central governments through their ministries of petroleum or other instrumentalities. Production and operating companies and related ancillary activities are largely owned or controlled by the governments. *International economic and political factors and domestic policies and needs predominate with laws and legal process, apart from contractual relationships, in the background*. Furthermore, contracting may be restricted by status to national citizens and companies (Angell, 2006).

During a conference in UAE (2006) by the Saudi Arbitration Group, reports suggest GCC will be investing in the range of \$200 billion, which Saudi Arabia feels is a large sum to invest in the oil & gas sector. Al Hamili (2006) has stated that "It is critical that we (GCC) are able to dialogue and discuss in a *balanced, pragmatic and realistic way*. If we can meet the challenges in this regard to the issues before us today it will be to the benefit of us all."

Similarly, during the GCC Transport and Logistics Conference (2008) in Doha, it was reported that the GCC States are actively seeking the proper means to *enforce dispute resolution policies and procedures* and to finding alternative ways to control trade conflicts, which includes assessing the arbitration clause, and procedures, and related jurisdictional authorities.

### **Oil Investment challenge**

According to Handy *et al.* (2008b), a significant factor influencing the economics of upstream projects is the rapid run up in costs. Projects currently underway or announced have seen their costs revised sharply upwards reflecting *rising prices for rigs, pipelines, storage facilities, and for skilled human resources.*

According to Cambridge Energy Research Associates, upstream costs have more than doubled since 2000, with 76% of the increase occurring in the last three years. At the same time available oil resources are increasingly found in less accessible locations, such as deep offshore or in oil sands, which are inherently more costly to extract. Overall the marginal cost of finding and developing the most expensive barrel of oil has more than tripled to an estimated \$75-85/b. The increasing costs, combined with uncertainties on likely returns to necessarily large capital investments, are making oil project economics less attractive with potentially adverse implications for capacity expansions.

World Oil Outlook (2008), an OPEC report, states that with regard to the tremendous increase in upstream costs over the past few years this is clearly a major issue, as reflected in the *IHS/CERA Upstream Capital Cost Index*, which has costs in this industry segment doubling over the period from 2003 to mid-2008. Whether this cost issue is cyclical, structural, or a bit of both, it needs to be monitored as it is a significant challenge for all those investing in the oil industry.

According to Shouler (2008), all the GCC states are concerned about *excessive dependence on upstream hydrocarbons.* Each has sought to *expand capacity in downstream industries* as well as financial services and tourism.

### **Business challenge due to lack of very high Corporate Governance**

Watkins (2007), Whistleblower in the Enron scandal, remarks that the UAE is very aware that good governance attracts capital and is moving towards a *'comply' or 'explain'* regime. According to Watkins (2007), external regulation does not necessarily guarantee



that white collar crime will not occur in a company. Collapse of Enron happened in spite of Enron having enough corporate governance checks. Enron's downfall was a result of the company leadership failing to stand behind the controls and value of the Internal Audit department. Arguably, the Chairman of Steering Committee of the governance & oversight within the UN, King (2007), stated that America's '*mindless compliance*' with tough corporate governance laws has caused more damage than it tries to prevent, by forcing some entities to seek locations offering more relaxed laws, like tax haven countries.

Ditcham (2007), states that the collapse of Enron in 2001 has brought Corporate Governance into the spotlight with many of the UAE's business leaders highlighting the possibility of at least one major failure in Dubai this decade. The entities face some tough choices as to how it should shape its future corporate regulatory framework, as presented below:

- ❑ *Should it introduce SOX Act of 2002?*
- ❑ *Should it rely on a basic set of guidelines and depend on entities to set and abide by their own Corporate Values?*

Ditcham (2007), reports that several audit heads of companies like Emirates Airlines, HSBC, Majid Al Futtaim, Dubai Holding have stated that many listed companies in the UAE adhere to very high standards of Corporate Governance, but *this policy comes from within the organization*. However, as yet there are no external pressures forcing on entities in GCC. Experts in GCC however agreed that a basic legal framework is needed, while highlighting the disadvantages of 'over regulation' in the American companies. They however agreed that existing environment of rapid business growth and lagging internal audit controls in UAE make the emirates ripe for *a significant control-driven failure to occur within 2010*.

#### 4.4 Conclusion

Based on the review of the GCC's business environment and in particular the hydrocarbon sector, we realize that there are *endogenous and exogenous factors* (OECD, 2002; Pearl, 2000) triggering risks and challenges to an entity (COSO, 2004) in its business environment.

A panorama of regional and international voices on the Middle East oil (Jreisat, 1997; Noreg, 2002; Val erie *et al*, 2006, Doran, 1977; Odel, 1979; Yorke, 1986, Vo, 1994; Quandt, 1981; Peterson, 1983) can be heard while discussing the *oil quandary* (Margonelli, 2007, Stone, 1977; Hartshorn, 1993) and the political myth behind the oil & gas related issues and economic folklore on the price (Claes, 2001; Hanneson 1998; Huettner, 2000) of a strategic commodity (Bromley, 1991; Heiss, 1997). The fear of running out of oil has been a continuous driving force for UK and US (Mo si, 2001; Noreg, 2002), providing a rationale for seeking privileged positions with the NOCs and denying access to rival powers. Securing oil interests by establishing political, commercial and military ties has had a historical precedence by countries, especially like the UK and US in the Middle East, have manifested till date in setting the tone of the contemporary issues and fundamental characteristics of the Oil Titans of the Middle East (Sampson, 1975; Bromley, 1991; Jreisat, 1997; Kemp et al, 1997; Noreg, 2002; Val erie et al, 2006; Hartshorn, 1993).

One of the contentious parameters is the R/P ratio as it depends largely on the geologic, technological, economic and political limitations (Feygin et al, 2004; Campbell, 2007) and the National Depletion Policies (Handy et al, 2008b; Bromley, 1991) of the GCC oil companies. However, the hydrocarbon rich countries of the GCC are of enormous strategic importance due to their overwhelming importance in the global supply of fossil energy. Accidents of geology have left this region with abundance of oil and gas reserves and with comparatively low production cost. Therefore, Middle Eastern oil remains of vital political and economic importance to both American and other world powers. Many studies have concluded that GCC's importance is even bound to increase in the 21st century.

The GCC's *economic fundamentals* (massive energy reserves, rapid population growth, financially sound public sectors with long-term capital expenditure programmes) are sound and enjoy an economic boom. Economic growth is the increase in real GDP per capita over time. GCC's economic growth is contributed by the *petrodollar monetization* which is a key driver of fresh liquidity in the GCC banking system/economy. Although GCC countries are trying to reduce their dependence on the oil economy (through their Structural Reforms) but it always revolves around their rich hydrocarbon resources. Oil and gas accounts for about a third of the GCC's GDP, three-quarters of GCC government revenues and three-quarters of exports and this dominance naturally makes the economies of the GCC relatively synchronized. However, many analysts state that *inflation has taken some of the sheen off the economic boom* scenario in the GCC.

It is a well acknowledged practice that Government can impact the economy primarily through two methods: Monetary policy and Fiscal policy. Some economists argue that monetary policy is a better tool than fiscal policy because fiscal policy makers are often slow in recognizing and responding to events that cause economic destabilization like recessions and excessive inflation. According to Becker (2002), *Fiscal policy* is the use of (a) *government spending* and (b) *taxes* to influence economic activity. The Government uses fiscal policy in times of recession or low economic activity as an essential tool in providing the framework for strong economic growth and working toward full employment. The goal of Fiscal policy is to influence the level of aggregate demand in the economy, in an effort to achieve economic objectives of price stability, full employment and economic growth.

- In the case of GCC, it's a tax haven. The only other fiscal policy tool in the hands of the Government is the effects from 'Changes in Government Spending' and opening up of the GCC Bond (Sukuk) markets.

However GCC Government is spending on infrastructure that has a positive impact on the economy which is magnified by the multiplier effect (Scouller et al, 1999; Becker, 2002).

According to Becker (2002), *Monetary policy* is the use of the money supply to stabilize the economy. The Government/Central Bank uses monetary policy to increase or decrease the '*money supply*' or '*interest rates*' to achieve certain economic goals. The goal of monetary policy is to promote price stability and full employment. Furthermore, monetary policies are described as follows: 'Accommodative' - if the interest rate set by the central monetary authority is intended to create economic growth; 'Neutral' - if it is intended neither to create growth nor combat inflation; 'Tight' - if intended to reduce inflation. GCC Monetary policy is inferred to be *tight* to combat the inflation in various states by some analysts.

- In the case of GCC, the dollar pegs are contributing to the inflationary environment. The weakening of the dollar against other global and emerging market economies is resulting in higher imported inflation.
- Interest rates in the GCC are negative in real terms and even more so after the aggressive US interest rate cuts in Oct '08. The only other monetary policy tool in the hands of the Government is to aim to decrease the Legal Reserve Ratio between the Central bank and Commercial banks, thereby increasing the Liquidity in the money supply.

Fiscal policy and Monetary policy are nevertheless inter dependent as the over-use of one instrument can create an imbalance in the market and trigger the alteration of use in the other instrument. So it is a fine balancing act that has to be executed by the GCC leaders with two main tools in managing the economy virtually absent *traditionally*:

- **Zero tax policy** as GCC is a 'tax haven'; while tax is one of the main components of the fiscal policy.
- **Ineffective control on interest rates** due to GCC's 'currency peg' to the US dollar and interest rates are virtually out of the hands of the GCC Central banks; while interest rates is yet again one of the components of the monetary policy.

Consequently, the main economic tool for GCC governments is fiscal policy. The role of fiscal policy is heightened by the fact that hydrocarbon revenues are accrued to the government, and it is through government spending that this revenue enters into the

economy. Government spending is an important driver of both private consumption and investment.

As this chapter was embarked (in Jul '08), oil prices hovered as high as \$130/b and as I conclude this chapter, oil prices have dropped to less than \$ 50/b. Considering the current scenario of a low oil price (Nov '08), certain reports state that, driven by the fall in crude oil revenues, the GCC economies will be exposed to the fallout from the global economic slowdown in 2009. Some analysts feel that the advantage of the money multiplier effect will decline and the pace of growth in credit in the economy may slow down, attributed to the lower demand in credit due to project delays and cancellations. Some reports forecast that as oil prices having plummeted by nearly 50% in just few weeks, it is also expected to decline in 2009 slashing the 2009 crude export earnings of GCC by at least \$200 Bn. According to MEED reports and GFH reports, the GCC is still expected to report economic growth in 2009 that will outperform the G7 group of industrialized nations, and match its emerging market peers. Furthermore, windfall oil inflows accumulated over the past six years will serve to cushion against a systemic crisis in 2009-10.

The basic philosophical questions over energy are unsettled (Beaudreau, 1998; Verleger, 1993) and OPEC politics and oil prices (Roncaglia, 1985; Philip, 1982; Johnston, 1994; Doran, 1977; Axlerod, 1984) have a special place in economic folklore (Durgin, 2000, Strange, 1988). Oil plays a crucial role in the economic and social development. While the socio-economic and political analysis of energy issues and particularly oil issues and policy options coupled with the current environmental initiatives and new technical specifications of the product slate is in itself a vital and exciting area of study for many researchers, this however is not the focus of this academic work.

Several regional reports advocate four *key risks* in the GCC business environment that include inflation, inadequate infrastructure, property price bubbles and oil price volatility. Property price bubble has not been reviewed in this academic work as it has no direct relevance to this study. While (Boer & Turner, 2007) state the challenges before the GCC

states are substantial in the hydrocarbon sector, but nevertheless, oil revenues will serve as a catalyst to break away from the boom-and-bust cycles that volatile energy markets create. This key risk is the *singular opportunity to diversify* their economies beyond hydrocarbons. Many analysts however also suggest *risks and challenges* also include strategic challenge due to regional geopolitics, widening gap in the skills gap, operational challenge in GCC wide co-operation which also include the co-operation in energy and common currency initiative supposedly to combat inflation, extremes of laissez-faire culture in a traditional society, petroleum law and legislative impediments due to weak arbitration laws, project financing and wider investment challenges in upstream/downstream sectors and the looming threat of a control driven failure due to weak corporate governance.

Exogenous factors that trigger some of the key risks are however at a macroeconomic level, and are primarily policy level matters and a suitable recourse is decided by the Government (Sheikhdoms) depending upon the level of exposure by the individual states and to a greater extent derived from the size and prestige of the state, via appropriate reforms and policies. Noreg, (2002); Aburish (19977 and Hawary (2002) have also acknowledged that energy market is exposed to Terrorist, Security, Economic and Price risks; which are however more meaningful at a macro front. The risks triggered from socio-economic and geo-political issues are exogenous to the oil companies.

Endogenous factors comprise of institutional constraints which include issues of management, technical and operational business processes of the oil companies; and hence are triggers for enterprise risks which are *the best contenders for the application of an Enterprise Risk Management framework*. Val erie *et al* (2006) and Margonelli (2007) have articulated that the Middle East oil titans take pride on their business and technical expertise, rather than on the mixed pressures from the macro front, which are generally left in the hands of the government entities. Business and technology are the endogenous channels of the oil companies and NOCs strive to improve in their performance excellence models to address predominantly their local objectives. Val erie *et al* (2006) and Margonelli (2007) have also established an important characteristic in

their narration of the NOCs regarding the difficulty in the perception of Middle East Oil Company's style of communication as they are not unequivocal; and with a restricted supply of official information present in the public domain.

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