When Petroleum-centric Economies Fail,
A Financial Tsunami Hits Kerala
Oil at the intersection of geo-politics
and the global economy

By

G. Vijaya Raghavan

(President of VMA Consultants Pvt. Ltd.)

V. S. M. Nair

(Director of VMA Consultants Pvt. Ltd)

Hari Nair

(Consultant for VMA Consultants Pvt. Ltd)

(This essay was written in early 2016. Although the basic premises are intact, some of the data given in the essay may be marginally at variance with the current situation. The views expressed in the essay are the views of the authors)

Global dependence on Petroleum

Petroleum has been the main source of energy for transportation (road, air, rail and water), heating, lighting and industrial power. Petroleum derivatives are the foundation for the plastic and fertilizer industries. The world has been hooked on oil for the last one century.

Today, the world is drowning in oil. The unrelenting oversupply of crude oil has caused a steep fall in oil prices from $110 per barrel to $27 per barrel, losing up to 75 % of its value within less than 20 months. Never in the past has the price fallen as much and as quickly.

Global demand for oil has been falling largely due to the slowing down of the economies of China (the world's second largest guzzler of oil), Brazil, and Europe. The major oil-producing countries are in the Gulf − Saudi Arabia, United Arab Emirates (UAE), Kuwait, Bahrain, Iraq, Oman and Qatar which together produce a huge chunk of the global output. Conventional economics would have dictated that these countries would curtail supply so that oil price is protected. But these countries have chosen to pump at full tilt.

Why? Because there are geopolitical factors at play - these countries want to protect their market share and discourage the entry of new suppliers.

USA, the world's largest importer of oil, recently became a net exporter within a short period with its shale oil (oil produced from oil shale rock fragments) and natural gas. Iran, in fact, was the most immediate cause of the bearishness. Thanks to the lifting of the sanctions on Iran, the country is going to make available about 3.5mln. barrels per day to the global market.

To a certain extent, the strategy of Saudi Arabia (which is providing the leadership to the oil-producing nations) appears to have worked. Shale oil boom was spinning into reverse in the US in the second half of 2015. Shale oil and Natural gas industries are sustainable only if the price of crude oil remains at around $50 a barrel. Some of the

Shale oil explorers are likely to be decimated. Of course, this downward trend could reverse if the technologies used in shale oil extraction leap ahead making the process competitive in terms of cost and, hence, be priced lower.

In any case, this strategy of the petroleum producers in the medium-term and long-term can actually harm them more than others. Oversupply and, hence, low prices can persist indefinitely.

The current fall in oil prices threatens to undermine the economies of major oil producing countries that depend so heavily on oil revenue. The region has a scarcity of resources other than oil. Oil prices ($ per barrel) needed to balance the budgets of oil-producing nations vary from country to country: Iran - $ 131, Nigeria - $ 123, Russia - $ 105, Saudi Arabia - $ 104, Iraq - $ 101, UAE - $ 81, Kuwait - $ 78 and Qatar - $ 77.

In these countries, falling oil prices and, hence, oil revenue will lead to Government budget deficits which would mean higher taxes or Government spending cuts or both. These setbacks can create economic recession, devaluation of currencies and profound socio-political shake up.

The IMF has issued a warning that Saudi Arabia, one of the most powerful economies in the world, may run out of financial assets (i.e. become bankrupt) in 5 years time, if the current spending policies continue. The IMF expects Saudi Arabia's budget deficit to be about 19 % of GDP in 2016 from 3 % in 2014. Saudi Arabia currently has $ 655 billion in foreign reserves, but the cash is disappearing quickly.

Saudi Arabia is in the process of reducing unnecessary expenditure and putting on hold, some major infrastructure projects.

Saudi population, which is accustomed to one of the highest standards of living in the world, is increasingly growing restless under the new economic restrictions. Economic analysts believe that with a fall in social spending and reduction in subsidies, comes the risk of rising domestic social turmoil.

The IMF warns that Bahrain and Oman are also at the risk of exhausting their financial assets by 2020.

Nigeria, which attracted a large number of expatriates from Kerala in the past, isn facing the prospects of economic collapse and political turmoil. Domestic oil producers with heavy borrowings are currently struggling to pay the interest on their loans. This can create a banking crisis; some banks may even collapse.

Fossil-fuel industry heading the way of the Dinosaur

For decades, unconventional energy technologies have failed to catch up with expectations. It seemed as if nothing could end our dependence on oil and coal. This compulsion gives rise to two dangerous consequences: Too much dependence on the Middle East (a region beset with economic, social and political instability, ever more than before) and the long-term impact on global climate - which is, by far, the biggest threat humanity faces.

The world is witnessing a revolution on multiple fronts. Renewable energy is at the forefront of changes sweeping across the world, registering some of the most remarkable advances in solar, wind power and geothermal. Solar and other technologies are no longer more expensive than traditional fossil fuel; in many areas, they are even cheaper.

Shale oil

The big shock to the energy industry, especially to the petroleum industry controlled by Middle East players, came with fracking, a new set of technologies for extracting more hydrocarbons from the ground. Burning fracked gas generates lot less green house emissions than burning coal. This new source dramatically reduced US’s dependence on foreign oil, and made the US a net exporter. The oil production levels in the US (the largest consumer of oil in the world) were at their highest in almost 30 years. This has been one of the main drivers lowering oil prices globally.

Solar and wind

The next shock to the energy sector will come from clean energy. Solar and wind are now advancing on exponential curves. With wind turbines and solar panels, we will ensure that millions of tonnes of climate-damaging carbon emissions are avoided.

The cost of installing solar panels has been falling significantly. Average global price of installing solar panels in 1997 was $ 76.67 a watt; the cost plummeted to 60 cents a watt in 2015. The fall in the cost is due to the reduction in the costs of processing and of polysilicon and the improvement in conversion efficiencies. Even without subsidies, the payback period for installations in households will be 4 years by 2022. Solar will be the main source of energy as soon as 2050. This means that sun will provide a major share of the world's future energy mix.

The speed at which a solar panel project could be launched is another compelling case for it. A 4.99 MW solar farm - 18,860 solar panels - can be commissioned within 3 months.

Scotland is planning to be European Union's first fully renewable city-nation by 2030. In 2015, wind energy generated enough power to meet the electricity needs of 97% of the Scottish households.

Atomic fusion

Nuclear fusion power offers the prospects of an almost inexhaustible source of energy for future generations. Vigorous research efforts are ongoing in several countries to beat the tough scientific and engineering challenges.

Fusion reaction is all about "*how to produce clear energy by mimicking the sun's source of power*".

"... An energy source so cheap and clean and plentiful that it would create an inflection point in human history. ... Fusion could mean the end of fossil fuels. It would

be the greatest antidote to climate change that the human race could reasonably ask for. Saving the world: that is the end game." (TIME magazine – Nov 2, 2015)

The Energy Industry – An enigma wrapped in a mystery?

Given the highly dynamic, volatile nature of the energy markets, making any kind of prediction with certainty is nearly impossible. Nobody knows for sure how or when the oil market will rebalance.

The public at large tends to rejoice at the drastic fall in the oil prices. Both individual consumers and importing nations end up with surplus funds at their disposal. (For India, which meets 70% of its requirements through imports, the falling oil prices could well be manna from heaven. Every reduction of $ 1 per barrel means Rs. 90,000 million reduction on our import bills, easing pressure on fiscal balance). Consumers spend the surplus income on additional consumption that necessitates increased production to meet the higher demand. This process does stimulate economic growth. But there is a flip side to this phenomenon in the context of oil prices:

- Lower oil prices will provide a boost to demand growth but could undercut the drive for cleaner and more efficient energy because such energy becomes comparatively more expensive.
- Lower prices need not necessarily be good for energy security. Concentration of supply may remain on Middle East oil, which will get back to 1970s levels. Non-Middle East sources may find it difficult to sustain production at low prices.
- If low prices persist, investments in new supply will be cut back. Many leading oil companies have announced their plans to do so. Unless theheavily oversupplied oil market returns to balance and high levels of stockstart to fall, oil prices can not rise to levels necessary to supportinvestments in the high-cost resources that must be developed to meet therising demand. Supply may fall short of demand and eventually oil pricescould increase sharply, slowing down economic growth!

It could be argued that given their large net foreign assets and low external debt, the region is unlikely to witness a crude price related fall out in the immediate future. The 8 Sovereign Wealth Funds of UAE add up to $ 1.22 trillion (about 1.4 times India's GDP). Other major Wealth Funds include $ 638 billion of Saudi Arabia, $ 592 billion of Kuwait and $ 256 billion of Qatar.

Remittances-driven, consumption-led Kerala economy heading for trouble

Estimates of the number of Non-Resident Keralites (NRKs), those living outside the country vary from 1.6 million to 2 million; over 75% of them live in the Gulf region.

The following observations are offered by UNCTAD in their 2011 study:

- Remittances have played a significant role in Kerala's economy by increasing per capita income and, to that extent, may have contributed in reducing poverty levels.
- Only a small proportion - about 1 % - of Kerala's remittances are linked to investment and discretionary spending; most of it is subsistence-based end usage.
- The increase in per capita consumption, as compared to the national average, has been without a corresponding increase in income.

India receives the largest amount of remittances in the world, close to $ 75 billion. Kerala receives the highest level of remittances among the different States in the country, an estimated Rs. 1,20,000 crores (about $ 18billion). In fact, the actual amount could be higher; when Keralites return home from the Middle East, many bring part of their savings in cash which may not get recorded anywhere.

Remittances which India gets account for 3.4 % of the national GDP whereas remittances the Kerala State receives amount to 35 % of the State GDP. Only Tajikistan, a small Central Asian country, beats Kerala in terms of the share of the remittances of its

migrant workers to the GDP – for them, it's 47 %. Remittances are close to double the Kerala State's tax and non-tax revenue. Kerala has the highest per capita consumption in the country for the widest range of products. Malayalees are spending as if there is no tomorrow. This almost maniacal and ostentatious spending on consumer goods and services as well as investment in real estate and housing have been the main drivers of the State economy, not the manufacturing or the agricultural sector. For those who spend the remittances, they are unearned and easy money, which the resident Keralites splurge.

Now the questions are:

1. When will Malayalees begin to imagine the possibility of the huge inflow of remittances from the Middle East drying up?
2. How will they cope with a financial crisis of unimaginable proportions which most of a generation of Malayalees cannot even comprehend?

Suddenly, a huge quantum of money, currently frenetically flitting about across the economy, will be sucked out of the system and several economic activities will ground to a halt, throwing thousands out of their jobs.

Not that it is going to happen overnight; it could happen in slow motion, may be, over a decade or so. The telltale signs we should be looking out for include: those unfinished apartment complexes reaching out to the sky as if invoking divine intervention; streets strewn with the 'carcasses' of bakeries (Per unit of population or geographical area, Kerala has the largest number of bakeries on the planet!); multi-specialty hospitals offering deep discounts because they can no longer persuade Malayalees to visit as frequently and spend as much as they used to; Big Bazaar, Reliance Fresh and other shopping malls in Kerala switching off their ACs and the last light bulbs; thousands of migrant labourers milling around in the major railway stations of the State trying to catch trains back to their homes in the northern States…!

What are the thousands upon thousands of Malayalees returning from the Middle East going to do to make a living? One obvious answer is to re-discover the art of farming, which they abandoned a few decades ago. They can take to organic farming to grow the widest varieties of vegetables, fruits and flowers for the national and global market. After all, we have a bounty of fertile, naturally irrigated, fallow lands to grow whatever we want. We should be inviting companies like PepsiCo to grow fruits (Pineapple?) and vegetables on contract farming as they do in States like Punjab.

Of course, thousands of sustainable economic activities have to be identified for the participation of those who come back. These returnees will naturally have the widest range of skill sets and professional backgrounds. Even mapping their skill sets into appropriate categories to match the available opportunities will be a difficult task. So, it is going to be a massive effort involving government agencies, NGOs, industry associations, academicians etc. A high-level, professional group with the authority and the resources has to be entrusted with this task, which will also cover skill development in collaboration with the National Skill Development Agency.

Are there other countries which encourage immigrants and, if so, what skill sets / professional backgrounds are they looking for? After all, many countries in the developed world are facing the irreversible challenge of ageing and shortage of skilled people. Organizations like the Kerala Academy for Skills Excellence (KASE) have a major role to play in designing an action plan to meet the brewing crisis.

It is not too early to embark on this initiative.