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POST-SANCTION IRAN AND ITS "GAME CHANGER" EFFECT IN ENERGY MARKET

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I. Iran's economic overview

The economy of Iran is mainly characterized by the hydrocarbon sector, agriculture and service sectors, country's economic activity still depending on oil revenues. Iran ranks the world's 2nd largest natural gas reserves and shares 9.3% among overall proved oil reserves of the world (5, p.12). According to the World Bank, Iran's Gross Domestic Product (GDP) was estimated $439.5 billion in 2017 (26).

For long term, it is expected that Iran will reintegrate with global market players in trade, banking, investment and other service sectors. However, Iran's current sanction challenges still make several difficulties for overall economic development. This challenge seems much more sharp in energy sector that has direct impacts on country's economic growth. Going forward, Iran's energy wealth and geostrategic location – a bridge between East and West, allows the country to export energy resources to European and Asian markets. From this point of view, the purpose of this article is to answer the question: to what extent Iran might emerge as a major game changer actor after the lifting of sanctions? To that end, this paper defines Iran's potential reserves and market routes and analyses Iran's game changer effects in the energy market in post-sanction period, and predicts possible scenarios for country's energy policy in the future.

II. Post-Sanction Iran and current situation

2.1 Potential Reserves

Most prominent geologists consider the Middle East region, especially Iran possess major oil reserves of the world. However, the most important question is not how much potential oil reserves Iran has, rather the question is that will these reserves run 30 or 50 years. Iran also has the 2nd largest gas reserves in the world, has continued to discover significant new reserves. Iran could, therefore, play an important role in the international energy market as a key exporting country, and fulfilment of this role continues to prove challenging as the country faces significant domestic and international political and economic difficulties. Even though the number of proven reserves can be found in prominent journals, Iran NOIC does not explicitly publish an exact number of proven reserves. Therefore, it is known that oil-in-place is approximately 300-400 billion barrels. The oil which can be commercially exploitable currently is 15% (8, p.17).

According to the information of Head of exploration at NIOC claims Iran recently has explored about a big amount of recent oil fields with in-place reserves of approximately, 30 billion barrels. Furthermore, it should be mentioned that 4.7 billion barrels are recoverable (12). Furthermore, a head of exploration at NOIC, Seyyed Saleh Hendi argued that Iran explored 128 trillion cubic feet of gas. Hendi also considered that they cannot rely on only Yadavaran and Azadegan which are considered rich fields, but also they should go on exploring new smaller fields. All statistics indicate that Iran's proven oil reserves are approximately, 157 billion barrels which is known the world's third largest (12). Moreover, gas reserves are estimated 29.6 trillion cubic metres by getting 2nd largest place after Russia (1, p.278).

From this point of view, Iran could restore its economic relations with neighbours as well other international actors after lifting sanctions which is described Iran's 2025 National Vision Document and "Economic Resistence" presented by Ayatollah Ali Khamenei (24, p.10). For future, Iran could benefit several competitive opportunities that can increase its role as natural gas exporter, first to neighbouring countries via pipelines, as well as more far locations via LNG (18, p.5).

Map 1. Iran's oil and gas fields

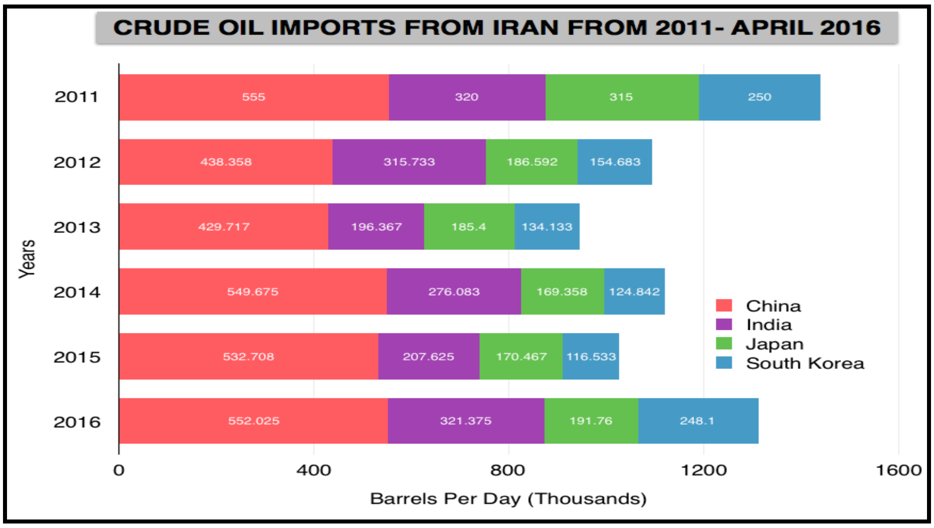
Source: IEA

2.2 Potential Market Routes

As known, the US-imposed sanctions strongly affected Iran's potential market routes and prevented market diversification of Iranian oil and gas export (6, p.244) Despite this, Iran still has plenty opportunities to create and explore new oil and gas projects by delivering to several various directions as Asian and European markets:

Asian markets are mainly based on approximately 75% of Iran's crude oil exports. According to the Reuters's report, Iran's export to 4 major Asian oil customers – **China, India, Japan and South Korea** were 47.1% higher than 2015 (22). Before nuclear-related sanctions affected in 2011, China was the largest importer of crude oil from Iran, followed by India, Japan, and South Korea. After the lifting of sanctions in January 2016, China and India maintained two leading importer position, whereas, South Korea surpassed Japan as the third largest importer (20). Even though China attempted to restore Iran's crude oil imports before sanctions, it seemed reluctant to exceed level because of risks regarding sanctions. South Korea and India also did not seem much reluctant; by contrast, they steadily increased purchase of Iranian crude oil. Japan initially applied restraints against Iran; however, it also has intended to boost oil import from Iran. It seems that Iran emerges a targeted strategy potential Asian market by diversifying market routes and recovering its production level pre-sanction period - Kang Yoo Jin, a Seoul-based commodities analyst said (15).

Figure 1. Asian market for Iranian oil



Source: Middle East Institute, 2016

Even though the EU-Russia energy relations seem beneficial for both sides for many years, Russia's energy hegemony over **European market** increases gas dependence from economic and political point of view. Before EU imposed an embargo on oil imports till 2012, Iran was its 6th largest supplier of petroleum (21).

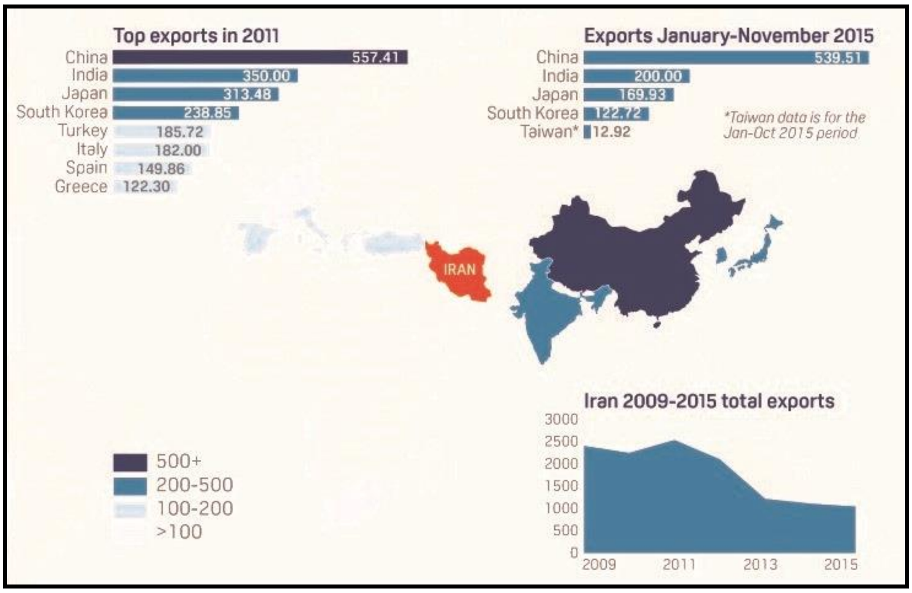
However, Iran has not initiated to export any to the EU yet due to its high domestic gas consumption. Despite of this, Iran still is interesting in promoting oil-gas export to Europe and its neighbours. According to Vassilios Sitaras, a Head of Energy, Trade, Investment Section of Greece Embassy to Azerbaijan, “only Iranian gas could challenge Russian gas in the European market. Even, Iranian gas is much more important than oil for EU market. From this point of view, European Commission would definitely prefer Iranian gas to reduce Russia's dependence in the future” (25).

Obviosly, this cooperation should come from firstly European side. If the EU sets a more modest goal, then Iran could play an important role of the European energy security issues. To that end, initial steps Nabucco project emerged; however, the pipeline was not realized because of financial and political reasons (7, p.61). However, export of Azeri gas to Europe through Turkey, in other words via TANAP and TAP pipelines seem potential export route for Iran. Via TANAP, the pipeline is expected to increase capacity 23 bcm by

2023 and 31 bcm by 2026 (23). Regarding this, export of Iranian and Turkmen gas is still under consideration for additional sources to Europe. Nevertheless, implementation of this process depends on 2 factors: First issue is that Azerbaijan does not have enough gas to make the pipeline a viable source of power; second issue is that Iran's under-investment in even the most basic logistical infrastructure makes difficulties next implications (13).

Iran also plans to export its natural gas to Europe through the territories of Iraq, Syria and the Mediterranean. There are various options and routes for the export of "blue fuel" from Iran to Europe, called "Persian Pipeline". If we approach the issue of gas supplies from Iran to Europe from a technical point of view, then, based on the available reserves of "blue fuel" comparable to the Russian ones, Tehran can supply Europeans with gas in large quantities. Obviously, current leadership of Iran is trying to break out of the economic blockade and dreams of investing from the outside. A powerful tool in EU policy towards Iran could be new technologies needed to increase oil and gas production. Without them, it will be difficult for Tehran to increase the production of hydrocarbon resources, including offshore fields. However, 1st question is whether Europe will want to invest in the economy of Iran?; 2nd is what to do with the Iranian nuclear program? The West has obvious claims to the negotiation process on the Iranian "nuclear dossier." After all, 3rd question is where are the guarantees that Western investments destined for gas projects will not be used for nuclear development? Therefore, a number of experts believe with solving the nuclear Iranian problem it is possible to start implementing projects for the transportation of Iranian gas to Europe. In this case, Tehran's attempts to announce new transportation routes bring Iran closer to the situation when the EU starts substantive negotiations with the Islamic Republic on gas issues.

Map 2. Iranian oil export routes



Source: EIA, Eurostat, OPEC

III. Impacts of "Iran's Great Return" on changing the rules of the game

Any shift in a rule of game affects behaviours of the players in energy affairs. Obviosly, "Iran's Great Return" could make some players as winner or loser in the future.

3.1 Who are the winners?

The **Iranian government** itself, and population would benefit from an increase in oil, gas and petrochemical exports, and of course the gradual foreign investments to energy industry. "Iran's Great Return" could help this country to regain its position alongside Saudi Arabia, Russia, the US, and Iraq. Economically, the lifting of sanctions could give an opportunity to reconnect with the global economic and make up for the lost opportunity. It seems that expectations of the Iranian as well international business community are very high for a long term. Interestingly, preliminary business has already started negotiations with international companies at least 130$ billion since nuclear agreement was adopted in July 2015 (16, p.1).

Given the fact that the ex-government, according to the Council on Foreign Relations, was still very anti-West, this is backed by Ahmadinejad's statement, "our nation is continuing the path of progress and on this path has no significant need for the US" (17, p.27). It is argued that there would have to be internal changes before all the sanctions are fully lifted. Still, a sanction free future would signify billions of dollars and euros pouring into the Iranian economy and energy sector to help exploit the underdeveloped energy resources present in the country. This would usher a change in relations with other countries in the region, particularly S.A. who has enjoyed warm relations with the US, this would change many of the neutral stances the West has had towards Saudi policies in the region. Looking East to China, cooperation with the West would change Iran's future with China since Iran would now have options in terms of markets in which it could sell its oil and gas. Iran could either shift from an Eastern perspective towards the West or further strengthen ties with China and India as well although this is still to be known.

According to Stratfor, with **Turkey**, Iran would have to have further bilateral relations with its neighbor to the west as it would serve as a transit country for Iranian gas entering Europe. Iran also supplies a sizeable piece of Turkey's natural gas demand but further cooperation would be needed to help realize any potential transcontinental projects (2).

3.2 Who are the losers?

Post-sanction period will cause additional Iranian oil exports. Adding more barrel to the already oversupplied global oil market will expand gap between supply and demand. Obviously, this will have direct impact on major oil producer and exporters, like the OPEC states, the US and Russia. In this case, Iran will have 2 option whether to increase exports to Asia or renew export to Europe. Regardless of Iran's choice, its game changer role will have significant impact on producer countries, which we will discuss in this section.

With **S.A.**, Iran's economic, political, and religious rival, any future relationship would depend partially on compromise and future relations with the US. Iran's future oil producing capacity will also challenge Saudi oil in the world market and it is predictable that accession of Iranian oil to the global market would bring prices down affecting major global producers and their economies. Like Mr.Tanchum puts it, “the removal of international sanctions on Iran will be one of the most consequential events for the global energy market in recent history” (19, p.3). It is argued that this would bring Iran in trouble with OPEC and other oil exporting nations but would also give Iran further political power in these international negotiations. Analysists claim that in comparison with S.A.’s oil price, Iran’s lower oil price will weaken S.A.’s export in European and Asian markets. Thus, S.A. will decrease export in the long term which leads to Kuwait will feel as pressed like S.A (4).

In **Russia**, drop in oil prices happened because of Ukraine crisis, and the US and EU sanctions against Moscow. Since oil and gas account 75% of total Russia’s export and more than a half of its budget revenues, changes in oil market significantly influenced the Russian ruble (10). It seems that “Iran’s Great Return” will also negatively affect Russian economy by coming of the new supplier to the market. It is true that Russia seems as a supporter of Iran regarding on Nuclear Talks; however, Russia implements double standards on relations with Iran and S.A. On the one hand, Russia and Iran have been negotiating oil for food swap deal of common interest, on the other hand, Moscow also helps construction of 16 nuclear reactors by signing bilateral pact with S.A. and suggests creation of “oil alliance” between them (7, p.56). The fact indicates that future cooperation between Russia-S.A. or Russia-Iran will happen; however, Russia’s prospect choice will depend on ongoing processes in the Middle East, particularly, “Iran’s Great Return”.

Coming to the **US**, Iran’s re-emergence will also affect this global actor. Though there is ban on the US oil exports and the US is to large extent independent from oil suppliers, Washington is not isolated itself from the global energy market. In this case, drop in oil prices obviously will have impacts on the US’ shale oil and gas production because of require high technology costs. Therefore, Iran’s cheap oil-gas prices will make the US’s production less competitive in the market. Regarding on this, Iran’s prospect re-emergence into energy market will create even great challenge for the US producers (7, p.57). However, interesting point is that unlike small and medium companies, major US ICOs could benefit from new investment opportunities, because of less cost and high profit in the Iranian oil-gas fields.

IV. Possible scenarios on Iran’s game changer role

In post-sanction period, Iran will need IOCs and NOCs in the region to reassess its strategic plans by considering challenges and opportunities in the presented 2 scenarios:

Scenario A: To attract foreign investments, Iran should start from its domestic policy by adopting new reforms

- **Step 1. Changing oil contracts.** Under sanctions industry’s deterioration and the guidance of Rouhani’s predecessor, Mahmoud Ahmadinejad, made it clear to many Iranian leaders that this country could not achieve own potential production without any help. Although there are political challenges on negotiations with foreign partners, Rouhani still attempts to revitalize Iranian energy industry by changing oil contracts (11, p.5). For this reason, Iran has already started discussions its new Iran Petroleum Contract (IPC) model. Although the details of final version are under consideration, the initial draft was clearly designed to address main criticisms of Iran's former the *buyback contract* framework.

- **Step 2. Allowing Joint Ventures.** Since the 1979 Revolution, foreign companies have not been able to participate in the production stage of any Iranian oil field (3, p.104). But under IPC, IOCs can serve as the operators of a block or field during the exploration stage. If oil is discovered and its extraction is deemed economical, then foreign company a joint operating company and a joint venture, which acts as a contractor, to continue operating, developing and producing the field. Regarding on this issue, Tehran hopes that it will get a chance to access the best technology and expertise available with longer and more frequent partnership with IOCs.
- **Step 3. Incentivizing foreign participation.** The Iranian government also should consider challenges regarding on buyback model that endangered IOCs' profits. IOC receives a fixed rate of return, usually 15-17 % based on the sum they initially agreed to invest; whereas, the IPC will replace this rate with more robust mechanism by calculating revenues from oil prices, produced volumes and field's complexity. By implementing this step, Iran not only motivates IOCs to benefit from higher oil prices but also incentivizes them to extract as much oil as they can, potentially exceeding production goals. Furthermore, introduced cost recovery mechanism will allow IOCs to recoup costs equal to as much as 50% of the project's annual revenues, carrying forwards any outstanding costs into the next year (14). Obviously, IOCs will get a flexibility to make adjustments more easily in project's next stages, encouraging field redevelopment and the use of enhanced oil recovery techniques in the process.

Scenario B: Iran's re-entry in the market may challenge old assumptions about the relative profitability of investing in alternative forms of energy

Iran's increasing production, added to Iraq's already growing output, and plus forecasting boost in Libya after political stabilization seem to prolong current cheap oil situation for a long term (9, p.7). There are certain strategies GCC NCC can follow to diminish effects:

- **Leverage opportunities can reduce costs and improve efficiency.** When oil is cheap and global E&P investment in high-cost reservoirs slows down, OFS and EPC providers experience overcapacity and therefore become a lot more open to renegotiating their rates downward (9, p.7). For Middle East NOCs whose reserves are still cheap enough to justify continued investment, focusing on supply chain operations improvements presents a real opportunity to reduce costs substantially without impacting real investment.
- **Cheap oil also means cheap naphtha.** This means that naphtha prices will drop faster than those local gas contracts in the depressed oil market. Furthermore, if Iran re-enters the market with additional gas crackers that is relatively easy, it will put additional price pressure on the combination of products these crackers generate. Considering the country has no LNG export facilities (and could take years to complete one), opportunities to monetize its surplus gas production are reduced to either building new pipelines or cracking its gas into olefins. Iran is already aggressively betting on this latter option to meet the feedstock requirements of the new petrochemical plants on the Western part of the country. Iran's re-entry in the market

will therefore require a second look at the comparative profitability of a naphtha-based versus gas-based petrochemical portfolio, while gas-producing countries in the Gulf may find changes in the comparative profitability of exporting gas as LNG versus transformed into olefins (9, p.8).

- **Cheap crude oil is also good for refiners.** Since cheap naphtha is good for naphtha crackers, cheap crude oil is also good for refiners. This may not lead to many incremental investment opportunities in the Gulf, as several massive capacity-enhancement projects are already under way. Nevertheless, as financially strapped IOCs and independents in other parts of the world seek to raise cash by divesting their refining assets, Middle East NOCs can potentially swoop in to capture attractive M&A opportunities (7, p.8).

V. Conclusion

This paper aimed to define Iran's potential reserves and market routes and analyse Iran's game changer effects post-sanction period, and predict possible scenarios for Iran's energy policy in the future. According findings, the amount of additional Iranian oil and gas will depend on the domestic production, foreign investment and market itself. Additional oil and gas supplies will cause gradual decrease of the oil and gas prices in the short and midterm; however, Iran's return to the energy market probably will change rule of game. Iran's game changer role will have positive impact on the consumer regions like Asian and European markets; whereas, this will reshape competition between Iran and other producer countries, including S.A., Russia and US. To conclude that game change effect will be significantly observed in the Iranian economy itself by accepting new reforms and attracting foreign investments.

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