

The Riddle of the Oil Sector

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Oil is the most politicized commodity in the world. Conflict over oil has been a persistent feature, ever since Britain acquired a 51% stake in the Anglo-Persian Oil Company (APOC) in 1914. The price of oil has always been a matter of concern. Its price has and can cause recession in the world economy. Not surprisingly, it is perpetually in the news. 'Oil Rises', 'Oil Slips', 'Oil Prices Plummet', 'Uptick for Oil Prices', 'Bear Market has turned Black Gold into a Worthless Commodity' are common daily headlines in both the print and electronic media. No other commodity is perhaps tracked more closely by the policymakers, traders, hedgers and speculators.

ECONOMIC AND MILITARY IMPORTANCE

The economic and military importance of the oil sector, make it an attractive target for the inter-play of geo-politics and geo-economics. Oil has been and continues to be a political and economic weapon. What emerges from this cocktail is price uncertainty and supply disruptions. This poses an adaptive challenge for countries like India, whose

development paradigm necessitates an increased appetite for energy resulting in unacceptable level of crude oil import dependence. Such dependence directly impacts the Current Account Deficit (CAD), with its resultant impact on the strength of the currency, the Fiscal Deficit and the rate of inflation.

This is the age of the Hydrocarbon Man – a phrase coined by Daniel Yergin the author of the best seller ‘The Prize: The Epic Quest for Oil, Money and Power’. No aspect of modern life is untouched by hydrocarbons and products derived from them. Enslavement to this fossil fuel underlines its great economic importance. As a primary source of energy, it powers the sinews of the economy. Taken together, the share of oil and natural gas in the world economy is about 60%. For India, the corresponding figure is about 40%. It is indispensable as a transportation fuel, whether on land, air or sea. Notwithstanding the brouhaha about electric mobility, the primacy of oil as an auto, shipping and aviation fuel is likely to continue undisturbed for the next decade or so. Plastic products derived from hydrocarbons are ubiquitous. Modern agriculture derives its strength from nitrogenous fertilizer, which use hydrocarbons as feedstock.

VITAL FOR MILITARY OPERATIONS

Oil is necessary for military operations. Military operations, whether on land, sea or air, is inconceivable without oil.

Oil’s military importance was a natural corollary of a decision taken in 1911 by Winston Churchill as First Lord of Admiralty to use oil, instead of coal to propel ships of Royal navy. This ensured the superiority of Britain’s navy over rivals in World War I by enabling the British naval ships to travel at higher speeds, while carrying bigger guns and additional armour. The role of the taxi armada, commandeered by General Joseph Gallieni, who had been called out from retirement to oversee the defence of Paris, in stopping the advance of German troops, 30 km. from Paris is the stuff of legends. The stalemate that followed and what became best known as the Trench Warfare, could only be broken by the introduction of the Tank. Unsurprisingly, after WWI was successfully concluded, Lord

Curzon famously said that the “The Allied cause had floated to victory upon a wave of oil”. The lessons of the war were not lost on the French either. Georges Clemenceau, the French Premier who had reportedly said before the WWI that, “when I want some oil, I’ll find it at my grocer’s”, obtained a share of the Middle East oil pie by swapping the territory of Mosul, for a 25% stake in the Turkish Petroleum Company.

In WWII, the German army used blitzkrieg, the lightning war to good effect. This mode of warfare factored in the limited availability of petroleum and therefore relied on swift, sudden and decisive concentrated action by tanks and motorized artillery, with air support to pulverize the opposition, before petroleum supplies ran out. Obtaining access to oil was the single biggest reason for the German invasion of Russia. Ironically, in February 1943, the German Sixth Army tasked with capturing Stalingrad, ran out of fuel and capitulated. ‘The Germans ran short of oil in their quest for oil’. After the Battle of El Alamein, as Rommel’s army retreated before Montgomery’s forces, Rommel, the master of tank and mobile warfare wrote “The bravest men can do nothing without guns, the guns without plenty of ammunition and neither guns nor ammunition are of much use in mobile warfare unless there are vehicles with sufficient petrol to haul them around.”

IRREGULAR DISPERSION OF OIL RESOURCES

The irregular dispersion of oil reserves makes it an ideal candidate for geo-politics. Twenty-two countries possess more than 90% of the world’s oil reserves. More than two-thirds of the reserves are in the Persian Gulf. Worldwide, it is estimated that 49% of the hydrocarbon reserves are located in 49 giant fields, whereas the remaining 51% are located in more than 30,000 medium and small fields. More worrisome is the fact that a substantial portion of these reserves is located in areas of conflict and instability.

GEO-POLITICS AND GEO-ECONOMICS OF OIL

The stage for the battle for oil, during the post war years of the 20th century and which spilled into the 21st century, was set by President Roosevelt’s statement to a British diplomat in 1944 –“Persian oil...is

yours. We share the oil of Iraq and Kuwait. As for Saudi Arabian oil, it's ours." This Anglo-American Petroleum Agreement effectively divided the oil resources between United States and Britain. With the subsequent decline of Britain, United States' role in the Middle East became preeminent. On 14 February 1945 President Roosevelt met King Ibn Saud on the Great Bitter Lake in the Suez Canal. This was the first time an US President had visited West Asia. The stage was set for 'King Oil' to determine the fate of the people of oil rich nations.

Initially, the western Governments decided to back their oil companies, who in turn exercised direct control over the entire value chain of the oil economy-extraction, refining, distribution and marketing. Their main interest was, maintaining stability in oil prices and protecting friendly oil producing regimes. In 1950, President Truman assured King Saud, that his country was interested in protecting the independence and territorial integrity of Saudi Arabia. Further, the Truman doctrine provides for sending US military aid to countries, which were threatened by Soviet communism. His successor, President Eisenhower reiterated that US troops would be sent to the Middle East to protect them from inimical countries, who have the backing of Soviet Union. President Nixon armed Iran and Saudi Arabia to the teeth, so that they could protect the vital interests of US by maintaining stability in the region.

The second half of the twentieth century saw several oil crisis all emanating from West Asia- Iran crisis (1951), Suez crisis (1956), Six Day War (1967), Yom Kippur War (1973), Iran crisis (1979-80), Iraq's invasion of Kuwait (1990) and the Gulf War (1991).

The Iran crisis of 1951 began with the nationalization of the Anglo Iranian Oil Company (AIOC) by Mohammed Mossadegh, the democratically elected Prime Minister of Iran. AIOC had been renamed as NIOC in 1935. British employees bid good-bye to the Abadan refinery, the world's largest at that time. Refining operations came to a halt. Meanwhile Britain threatened tanker owners with legal action if they picked up stolen oil. It also embargoed sale of goods to Iran. The Bank of England suspended trade and financial facilities to Iran. This economic warfare caused internal economic distress in Iran. Oil production fell

from 6,60,000 barrel/day(bpd) to 20,000 bpd. Inflation became rampant. Revenue and export earnings shrank drastically. Law and order collapsed. Mossadegh was ousted in a coup in 1953 and replaced by the Shah. This coup was reportedly the handiwork of CIA and the British intelligence agencies.

The Suez Canal crisis was triggered by nationalization of the Suez Canal Company, which was controlled by French and British interests. Israel, Britain and France invaded the Canal area. Saudi Arabia banned export of crude oil to England and France. This had little effect. It was threat of economic sanctions by the United States, which forced the invading forces to withdraw. Britain lost its status as a world power, vacating the space for United States to become the dominant player in the West Asia. The Arab countries once again used oil embargo as a weapon during the Six Day War. However as had happened earlier, it failed to influence either supplies or prices and was soon lifted.

The oil weapon arrived with a bang during the Yom Kippur War. The Organization of Arab Petroleum Exporting Countries (OAPEC) proclaimed an oil embargo. This was preceded by production cuts and increase in oil prices. The price of crude oil went up from \$3/barrel to \$12/barrel, by the time it was lifted. It had many short and long-term effects on global economy and politics. Inflation and recession followed. At the same time exploration was stepped up in difficult areas like the North Sea, the Caspian Sea, Alaska and Siberia. Countries moved to alternative energy sources. Energy efficiency and conservation attained priority. However, this crisis established Saudi Arabia as a swing producer with commensurate increase in its diplomatic and economic clout. With US production peaking in the 1970's, it hammered a settlement with the House of Saud. This agreement has not only stood the test of time, but has defined the contours of US policy in the Middle East. The agreement provided that in lieu of protection against both internal and external threats, Saudi Arabia would ensure adequate supply of crude oil to US and more importantly sell it oil only in dollars. This laid the foundation of petro-dollars and its acceptance of dollar as the reserve currency of the global economy.

A 4% decline in production resulting from the 1979 Iranian crisis led to panic doubling crude oil prices to \$39.50/barrel over a year. The Nixon doctrine had failed to deliver the desired outcomes. It was time to re-jig the strategy. The Carter Doctrine, which mandated use of force to defend US interests in the Persian Gulf region followed – “Let our position be absolutely clear. An attempt by any outside force to gain control of the Persian Gulf will be regarded as an assault on the vital interests of the United States of America and such an assault will be repelled by any means including military force.” President Carter lost the elections for a second term and in October 1981 his successor, President Reagan in the wake of the ongoing Iran Iraq war announced the intent to protect Saudi Arabia by direct US intervention. Many analysts believed that Operation Desert Storm and what has happened in West Asia since then is a natural consequence of the Reagan doctrine. Regarding recent events, there is a view that the war in Syria is over two competing gas pipelines, to provide an alternative source to European markets, currently dependent on Russian gas - one starting in Qatar and the other in Iran. The proposed route of both pipelines runs through Syria. Reportedly, President Assad of Syria did not permit the Qatari pipeline to transit through his country.

After 1980, oil prices have generally moved southwards except for a brief period during the Gulf War. During this period, increased production from North Sea, Alaska, Mexico, Nigeria, Venezuela, Russia and Saudi Arabia upset the demand-supply balance, resulting in the price crashes of 1986 and 1998.

OIL PRICES IN THE 21ST CENTURY

Oil prices rose from \$25/barrel to \$150/ barrel between 2000 and 2008. Demand, especially from emerging economies was on an upswing, while OPEC countries were imposing production cuts. Thereafter, the demand recession caused by the global financial crisis sent oil prices plummeting to about \$40/barrel. However prices soon recovered and remained above \$100/barrel till 2014. The downward cycle re-appeared after June 2014 and prices bottomed out under \$30/barrel in January 2016. This was driven primarily by Saudi Arabia's desire to maintain its market share,

by driving the US shale producers out of the market. Since the cost of following this strategy to the oil exporters was unsustainable, it was only a matter of time before OPEC and Russia, acting in concert decided to cap production. A deal came into force in November 2016. Prices started rising and gained momentum with the announcement of US sanctions against Iran.

RECENT EVENTS AND OPTIONS FOR INDIAN POLICYMAKERS

Besides providing a feeling of déjà vu, nothing illustrates better the role of geo-politics and geo-economics in the oil sector than the recent fluctuations in the price of crude oil. Uncertainty induced by the threat of tough US sanctions on Iran led to prices crossing \$85/barrel. Since oil has a global price, this risked raising pump prices in the US. Having recently lost majority in the House of Representatives, risking further voter ire would have been uppermost in President Trump's mind. This together with pressure from Japan, Korea and India, perhaps led to easing of sanction conditions for a select group of countries. Negative Sentiment having eroded (at least for the time being) the reality of the demand-supply situation kicked in. Prospects of reduced demand coupled with supply increase on account of higher US and OPEC production, sent the crude oil prices plummeting by more than 20% in a matter of weeks. Saudi Arabia, which was looking at both higher market share and price was unable to flex its muscles, more so since it was bogged down by the Kashoggi controversy. The recent agreement by OPEC+ countries to reduce daily production by 1.2 million barrels per day (mbd), has failed to enthuse the market. This has belied the expectations of the producing countries. The importing countries on the other hand have heaved a sigh of relief. Where we go from here, depends on how effective OPEC remains as a cartel. The effectiveness of a cartel to deliver the envisaged outcomes, hinges on its ability to garner a dominant share of the market, pose entry barriers to new entrants and maintain discipline amongst its members. By roping in Russia, the clout of OPEC+ has increased. Price is important entry barrier, particularly for US shale producers. But it is maintaining discipline amongst its members, which may be a cause

of serious concern. Cheating on quotas is not unknown. Qatar recent quitting of OPEC, historical sectarian differences between Iran and Saudi Arabia, which got accentuated by re-imposition of US sanctions, a war ravaged Iraq's reluctance to cut production given its huge dependence on oil revenues and an imploding Venezuela, may pose an existential challenge to this organization, almost five decades after its formation.

The Indian policymakers are faced with a difficult choice. Demand for oil is constantly increasing. Production is declining. Indian policymakers have to factor in the consequences of price fluctuations, over which they have no control. 20 years were lost trying to market the New Exploration Licensing Policy (NELP). Introduced in 1997, it has not resulted in any additional crude oil production. The initial promise of gas production has been belied. Out of the 254 blocks for which Production Sharing Contracts (PSCs) were signed under the NELP regime, more than two-third has been relinquished. Only one block is producing gas and that too in much lower quantities than what was envisaged. On the contrary, it has aggravated the perception amongst the oil majors, that India is a difficult area to carry out exploration. Such perception is music to the ears of crude oil exporters to India. Efforts to change this perception can be made by early monetization existing discoveries. Concerted efforts also have to be made to make the recently bid out rounds under the Discovered Small Fields' Policy and Hydrocarbon Exploration and Licensing Policy, a success in a specified time frame. This can best be achieved by facilitating and expediting requisite clearances for early start of exploration activities. To arrest the declining production from existing fields, state of the art practices and technology to increase recovery from producing fields has to be prioritized. Since such technology is largely available with the Independent Oil Companies (IOCs), while the majority of the Indian licensed and leased acreage is with the National Oil Companies (NOCs), a contractual system to oversee their marriage has to be devised, for the overall benefit of the country.

Demand management for petroleum products is an imperative. This has the potential of yielding dividends in a short period of time. In a country, where power plants are running at sub-optimal PLFs, captive

power generation on liquid fuels is a luxury, which needs to be dispensed with. Captive power generation makes Indian industry non-competitive. There is an old saying that “No power is more expensive than no power.” It is ironical that under utilized generation capacity co-exists with shortage of power, as evidenced in power cuts, euphemistically called load shedding. Remedy lies in improving the governance of electricity distribution companies. Reduction of line losses is a compulsion. A combination of political will and determined administrative action can significantly reduce line losses. Promoting public transport, incentivizing electric mobility, increasing the proportion of goods transported over waterways and railways, solarization of agriculture pumping sets are examples of some other measures, which have significant potential to reduce the demand of petroleum products. These need to be the focus of policymakers.

India needs to rapidly transit towards a full-fledged natural gas economy. Not only is it a cleaner fuel, it is also believed that India's gas endowments are superior to crude oil. Air pollution in major cities has reached hazardous levels. Use of natural gas for transportation and to replace liquid fuels for captive power generation, can be important pollution mitigation measures. A gas economy stands on three A's-availability, accessibility and affordability. Minimal uncertainty in supply; nationwide gas infrastructure of pipelines and Re-gasification of Liquefied Natural Gas (LNG) Terminals, i.e., on both the east and west coast; and, availability of gas at a price at which it makes economic sense to the user are the pre-requisites for the evolution of a vibrant gas economy. Any economic analysis will necessarily have to factor in the externalities associated with natural gas usage. World over, the biggest consumers of natural gas are power generating plants. Improving the Plant Load Factor of India's stranded gas based generating capacity and using gas power plants not only to replace liquid fuel based captive power generation but also to cater to the intermittency, inherent in solar power generation, provides an opportunity to achieve this objective. The proposed gas exchange will have to be an integral part of this ambitious plan.

The other idea mooted by the Niti Aayog is to develop a Methanol economy, to reduce import of crude oil and Liquefied Petroleum Gas (LPG). Methanol can be blended with gasoline while Di-methyl Ether (DME), is a clean alternative to diesel and can be blended with LPG. Methanol and DME can be produced both from coal and natural gas. The five main major domestic producers of methanol use LNG as feedstock. They are operating at low capacity, since they cannot compete with cheaper imports from countries where natural gas is in abundance. Taking a cue from China, which is the world's largest producer of methanol and DME, the proposal to set up a coal based integrated complex to produce power, methanol and fertilizer deserves serious consideration. China produces 70% of its methanol from coal. In 2016, China blended 21 million metric ton of methanol with gasoline. The other alternative proposed, which deserves attention is to put up a methanol production plant in Iran or Qatar, with natural gas as feedstock. The example of Oman India fertilizer plant at Sur in Oman is worthy of emulation.

CONCLUSION

Oil markets will continue to remain volatile. Volatility is largely induced by geo-political events and geo-economics. Volatility and speculation are two sides of the same coin. Price uncertainty in the world of oil is a certainty. The production cuts, agreed to in the last OPEC meeting, kick-in from January 2019. What a desperate Iran, if driven to the wall may do, especially to the transit of oil through the Straits of Hormuz, is a risk that needs to be factored into the calculations of planners. While barrels of crude oil may be available to cater to the burgeoning demand of the Indian market, however its price is likely to remain unpredictable and uncertain.

India with its huge import dependence is particularly vulnerable. Countries like Saudi Arabia exploit it by charging an Asian premium. Acting alone it has little clout in the international market. The effort to form an organization of oil importing countries needs to be intensified. Simultaneously, India has to forge strategic alliances with oil exporting nations. Investing in their upstream assets and encouraging Foreign

Direct Investment from these countries are but two examples of such co-operation.

Energy security comes from reduced import dependence. Overseas assets do not add to energy security. Oil has to be produced within the country. The thing that gets rewarded gets done. Economic problems are best resolved through economic measures. Attempt to address them through regulatory measures has limited potential for success, besides yielding sub-optimal results. The right incentives have to be in place for boosting domestic production. Revenue considerations have to be subordinated to the paramount requirement of enhanced production. The view that import lobbies have been influencing prospective bidders, by creating a perception of poor geological prospectivity of the county's sedimentary basins has to be dispelled by all means possible.

In light of what the country needs, it would be apt to conclude with the words of Wallace Everett Pratt, the world famous geologist: "Unless men can believe that there is more oil to be discovered, they will not drill for oil....where oil is first found, is in the final analysis is the minds of men. The undiscovered fields exist only as an idea in the minds of some oil finders. When no man any longer believes more oil is to be found, no more oil will be discovered but so long as a single finder remains with a mental vision of new fields to cherish, just so long new fields will continue to be discovered."