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The Strategic Impact of Iran's Rising Petroleum Exports After Sanctions

By Anthony H. Cordesman

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[Anthony H. Cordesman](#)¹

The decades since the first major oil embargo in 1973 have shown all too clearly that no one can predict oil and gas prices and petroleum export revenues. This is particularly true when oil supply is so high, key exporters like Iraq and Libya are at war, production is partly driven by the tensions between Iran and its Arab neighbors, new sources of production are coming on line, and the world seems to be headed for a China-driven collapse in the growth of petroleum demand.

There are important new estimates, however, that indicate that Iran is not going to see the kind of windfall from the lifting of sanctions as a result of the [Joint Comprehensive Plan of Action](#) (JCPOA) nuclear agreement and the lifting of sanctions that some expected at the time the agreement was signed.²

Iran's petroleum exports will increase, but they will do so at a time when oil and gas prices are far lower than at the time when sanctions became truly effective, and when they are far lower than most experts predicted at the time the JCPOA was negotiated and signed.

Many of the estimates of Iran's gains also assume that Iran will make major internal economic reforms – reforms for which many in Iran's regime have long recognized the need, but have been unable to actually make. This is a critical issue because most estimates of the gains Iran will get from lifting sanctions are more dependent on the ability to use higher petroleum revenues to catalyze the overall growth of the Iranian economy than on the increase in export revenues per se.

The differences between Iran's security-oriented hardliners and the more moderate figures that emphasize internal stability and economic growth present a further uncertainty, as does the priority given to funding and developing the state sector rather than allowing Iran's private sector and outside investment to benefit. There are many in Iran who do give priority to development and to the private sector as a key element in economic growth, but the Supreme Leader, hard-line politicians and clergy, and key elements of the Islamic Revolutionary Guards Corp and intelligence services give priority to investment in security and military forces.

The rising level of tension and violence in the region, and external factors adds to this level of uncertainty. Iran's rising rivalry with Saudi Arabia is occurring at time when the Organization of the Petroleum Exporting Countries (OPEC) has proven to be extremely weak, and Saudi Arabia has little incentive to cut back on production unless other states like Iran and Russia do so, and the net impact is a serious rise in Saudi Arabia's real export revenues. At the same time, the slow down in China's economic growth and demand for all commodities – including petroleum – now seems likely to last for at least several years, driven in part by rising Chinese costs and the lack of economic growth and demand for imports by other states.

The lifting of sanctions will allow Iran to increase its petroleum exports if the levels of tension between Iran and its Arab Gulf neighbors do not escalate to the point of conflicts that affect the flow of petroleum exports from the Gulf region. At the same time, Iran has limited petroleum export capability and faces serious price pressure because of production by Gulf and other exporters and limited global demand. There are no certainties in making even short-term predictions of the increases Iran can make in petroleum exports, the export revenues it will receive, or the impact on its economy.

There are ways to bound some of these uncertainties. The United States Energy Information Agency (EIA), which is part of the United States Department of Energy, has released several important studies covering different aspects of the potential impact of Iran's future production and exports, and the World Bank and International Monetary Fund (IMF) have issued studies of the potential impact on Iran's economy. Much will still depend on Iran's politics, economic choices, and the level of regional tension and conflict – as well as the export politics and capacity of other states and the level of global demand – but these studies do make Iran's options far clearer.

The Impact on Iranian Exports of Lifting Sanctions

The EIA has issued several studies on the impact that the JCPOA, and lifting of petroleum sanctions, had on Iranian petroleum exports. One such study – issued on January 19, 2016 – focused on Iran alone. It was entitled “[Iran's petroleum production expected to increase as sanctions are lifted](#).”³ It provided both an updated analysis of Iran's current production and a forecast of the range of near-term increases that Iran may be able to make now that petroleum sanctions are lifted.

Iran's Exports During and After the Lifting of Sanctions

These data are summarized in **Figure One** – which shows the history of Iran's production and exports before sanctions, production after sanctions, and estimated production through 2017. The key portions of the EIA analysis supporting the estimates in **Figure One** are:

Sanctions relief will lead to an increase in Iran's oil production and exports, which had been subject to an EU embargo, among other sanctions. Iran's crude oil production has been relatively flat over the past three years while sanctions were in place, averaging 2.8 million barrels per day (b/d) in 2015, representing 9% of total crude oil production from the Organization of the Petroleum Exporting Countries (OPEC). In EIA's January *Short-Term Energy Outlook (STEO)*, which assumed implementation day to occur this quarter, Iran's annual average crude oil production is forecast at 3.1 million b/d in 2016 (10% of projected total OPEC production), and almost 3.6 million b/d in 2017.⁴

Consistent with these forecasts for average annual production, Iran's crude oil production reaches 3.3 million b/d at the end of 2016 and 3.7 million b/d at the end of 2017. EIA estimates a subjective uncertainty range of +/- 250,000 b/d surrounding these year-end projections, with actual outcomes dependent on Iran's ability to mitigate production decline rates, deal with technical challenges, and bring new oil fields into production.

Most of Iran's forecast production growth comes from Iran's preexisting crude oil production capacity that is currently shut in, while the remainder comes from newly developed fields. Iran has a number of new oil fields that Iranian and Chinese companies have been developing over the past several years, which have the potential to add 100,000 b/d to 200,000 b/d of crude oil production capacity by 2017. The STEO forecast also accounts for production declines at Iran's mature oil fields.

... Beyond crude oil, Iran's condensate and natural gas plant liquids (NGPL) production is currently almost 750,000 b/d, of which 75% is condensate and the remainder NGPL. Iran's non-crude liquids production has grown over the past few years. The main buyers of Iran's non-crude liquids have been in countries in Asia, mainly China, and the United Arab Emirates (UAE).

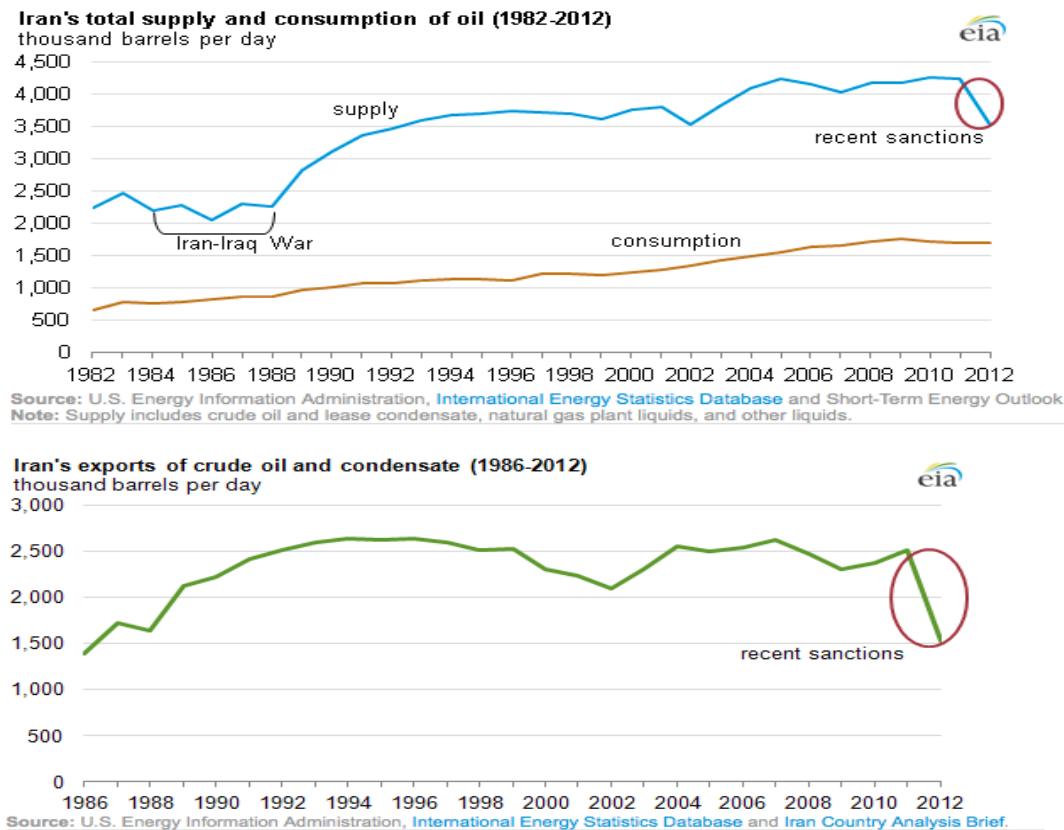
Iran's non-crude liquids production is expected to grow by 150,000 b/d by the end of 2016 and by an additional 100,000 b/d by the end of 2017, as more project phases at the [South Pars natural gas field](#) come online.⁵ More than 80% of Iran's condensate production comes from the South Pars field located offshore in the Persian Gulf, which is Iran's largest nonassociated gas field. Lack of

foreign investment and insufficient financing, stemming from international sanctions, have slowed the development of South Pars. However, some progress has been made in recent years, and sanctions relief is expected to quicken the pace of development of its remaining phases over the next decade.

With Iran's petroleum and other liquid fuels consumption expected to remain flat over the next two years, crude oil and other liquid fuels from the production increase is likely to be sold in export markets. The pace that Iran will ramp up its exports now that sanctions are lifted is uncertain. Iran has a considerable amount of oil stored offshore in tankers (between 30 and 50 million barrels), most of which is condensate, and crude oil stored at onshore facilities. Initial post-sanction increases in Iranian exports will most likely come from storage, while meaningful production increases will occur after some of the storage is cleared.

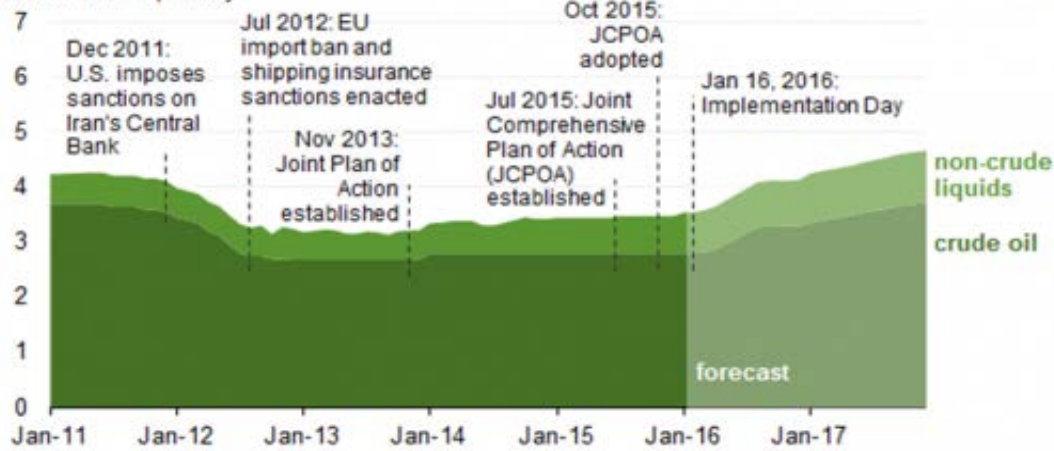
([Iran's petroleum production expected to increase as sanctions are lifted](http://www.eia.gov/todayinenergy/detail.cfm?id=24592), January 19, 2016, <http://www.eia.gov/todayinenergy/detail.cfm?id=24592>)

Figure One: Iranian Past and Probable Production: 2011-2017



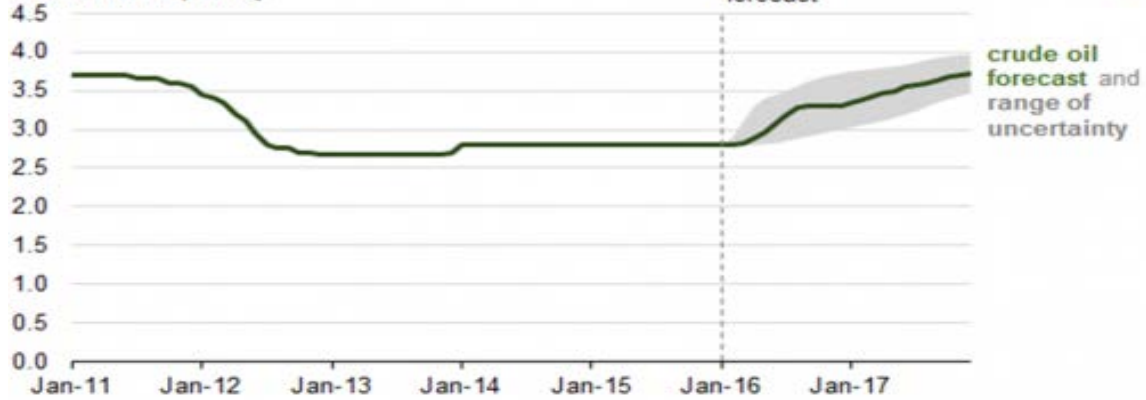
Monthly Iranian petroleum and other liquids production (2011-17)

million barrels per day



Monthly Iranian crude oil production (2011-17)

million barrels per day



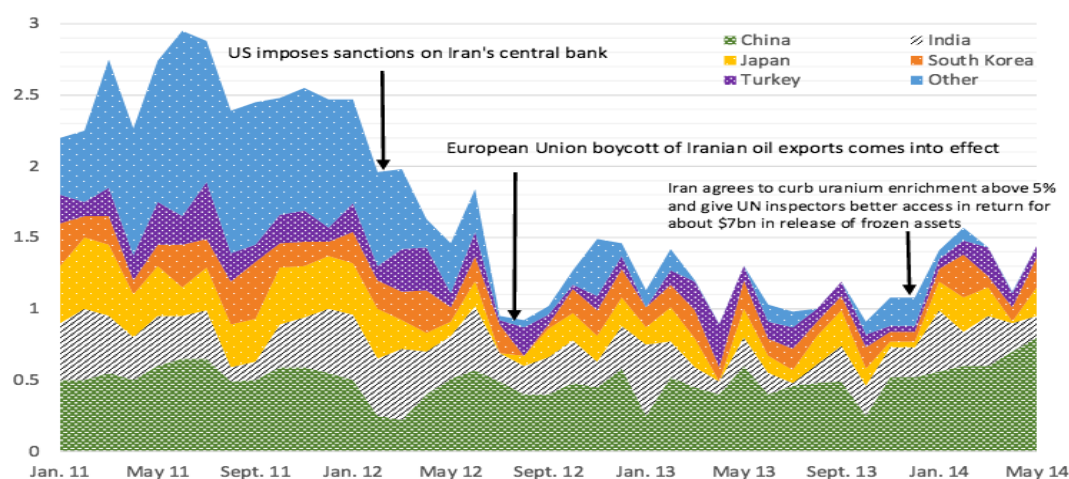
Source: U.S. Energy Information Administration, <https://www.eia.gov/todayinenergy/detail.cfm?id=11011>, May 2013; *Short-Term Energy Outlook*, January 2016; [Iran's petroleum production expected to increase as sanctions are lifted](http://www.eia.gov/todayinenergy/detail.cfm?id=24592), January 19, 2016, <http://www.eia.gov/todayinenergy/detail.cfm?id=24592>; and <http://www.eia.gov/todayinenergy/detail.cfm?id=24592&src=email>.

The Impact of Sanctions on Iran's Flow to Given Customers and Market Share

The EIA drew very similar conclusions in an analysis in *This Week in Petroleum* on January 21, 2016, but added some important data on the impact of sanctions on Iran's market share, and shifts in demand that resulted from sanctions. These data are shown in **Figure Two**, and – along with the previous data on the impact of sanctions in **Figure One** – help illustrate the fact that lifting sanctions involves more than raising export capacity, it also means reestablishing or changing the flow of exports and competing for market share.

Figure Two: The Impact of Sanctions on Iran's Market Share and the Flow of Iranian Exports

Exports of Crude and Condensates by Importing Country During Sanctions (in Millions of barrels)



Impact of Sanctions on Iran's Market Share (in Percentages and Millions of barrels)

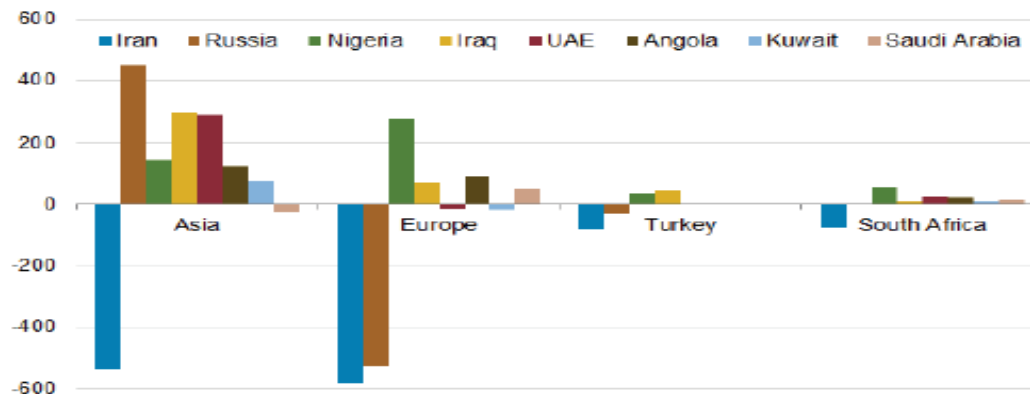
	Iran's market share in 2011	Iran's market share in 2014	reduction in market share	reduction in volumes (000 b/d)	top substitute	other substitute(s)
Asia	9%	6%	3%	536	Russia	UAE, Iraq, Nigeria, Angola
Europe (excluding Turkey)	5%	0%	5%	584	Nigeria	Angola, Iraq, Saudi Arabia
Turkey	51%	30%	22%	84	Iraq	Nigeria
South Africa	20%	0%	20%	76	Nigeria	Angola, UAE, Saudi Arabia, Iraq, Kuwait

Source: U.S. Energy Information Administration based on data from Global Trade Information Services, Lloyd's List Intelligence (APEX), and Eurostat

Note: The total reduction in volumes is slightly below 1.3 million b/d. However, Syrian imports from Iran increased by 70,000 b/d in 2014, compared with 2011, partially offsetting the total reduction in volumes imported from Iran.

Note: The reduction in volumes in Europe includes the 9,000 b/d that Italy imported from Iran in 2014, which was exempted from sanctions. Otherwise, Europe's reduction would be 592,000 b/d in 2014.

Changes in Imports of Oil and Condensate from 2011 to 2014 by Select Import Regions and Export Countries (in Thousands of barrels)



Source: "Iran's petroleum production seen rising as many sanctions are lifted," *This Week in Petroleum*, January 27, 2016, https://www.eia.gov/petroleum/weekly/archive/2016/160121/includes/analysis_print.cfm; and U.S. Energy Information Administration, <https://www.eia.gov/todayinenergy/detail.cfm?id=11011>, May 2013; *Short-Term Energy Outlook*, January 2016; and <http://www.eia.gov/todayinenergy/detail.cfm?id=24592&src=email>.

Estimated Impact on Global Supply and Demand

The EIA has made broader estimates of the size and impact of Iran's increase in exports in the context of the trends in global exports demand and supply. These estimates seem to closely parallel those the International Energy Agency (IEA), and highlight the fact that Iranian increases in production – and efforts to recover past customers and increase market share – will occur in a market with limited growth in demand, other increases in supply, and where prices are not expected to increase back towards anything like the pre-“Oil Crash” levels discussed later in this analysis, and that have cut the average price of oil from \$110 a barrel to some \$30 to \$40 – a cut of over 60-70%.

The EIA estimates indicate that the oil export market has become far more competitive and that it would take a major agreement between key producers – including Russia and Saudi Arabia – to limit production to make a major near term increase in oil prices and export revenues. An EIA analysis of the probable impact of the increase in Iranian production on the behavior of other OPEC states made in the January 12, 2016 edition of its *Short Term Energy Outlook* (https://www.eia.gov/forecasts/steo/report/global_oil.cfm) concluded that:

OPEC crude oil production averaged 31.6 million b/d in 2015, an increase of 0.9 million b/d from 2014. Iraq led the OPEC production increases. Its production rose by 0.7 million b/d in 2015. Saudi Arabia also boosted production to defend its share of the global oil market, with its production increasing by 0.3 million b/d in 2015.

Forecast OPEC crude oil production increases by 0.5 million b/d in 2016, with Iran expected to increase production once international sanctions targeting its oil sector are suspended. Under the [Joint Comprehensive Plan of Action](#) (JCPOA) between Iran and the five permanent members of the United Nations Security Council and Germany (P5+1), which was announced on July 14, 2015, sanctions relief is contingent on verification by the International Atomic Energy Agency (IAEA) that Iran has complied with key nuclear-related steps. Forecast OPEC crude oil production is expected to increase by 0.6 million b/d in 2017, with Iran accounting for most of the increase.

Although uncertainty remains as to the timing of sanctions relief, EIA assumes the implementation occurs in the first quarter of 2016, clearing the way to ease sanctions at that time. EIA has moved up the anticipated implementation day because Iran has made faster-than-expected progress in meeting key obligations required under the JCPOA.

Iran's crude oil production is forecast to grow by about 0.3 million b/d in 2016 and by 0.5 million b/d in 2017. The forecast growth of Iran's crude oil production through the forecast period also depends on internal factors including Iran's ability to mitigate production decline rates and meet technical challenges and on its willingness to discount oil.

OPEC noncrude liquids production averaged 6.7 million b/d in 2015, and it is forecast to increase by 0.3 million b/d in both 2016 and 2017, led by increases in Iran and Qatar.

In December, unplanned crude oil supply disruptions among OPEC producers averaged 2.8 million b/d, up slightly compared with the previous month. Kuwait and Saudi Arabia continue to have a combined disruption of 0.5 million b/d at the Wafra and Khafji fields in the Neutral Zone that straddles the two countries.

OPEC surplus crude oil production capacity, which averaged 1.6 million b/d in 2015, is expected to increase to 2.0 million b/d in 2016 and then be 1.9 million b/d in 2017. EIA estimates that Iran's crude oil production capacity is 3.6 million b/d, which is 0.8 million b/d higher than its current estimated production level. EIA currently categorizes that 0.8 million b/d difference as a disruption because Iran's production is restricted by sanctions that affect the country's ability to sell its oil. However, if sanctions are lifted, any difference between its crude oil production capacity and its crude oil production level would henceforth be considered surplus capacity.

Surplus capacity is typically an indicator of market conditions, and surplus capacity below 2.5 million b/d indicates a relatively tight oil market. However, the continuing inventory builds and high current and forecast levels of global oil inventories make the projected low surplus capacity level less significant.

The Forces that Divide Key Exporters and OPEC

The EIA issued an updated estimate on February 8, 2016 that drew similar conclusions, and reinforced the impact of limited growth in demand on the willingness of other OPEC states and Russia to cooperate with Iran in limiting exports and attempting to raise petroleum prices and export revenues:⁶

EIA estimates that global oil inventories increased by 1.8 million b/d in 2015, marking the second consecutive year of strong inventory builds. Persistent oversupply has contributed to oil prices dropping further in January and reaching the lowest monthly average level since the end of 2003. Global oil inventories are forecast to increase by an annual average of 1.0 million b/d in 2016 and by an additional 0.3 million b/d in 2017.

EIA estimates that global consumption of petroleum and other liquid fuels grew by 1.4 million b/d in 2015, averaging 93.8 million b/d. EIA expects global consumption of petroleum and other liquid fuels to continue to grow by 1.2 million b/d in 2016 and by 1.5 million b/d in 2017. Forecast real gross domestic product (GDP) for the world weighted by oil consumption, which increased by an estimated 2.4% in 2015, rises by 2.6% in 2016 and by 3.1% in 2017.

Consumption of petroleum and other liquid fuels in countries outside the Organization for Economic Cooperation and Development (OECD) increased by an estimated 0.8 million b/d in 2015. Non-OECD consumption growth is expected to be 1.0 million b/d in 2016 and 1.1 million b/d in 2017, reflecting higher growth in the Middle East and Eurasia.

Slowing economic growth in China poses a downside risk to the forecast for liquid fuels consumption. OECD petroleum and other liquid fuels consumption rose by 0.6 million b/d in 2015. OECD consumption is expected to increase by 0.2 million b/d in 2016 and 0.3 million b/d in 2017, led by increases in U.S. consumption. OECD Europe demand is expected to be flat through the forecast period. Forecast U.S. consumption increases by 0.1 million b/d in 2016 and by 0.3 million b/d in 2017. Consumption in Japan is forecast to decline by less than 0.1 million b/d in both 2016 and 2017.

...EIA estimates that petroleum and other liquid fuels production in countries outside of the Organization of the Petroleum Exporting Countries (OPEC) grew by 1.4 million b/d in 2015. The 2015 growth occurred mainly in North America. EIA expects non-OPEC production to decline by 0.6 million b/d in 2016, which would be the first decline since 2008. Most of the forecast production decline in 2016 is expected to be in the United States. Non-OPEC production is forecast to decline by about 0.2 million b/d in 2017. Changes in non-OPEC production are driven by changes in U.S. tight oil production, which is characterized by high decline rates and relatively short investment horizons, which make it among the most price-sensitive globally. Forecast total

U.S. liquid fuels production declines by 0.5 million b/d in 2016, as low oil prices contribute to drilling rig counts falling below levels required to sustain current production. In 2017, U.S. liquid fuels production is relatively flat.

Outside the United States, forecast non-OPEC production declines by 0.1 million b/d in 2016 and by 0.3 million b/d in 2017. Despite low crude oil prices, production declines are relatively minor because of investments committed to projects when oil prices were higher.

...Among other non-OPEC producers, the largest declines are forecast to be in the North Sea and Russia. After increasing in 2015, production in the North Sea is expected to return to its long-term declining trend in 2016 and 2017, as the planned start of several projects is not enough to offset the region's steep decline rates. Production in Russia also increased in 2015, as international sanctions had little effect on Russia's oil production, but its production is expected to decline by 0.1 million b/d in 2016 and by 0.2 million b/d in 2017. However, Russia's exposure to low oil prices has been mitigated by the depreciation of the ruble relative to the dollar, given ruble-denominated production costs, and by Russia's taxation regime for the oil sector.

Some non-OPEC countries, led by Canada and Brazil, are expected to see continuing increases in oil production during the forecast period. Production in Canada is expected to increase by almost 0.2 million b/d in both 2016 and 2017, as several oil sands projects begin production, including the Imperial Oil and Cenovus projects scheduled to come online by the end of 2016. Producers commissioned these projects before the sharp decline in crude oil prices. Production in Brazil is expected to increase by about 30,000 b/d in 2016 and 20,000 b/d in 2017, down from growth of 190,000 b/d in 2015, despite Petrobras's high debt levels and the legal fallout from an ongoing corruption probe.

...OPEC crude oil production averaged 31.6 million b/d in 2015, an increase of 0.8 million b/d from 2014, led by rising production in Iraq and Saudi Arabia. Forecast OPEC crude oil production increases by 0.7 million b/d in 2016 and by 0.6 million b/d in 2017, with Iran accounting for most of the increase. EIA assumes that a collaborative production cut among OPEC members and other major producers does not occur in the forecast period, as major OPEC producers continue the strategy to maintain market share.

Implementation day for the Joint Comprehensive Plan of Action (JCPOA), an agreement among Iran, the P5+1 (the five permanent members of the United Nations Security Council and Germany), and the European Union (EU), occurred on January 16 when the International Atomic Energy Agency verified that Iran had completed the key physical steps required to trigger sanctions relief. With this milestone, the United States, the EU, and the United Nations have lifted nuclear-related sanctions against Iran, which include oil-related sanctions that have limited Iran's ability to sell its oil on the global market since late 2011.

Sanctions relief will lead to an increase in Iran's oil production and exports. Iran's crude oil production, which averaged 2.8 million b/d in 2015, is forecast to average more than 3.1 million b/d in 2016 and almost 3.6 million b/d in 2017, with the actual outcome dependent on Iran's ability to mitigate production decline rates, deal with technical challenges, and bring new oil fields online.

OPEC noncrude liquids production averaged 6.6 million b/d in 2015, and it is forecast to increase by 0.3 million b/d in both 2016 and 2017, led by increases in Iran and Qatar. OPEC unplanned crude oil supply disruptions averaged almost 1.9 million b/d in January 2016, 0.9 million b/d lower than in December 2015 because of changes to Iran's disruption and Libya's estimated production capacity. Iran's crude oil production disruption, which was estimated at 0.8 million b/d, ended in January 2016 when nuclear-related sanctions were lifted.

...OPEC surplus crude oil production capacity, which averaged 1.6 million b/d in 2015, is expected to be 2.0 million b/d in 2016 and 1.9 million b/d in 2017. Surplus capacity is typically an indicator of market conditions, and surplus capacity below 2.5 million b/d indicates a relatively tight oil market. However, the continuing inventory builds and high current and forecast levels of global oil inventories make the projected low surplus capacity level less significant.

(U.S. Energy Information Administration, *Short-Term Energy Outlook. February 2016*, February 9, 2016, http://www.eia.gov/forecasts/steo/pdf/steo_full.pdf.)

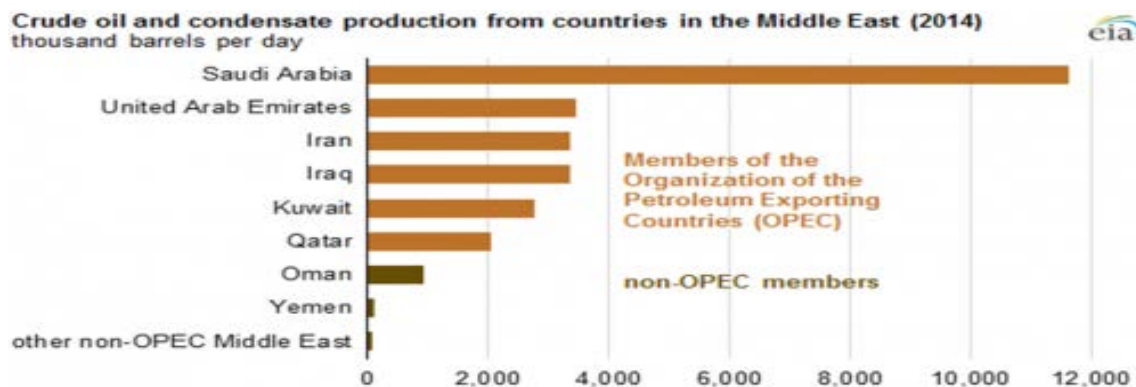
Iranian Competition for Market Share with Other Regional Exporters

Iran does not simply compete in world markets. It competes regionally against Arab states that not only want to maximize their own petroleum export revenues, but that see Iran as a major threat, and one they are seeking to limit and weaken.

Iran Compared to Other Gulf Exporters

The EIA issued another analysis on January 21, 2016, called “[Oman is the largest non-OPEC oil producer in the Middle East](#).”⁷ It provided the updated comparison of the current production by key Middle Eastern states shown in **Figure Three**. It is clear from the data in **Figure Three** that Iran’s current production levels are limited relative to its Arab neighbors. It is also clear in terms of outside investment and economic opportunities that Saudi Arabia and the other Arab states are the strategic prize in terms of total petroleum production, export markets to the region, and outside investment opportunities.

Figure Three: Iran’s Limited Production Compared to Other Middle Eastern States



Source: U.S. Energy Information Administration, [International Energy Statistics](http://www.eia.gov/todayinenergy/detail.cfm?id=24632&src=email), <http://www.eia.gov/todayinenergy/detail.cfm?id=24632&src=email>

Note: Other non-OPEC Middle East includes Bahrain, Syria, Israel, and Jordan.

Iran’s Ongoing Competition with Saudi Arabia

Saudi Arabia and Russia are the keys to any serious effort to limit petroleum exports and raise prices. Russia faces a major economic crisis, and would only cut production if the resulting rise in prices decisively increased its net petroleum export revenues. This not only would require Russian faith that other producers would make such cuts, but would require other key exporters to accept such an agreement, and Saudi Arabia – which leads the Arab Gulf exporters and has some of the lowest product costs in the world – has little reason to accommodate Iran and good reason to seek to maximize its oil export revenues at Iran’s expense.

Saudi Arabia has repeatedly made it clear that it intends to keep production levels high, maximize its own revenues at a time of low oil prices, and will probably be joined in doing this by other Arab oil exporters. The high levels of recent Saudi production levels are shown in **Figure Four**, and Saudi Arabia has made it clear it will not cut them to try to raise prices – especially at a time when it is deeply concerned about Iran’s other actions. The Saudi Foreign Minister, Adel Al-Jubeir, denied any connection between high Saudi production and Iran, and made the continued Saudi commitment to high production clear at the highest official level. He told CNN on January 19, 2016 that,

“People should go back to Adam Smith and basic economics. It’s about supply and demand ... We let the market determine where the equilibrium should be. What we’re seeing now is the market

price...You cannot manipulate the market and be able to do so consistently...If you try to manipulate it one way or the other, eventually you overshoot or undershoot and you pay a tremendous price for it. In the Middle East, the conspiracy theories are about what the great powers are doing. In the West, the conspiracy theories are about what the oil powers are doing.”⁸

Work by the World Bank supports these views to some extent. A July 2015 study of the impact of lifting sanctions, made at a time when oil prices were much higher than now, estimated that,

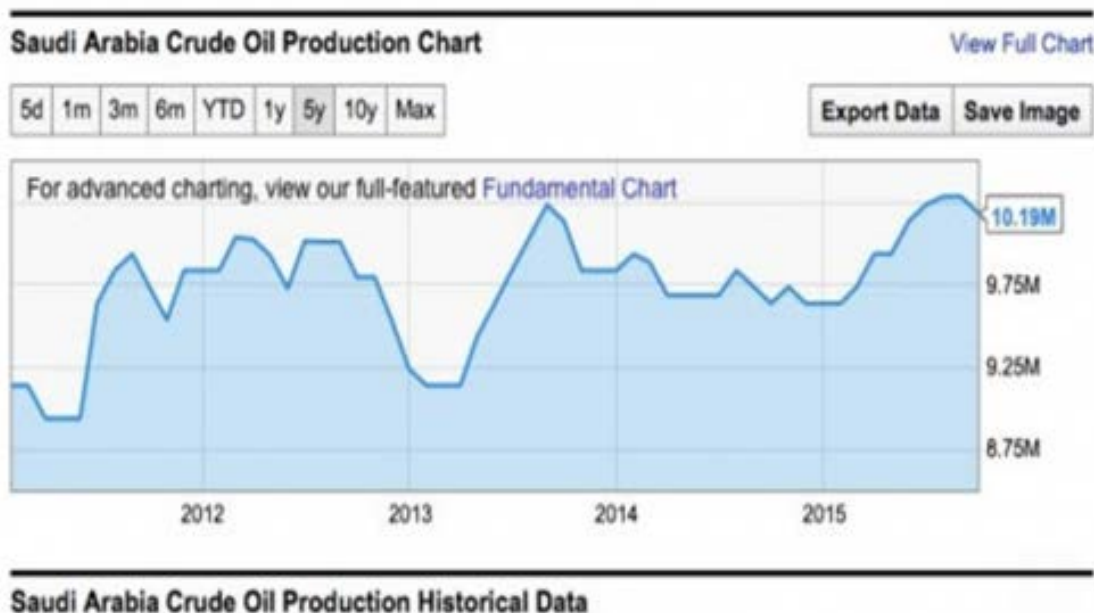
Assuming that the futures oil price for delivery in December 2015 stands at \$66 per barrel, this will reduce oil prices to an estimated \$56. The World Bank estimates that a drop of \$10 in oil prices could worsen the fiscal balances of major oil exporters in the MENA region, to the tune of 5 percent of GDP in Saudi Arabia and 10 percent of GDP in Libya. This amounts to a loss of \$40 billion for Saudi Arabia and \$5 billion for Libya in annual oil export revenues. The current account balances of all MENA oil exporters will also worsen. (http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2015/07/28/090224b083031bf/2_0/Rendered/PDF/Economic0implic0ng0sanctions0on0Iran.pdf)

It is important to note, however, that the cuts in oil prices since this World Bank study was issued have been so severe that they mean that the World Bank’s conclusion in July that, “Iran will be the least affected oil-exporting country as the additional revenues from increased exports of oil will outweigh the negative impacts of falling oil prices,” is no longer valid.

Khalid Al-Falih, the Chairman of Aramco, stated at a panel at Davos on January 23, 2016 that,

“We are not going to accept to withdraw our production to make space for others...This is the position that we’ve earned...we are not going to leave that position to others...Saudi Arabia has never advocated that it would take the sole role of balancing market against structural imbalance...If there are short-term adjustments that need to be made and if other producers are willing to collaborate, Saudi Arabia will also be willing to collaborate...If the prices continue to be low, we will be able to withstand it for a long, long time ... obviously we hope it will not happen.” Al-Falih described the current prices as, “unreasonable, but are probably not likely to climb much any time soon...Short term, it’s a very bleak picture... (“No production cut to make space for others: Kingdom,” Arab News, January 23, 2016, <http://www.arabnews.com/featured/news/869216>)⁹

Figure Four: Saudi Production Trends



Source: SUSRIS and Arab News, <http://susris.com/2016/01/23/saudi-steady-on-oil-production-bleak-picture-aramco-chairman/>.¹⁰

The Impact of Higher Export Revenues on Iran's Economy and Budget

To put the economic importance of Iran's post-nuclear sanctions earnings in perspective, the EIA summarizes the past impact of these sanctions on Iran's export earnings as follows:

(<https://www.eia.gov/beta/international/analysis.cfm?iso=IRN>)¹¹

The sanctions have prompted a number of cancellations and delays of upstream projects. The United States and the European Union (EU) enacted measures at the end of 2011 and during the summer of 2012 that affected the Iranian energy sector more profoundly than any previously enacted sanctions. The sanctions impeded Iran's ability to sell oil, resulting in a near 1.0-million b/d drop in crude oil and condensate exports in 2012 compared with the previous year.

Iran's oil and natural gas export revenue was \$118 billion in the 2011/2012 fiscal year (ending March 20, 2012), according to the International Monetary Fund (IMF). In the 2012/2013 fiscal year, oil and natural gas export revenue dropped by 47% to \$63 billion. The IMF estimates that Iran's oil and natural gas export revenue fell again in the 2013/2014 fiscal year by 10% to \$56 billion. The revenue loss is attributed to the sharp decline in the volume of oil exports from 2011 to 2013. Iran's natural gas exports increased slightly over the past few years. However, Iran exports only a small volume of natural gas, because most of its production is domestically consumed.

Nonetheless, international sanctions have also affected Iran's natural gas sector. Iran's natural gas sector has been expanding, but production growth has been lower than expected as a result of the lack of foreign investment and technology. However, in 2014, Iran experienced higher production growth than usual because new phases at the South Pars natural gas field came on line.

There are significant uncertainties about the data provided by virtually every source on the Iranian economy, and some Iranian data has been heavily politicized in the past. The EIA data and the data in the CIA World Factbook broadly track with the estimates of international institutions like the World Bank and International Monetary Fund (IMF), however, and these four sources seem to provide a reasonable basis for comparing estimates of how Iran's higher export levels could affect its economy in the near term.

Guesstimating Iran's Future Petroleum Export Earnings

The CIA's estimates of Iran's total exports only go up to 2014. The CIA estimates that they totaled \$86.47 billion that year, and that some 80% – or \$69.2 billion were petroleum. (The rest were largely related exports of chemical and petrochemical products, plus fruits and nuts, carpets, cement, and ore.)¹² (<https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>)

The EIA estimates that, “Brent crude oil prices averaged \$52/b in 2015, down \$47/barrel (b) from the average in 2014... North Sea Brent crude oil prices averaged \$38/b in December, a \$6/b decrease from November, and the lowest monthly average price since June 2004. Its January 12, 2016 *Short Term Energy Outlook* also estimates that, “Brent crude oil prices average \$40/b in 2016 and \$50/b in 2017. Forecast West Texas Intermediate (WTI) crude oil prices average \$2/b lower than Brent in 2016 and \$3/b lower in 2017. However, the current values of futures and options contracts continue to suggest high uncertainty in the price outlook.”¹³ (http://www.eia.gov/forecasts/steo/pdf/steo_full.pdf)

While Iranian petroleum products sell at a variety of different prices, the trends in Brent Crude prices are a good illustration of the pressure recent cuts in all oil prices have put on Iran. They are illustrated in **Figure Five**, which shows just how sharply prices have dropped since EU and strengthened U.S. sanctions were imposed on Iran.

Figure Five: End of Day Commodity Futures Price Quotes for Brent Crude Oil



Source: <http://www.nasdaq.com/markets/crude-oil-brent.aspx?timeframe=5y>¹⁴

As **Figure One** has already shown, there are different estimates of how soon Iran can increase exports, its sustainable production capacity, and what time, investment, incentives, and technology are required to increase that production capacity. The same levels of uncertainty apply to how quickly Iran can export the oil it has stored on tankers and Iranian soil since sanctions were imposed, and the prices it will receive.

Nevertheless, the near term impact of the nuclear agreement and lifting of sanctions seems certain to be far lower than anyone estimated at the time the JCPOA was signed.

What is far more critical in terms of the strategic impact of added production, however, is the massive cut in oil prices relative to Iran's probable oil export levels. As **Figure One** shows, Iran will not be back to its 2011-2012 production levels until the end of 2016 at the earliest and will not have added production capacity until the end of 2017. Even if oil should average as much as \$60 a barrel through 2016 – which may well be a high estimate – Iran's oil total and gas export revenues in 2016 will probably not exceed \$60-65 billion, and could be substantially lower. Even at an average of \$40 a barrel, they might well be under \$40 billion, and at this writing, prices are closer to \$30.

If one assumes that Iran can actually export all of the 1.15 million barrels a day in increased production that EIA projects it might be able to reach at the end of 2017, petroleum export revenues would probably still be well under \$72-75 billion at \$60 a barrel, and under \$50 billion at \$40 a barrel.

The Economic Impact of Higher Iranian Oil Export Revenues

None of these figures are anything approaching a massive windfall for a country that will then have 83 million to 84 million people, and whose GDP will be around \$1.4 trillion to \$1.6 trillion. Even with sanctions lifted, the end result is still likely to be that the internal power struggle for money and over military vs. civil needs may become even more serious.

The “hardliners” have a case. Iran has not come close to competing with its Arab Gulf neighbors in arms imports since the fall of the Shah in 1979. A recent CRS report indicates that the Arab Gulf Cooperation Council (GCC) states imported arms worth some 24 times more than Iran could afford in 2007-2014. As a result, much of its military inventory is better suited to a museum than creating a hegemon. Its air force and ground based air defenses largely date back to the time of the Shah or Vietnam War era military technology.

At the same time, it is important to note that the lifting of petroleum sanctions has benefits other than increasing oil revenues, and that it does offer Iran important options for revitalizing and developing its entire economy.

The EIA summarized several of these benefits in the January 21, 2016 edition of *This Week in Petroleum* (<https://www.eia.gov/petroleum/weekly/>),¹⁵

...the sanctions were lifted on January 16, which was implementation day for the [Joint Comprehensive Plan of Action](#) (JCPOA)¹⁶, an agreement among the P5+1 (the five permanent members of the United Nations Security Council and Germany), the European Union (EU), and Iran. On that day, the International Atomic Energy Agency verified that Iran had completed the key physical steps required to trigger sanctions relief. With this milestone, the United States, the EU, and the United Nations have lifted nuclear-related sanctions against Iran, which include oil-related sanctions that have limited Iran's ability to sell its oil on the global market since late 2011.

With nuclear-related sanctions being lifted:

- Some Iranian banks can get back on the Society for Worldwide Interbank Financial Telecommunication (SWIFT) system to conduct financial transactions electronically on the world market.
- Iran can access its foreign reserves held in banks worldwide. According to the [U.S. Department of Treasury](#), Iran's Central Bank has \$100 billion to \$125 billion in foreign exchange assets globally, but Treasury estimates Iran's usable liquid assets to be just slightly more than \$50 billion.¹⁷
- Non-U.S. companies can invest in Iran's oil and natural gas industry, including the sale, supply, and transfer of equipment and technology.
- Countries within the EU and elsewhere that had ceased imports of energy from Iran can again import Iranian oil, natural gas, and petrochemical products. Countries that are already importing from Iran can increase their purchases.
- European protection and indemnity (P&I) clubs can provide Iranian oil tankers with insurance and reinsurance.

Nonetheless, U.S. sanctions related to human rights abuses and terrorism are still in place, and some Iranian individuals and entities that were delisted under nuclear sanctions are still covered under existing sanctions. As a result, non-U.S. companies may be slow to rush back into Iran as they figure out how to resume business with Iran without violating the non-nuclear sanctions that remain in effect.

The other financial impacts of lifting nuclear sanctions are equally unclear. Press reports also talk about lifting as much as \$100 billion in frozen Iranian assets, and some strong opponents of the JCPOA have talked about as much as \$150 billion. The National Security Council (NSC) and U.S. Treasury put this money under \$52 billion, once existing obligations are subtracted, and note that it may take months or longer for the money to be freed, non-banks to freely deal with Iran, and the structure of Iran's finances to stabilize.

CIA Estimates of Key Economic Data and Trends

Even so, Iran's "moderates" – and Iran's people – still have a critical case for using sanctions relief to focus on stability and development. Iran now has some 82 million people, if one uses the CIA Factbook estimate as a base. It has a very young population and some 42% is 24 years of age or younger. A third of its population is young people depending on others for their livelihood and another 7% of its people are elderly dependents. Youth unemployment or underemployment are at levels of at least 20-25% and career opportunities are poor, and over 715,000 males and 680,000 females reach job age each year.

CIA Factbook data indicate that Iran's per capita income was under \$18,000 in 2014 – before the current crash in oil prices illustrated in **Figure Five**. This per capita income is far lower than in any Arab Gulf state other than a war torn Iraq. Iraq's GDP per capita was around \$15,300, Kuwait's was \$70,700, Oman's was \$3,800, Qatar's was \$137,200, Saudi Arabia's was \$53,200, and the UAE's was \$66,300.

Iran's income is poorly distributed, and sharply affected by corruption and the government's misuse of its resources. The CIA also reports that, "Iran continues to suffer from high unemployment and underemployment. Lack of job opportunities has prompted many educated Iranian youth to seek employment overseas, resulting in a significant 'brain drain.'"

World Bank Estimates of Key Economic Data and Trends

The World Bank reported in September 2015 that some progress toward economic reform had occurred under President Rouhani and that Iran has real economic potential, but that it faces major problems from state mismanagement, barriers to investment and growth, and particularly in terms of its population and youth (<http://www.worldbank.org/en/country/iran/overview>):¹⁸

Following two years of recession, the Iranian economy recovered during the 2014 Iranian calendar year (i.e., March 2014-March 2015) as the new administration led by President Rouhani took office in July 2013 and a partial lifting of sanctions was enacted under the Joint Plan of Action (JPA). This sanctions relief included the partial removal of constraints on Iran's oil exports, and the supply chain in key sectors of the economy—such as in the automobiles industry—and on international and domestic banks' international transactions.

The economy expanded by 3% in 2014, on the heels of annual economic contractions of 6.6% and 1.9% in 2012 and 2013, respectively. As of August 2015, the official and parallel market rates were trading at 29,797 Iranian rials per U.S. dollar and 33,400 Iranian rials per U.S. dollar, respectively, thereby representing a difference of about 13%, down from roughly 190% in the second quarter of 2012 when sanctions were tightened. The inflation rate declined from a year-on-year peak of 45.1% in 2012 to 15.6% in June 2015 in line with the lifting of sanctions and the tightening of monetary policy by the Central Bank of Iran.

The unemployment rate has remained stubbornly high and rose slightly in 2014. The unemployment rate reached 11.4% in 2014, up from 10.4% in 2013. The unemployment rate was much more elevated among women (20.3% for women against 8.7% for men), among the population between the ages of 15 and 29 (17.9% for men and 39% for women in this age cohort) and in urban areas (11.7% in urban areas and 7.4% in rural areas). This weak labor market performance took place within a context of a subdued and declining labor force participation rate with only 37.2% of the country's population being economically active in 2014, down from 37.6% in 2013 (62.9% for men and 11.8% for women). The incidence of underemployment has also become more prevalent, with an estimated 9.5% of workers being considered underemployed (10.3% for men and 4.8% for women). Underemployment is largely concentrated among the youth population.

Stimulating private sector growth and job creation is a mounting challenge for the new government considering the number of workers who should enter the labor market in the coming years, including women and youth. Weak labor market conditions are exacerbated by the large number of youth entering the labor market and low female labor force participation rate. This trend is expected to be maintained in line with the evolving socio-economic profile with the demographics of the country characterized by a disproportionately high youth population with over 60% of Iran's population of 77 million individuals estimated to be under the age of 30 in 2013. The government estimates that 8.5 million jobs should be created in the following two years to reduce the unemployment rate to 7% by 2016. Tackling youth unemployment in particular is a pressing policy issue.

...In 2005, poverty was 1.45% in Iran using a poverty line of US\$1.25 per day (PPP). World Bank projections estimate that only 0.7% of the population (half a million people) lived under this poverty line in 2010, although a large proportion of people are living close to it. Indeed, raising the poverty line by US\$0.5 (from US\$2 to US\$2.50 and from US\$3 to US\$3.50) could put 4%-6% of the population – over 4.5 million people - in poverty. This suggests that many individuals are vulnerable to changes in their personal disposable income and to the persistent rise in the cost of living.

...Growth will decelerate from 3% in 2014 to 1.9% in 2015 (March 2015-March 2016) against the backdrop of low oil prices despite a projected increase in oil production by 200,000 barrels per day from 3.1 million barrels per day in 2014. If all sanctions are lifted by the beginning of the 2016 Iranian calendar year (March-June 2016), real GDP should rise to 5.8 % and 6.7 % in 2016 and 2017, respectively, as oil production reaches 3.6 and 4.2 million barrels per day. Reforms to the business environment to promote competition, rationalize licensing and authorization requirements, reduce the imprint of State-Owned Enterprises in the economy, and improve the health of the financial and banking sector are needed to accelerate growth and private-sector led job creation.

(See <http://www.worldbank.org/en/news/press-release/2015/08/10/iran-lifting-sanctions-will-lower-oil-prices-and-boost-domestic-economy-if-managed-well>, August 10, 2015; and <http://documents.worldbank.org/curated/en/2015/08/24824578/economic-implications-lifting-sanctions-iran>, July 23, 2015.)

It is important to note that this analysis indicated that Iran's medium-term outlook was positive only (a) if the JCPOA was fully implemented over coming years, (b) there were no major new or "snap-back" sanctions, and (c) if the government tackles much needed reforms to unleash growth and private-sector led job creation. It was also made at a time of higher oil prices and was more optimistic than the EIA now is in terms of how large an increase Iran can make in near term petroleum production:

World Bank Estimate of the Economic Impact of Lifting Nuclear Sanctions

As **Figure Five** shows all too clearly, petroleum prices and global economic conditions are changing so rapidly that it is difficult for even the best institutions to keep up, and the World Bank's public estimates of the impact of lifting nuclear sanctions date back to July 2015, and now seem to be based on optimistic estimates of oil prices and export revenues. Nevertheless, they are still of interest and help to put more recent "guesstimates" in perspective:

The most significant change will be Iran's return to the oil market. The World Bank estimates that the eventual addition of one million barrels a day (mb/d) from Iran, assuming no strategic response from other oil exporters, would lower oil prices by 14 percent or \$10 per barrel in 2016. Oil importers, including the European Union (EU) and United States (US), will gain while oil exporters, especially the Gulf countries, will lose.

Secondly, once sanctions and restrictions on financial transactions are relaxed, Iran's trade, which had both declined in absolute terms and shifted away from Europe towards Asia and the Middle East, will expand. The World Bank estimates that sanctions reduced Iranian exports by \$17.1 billion during 2012-14, equivalent to 13.5 percent of total exports in that period. Our analysis suggests that the countries that will see the largest post-sanctions increase in trade with Iran include Britain, China, India, Turkey, and Saudi Arabia.

Thirdly, the Iranian economy, which was in recession for two years, will receive a major boost from increased oil revenues—conservatively estimated at about \$15 billion in the first year—and lower trade costs. In addition, there are estimates that Iran holds about \$107 billion worth of frozen assets (including LCs and oil exports earnings) overseas, of which an estimated \$29 billion will be released immediately after sanctions removal. Finally, foreign direct investment (FDI), which had declined by billions of dollars following the tightening of sanctions in 2012, is expected to pick up. There has already been some interest shown by foreign multinationals since the April 2015 framework agreement, especially in the oil and gas sectors. The World Bank expects FDI to eventually increase to about \$3 - 3.5 billion in a couple of years, double the level in 2015 but still below the peak in 2003.¹⁹

(http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2015/07/28/090224b083031bff/2_0/Rendered/PDF/Economic0impli0ng0sanctions0on0Iran.pdf)

IMF Estimates of Key Economic Data and Trends

An IMF Article IV analysis of Iran's economy issued on December 7, 2015, was based on more realistic oil prices, but also made assumptions about the level of economic reform and progress that seem likely to prove highly optimistic. Key excerpts include:

After a 9 percent contraction over the previous two years, interim sanctions relief and prudent policies eased constraints on trade and financial transactions, improved economic activity, and lowered inflation in 2014/15. Although the decline in oil prices has negatively affected economic activity in 2015/16, the comprehensive agreement between Iran and the P5+1, if implemented successfully, should improve Iran's external environment and economic performance substantially going forward. However, Iran faces multiple constraints to unleash its growth potential and to achieve single-digit inflation sustainably. The economy's dependency on hydrocarbons remains high, the policy framework is not well-designed to respond to shocks, and structural vulnerabilities abound. Corporate and bank balance sheets are weak, unemployment is high, particularly among youth and women, and doing business is costly. Placing the Iranian economy among the top emerging market economies over the next decades will require comprehensive reforms.

...After growing 3 percent in 2014/15, economic activity is poised for a significant slowdown in 2015/16.... The easing of trade and financial sanctions associated with the November 2013 interim agreement with the P5+1 provided a significant, but short-lived, impulse to the economy (Tables 1 and 2). The sharp decline in global oil prices, tight balance sheets, and postponed consumption and investment decisions ahead of the expected lifting of economic sanctions, have significantly slowed economic activity since the fourth quarter of 2014/15. Key sectors in the economy, such as manufacturing and construction, have contracted in the first quarter of 2015/16. ...As a result, real GDP growth is projected to be between 0.5 and -0.5 percent in 2015/16, depending on the timing of the expected lifting of economic sanctions. Twelve-month inflation has declined to around 12 percent in recent months, largely reflecting lower food and beverage inflation, and is expected to rebound slightly to 14 percent by year-end, as the temporary effect of lower food prices wanes.

...In spite of lower global oil prices, near- and medium-term prospects are brighter. Higher oil production and exports on account of sanctions relief, lower costs for trade and financial transactions, and restored access to foreign assets, would be expected to lift real GDP growth to about 4–5.5 percent in 2016/17–2017/18. A significant part of this growth would be the result of higher oil production, which could range from at least 0.6 millions of barrels per day (mbpd) to an official estimate of 1 mbpd. Lower trade and financial transaction costs would account for 0.75–1 percentage point of growth. Real GDP growth would then stabilize at around 4 percent annually over the next several years.

Much of the acceleration in growth would depend on the spillovers from higher oil production to the rest of the economy and on addressing structural weaknesses—on the policy framework, taxation, and bank balance sheets—that should help productivity growth to gradually return to its long-run average (Box 2). Higher oil revenue and lower cost of trade and financial transactions, and capital inflows could lead to appreciation pressures on the real exchange rate. Continued gradual fiscal consolidation and prudent monetary policy, anchored by the authorities' goal of achieving single-digit inflation by end-2016/17, can mitigate these upward pressures and thereby preserve competitiveness.

(Source: International Monetary Fund, ISLAMIC REPUBLIC OF IRAN, 2015 ARTICLE IV CONSULTATION—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR THE ISLAMIC REPUBLIC OF IRAN, IMF Country Report No. 15/349, December 7 2015, IMF Country Report No. 15/349, data and analysis as of November 18, 2015. Note that Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board.)

A more recent IMF analysis—issued in January 2016—reflected further drops in estimated oil prices, but still assumed that Iran might make more ambitious economic reforms in the near future than Iran had been

willing to carry out in the past. As a result, it reflected similar conclusions but ones that came with clearer warnings that much depended on Iran's ability to execute major reforms,

Economic performance has stalled in recent months with key sectors—manufacturing and construction—contracting significantly. Real GDP growth is now projected to decelerate from 3 percent in 2014/2015 to between ½ percent to – ½ percent in 2015/2016, because of the drop in oil prices, and the postponement of investment and consumption decisions ahead of the expected lifting of sanctions.

The recent lifting of economic sanctions is expected to help increase oil production and exports, and lower costs for trade and financial transactions. Access to foreign assets is also anticipated to be restored. Under these assumptions, real GDP growth is projected to accelerate to 4–5½ percent in 2016/17 and to average 4 percent throughout the medium term.

... relief of sanctions also brings forth many challenges to address. Higher oil revenue and greater capital inflows stemming from increased trade and financial transactions could potentially lead to exchange rate appreciation. Mitigating such pressures could be achieved through reforms that support the authorities' goal of bringing Iran's inflation to the single digits by 2016-2017 sustainably, down from the high levels experienced in recent years, the IMF noted.

... Continued efforts in reducing fuel subsidies and mobilizing domestic tax revenue would help contain and reduce the fiscal deficit in the years ahead and dampen upward pressures on the real exchange rate, and thus provide room for infrastructure investment," said Cerisola.

The report also recommends a medium-term fiscal framework, to increase domestic tax revenue collection, and to develop fiscal buffers to protect the fiscal space for investment spending on infrastructure and human capital.

Reducing and stabilizing inflation is also important. Here the authorities' focus on strengthening the Central Bank of Iran's mandate on price stability is a critical step in consolidating macroeconomic stability.

"Central to the need to boost sustainable growth and employment are reforms to address structural weaknesses in the economy," said Cerisola. A durable reduction of real interest rates should be predicated on addressing financial sector vulnerabilities, namely resolving the high nonperforming assets, restructuring banks, addressing unlicensed financial institutions, and strengthening the Central Bank of Iran supervisory framework.

In addition, the country can take measures to increase productivity by attracting modern technology from trading partners, and by implementing reforms targeting specifically labor-intensive sectors, such as services and agriculture.

(Martin Cerisola, IMF's mission chief for Iran, *IMF Survey, Iran Faces Multiple Challenges as Growth Prospects Brighten*, January 20, 2016, <http://www.imf.org/external/pubs/ft/survey/so/2016/NEW012016A.htm>.)

IMF Estimates of Key Economic Data and Trends and the Impact of Lifting Nuclear Sanctions

If Iran does carry out the necessary reforms, the IMF also provided a more up-to-date estimate of the possible impacts of lifting sanctions, and the updated graphic estimates shown in **Figure Six**:

The Joint Comprehensive Plan of Action (JCPOA) between the Islamic Republic of Iran and the P5+1 comes after several difficult years for the Iranian economy. The economic sanctions imposed in 2012 led to a sharp contraction in economic activity, as well as higher inflation and unemployment. Over the previous decade, Iran had achieved significant convergence in per-capita income, mostly led by factor accumulation. TFP had decelerated substantially from the mid-2000s reflecting structural weaknesses in the economy (see 2014 Article IV Report).

Much of the contraction in the economy was due to sharp drops in oil production and non-oil productivity. Oil production and total factor productivity (TFP) in the non-oil economy had already been on a stagnant/declining trend prior to the intensification of sanctions in 2012. The

intensification of sanctions pushed TFP growth into negative territory and led to sharp contractions in production and exports in the hydrocarbon sector.

The expected lifting of economic sanctions paves the way for an improved economic outlook. Higher oil output would bring spillovers to the rest of the economy and account for the bulk of the projected pick-up in activity in 2016/17 and 2017/18. In addition, lower trade and financial transaction costs could add about 0.75–1 percentage points to growth. With sanctions to be lifted, the non-oil economy should gradually improve its efficiency. In the near term, factor accumulation should contribute about half to non-oil GDP growth in the earlier years, which is projected to pick up gradually toward its historic average growth of 3 percent by 2020.

... In spite of lower global oil prices, near- and medium-term prospects are brighter. Higher oil production and exports on account of sanctions relief, lower costs for trade and financial transactions, and restored access to foreign assets, would be expected to lift real GDP growth to about 4–5.5 percent in 2016/17–2017/18....A significant part of this growth would be the result of higher oil production, which could range from at least 0.6 millions of barrels per day (mbpd) to an official estimate of 1 mbpd. Lower trade and financial transaction costs would account for 0.75–1 percentage point of growth. Real GDP growth would then stabilize at around 4 percent annually over the next several years. Much of the acceleration in growth would depend on the spillovers from higher oil production to the rest of the economy and on addressing structural weaknesses—on the policy framework, taxation, and bank balance sheets—that should help productivity growth to gradually return to its long-run average.

...Higher oil revenue and lower cost of trade and financial transactions, and capital inflows could lead to appreciation pressures on the real exchange rate. Continued gradual fiscal consolidation and prudent monetary policy, anchored by the authorities' goal of achieving single-digit inflation by end-2016/17, can mitigate these upward pressures and thereby preserve competitiveness.

(Source: International Monetary Fund, ISLAMIC REPUBLIC OF IRAN, 2015 ARTICLE IV CONSULTATION—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR THE ISLAMIC REPUBLIC OF IRAN, IMF Country Report No. 15/349, December 7 2015, IMF Country Report No. 15/349, data and analysis as of November 18, 2015.)

The IMF analysis did note, however, that,

...The growth outlook is subject to large uncertainties. The path of oil production and exports in the years ahead depends on Iran's capacity to re-activate shut oil wells, regain market share, and mobilize foreign investment and technological expertise. In addition, the expected recovery in non-oil productivity growth could be impaired if balance sheet vulnerabilities in the corporate and banking sectors are not addressed.

(Source: International Monetary Fund, ISLAMIC REPUBLIC OF IRAN, 2015 ARTICLE IV CONSULTATION—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR THE ISLAMIC REPUBLIC OF IRAN, IMF Country Report No. 15/349, December 7 2015, IMF Country Report No. 15/349, data and analysis as of November 18, 2015.)

It is equally important to note that **Figure Six** shows that almost all of the increase in the Iranian economy – and benefit to Iranians and foreign investment opportunities – comes from the broader impact of more revenues and reform on the Iranian economy and not from increase export revenues. Equally important, **Figure Five** is based on average oil prices of \$52 to \$57 per barrel during calendar FY2016-FY2017. This is much higher than the oil prices Iran received in January 2016.

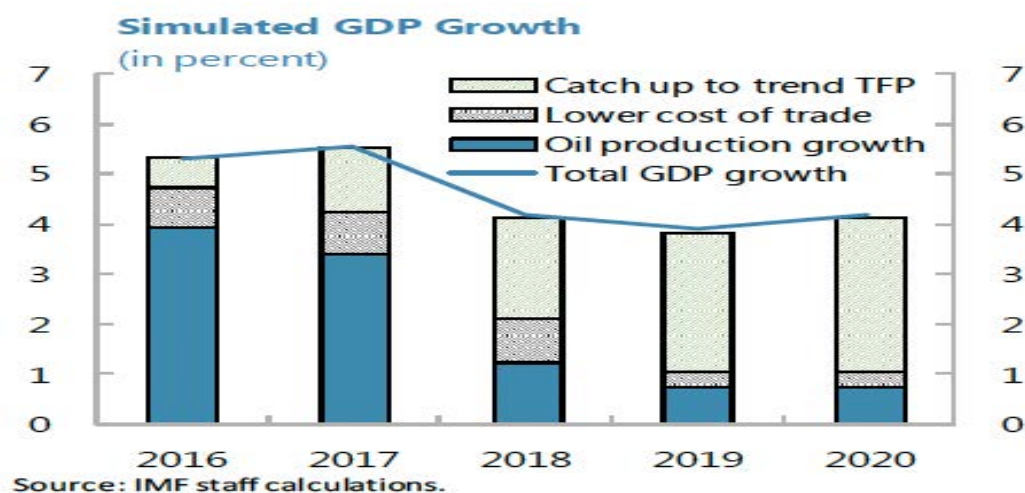
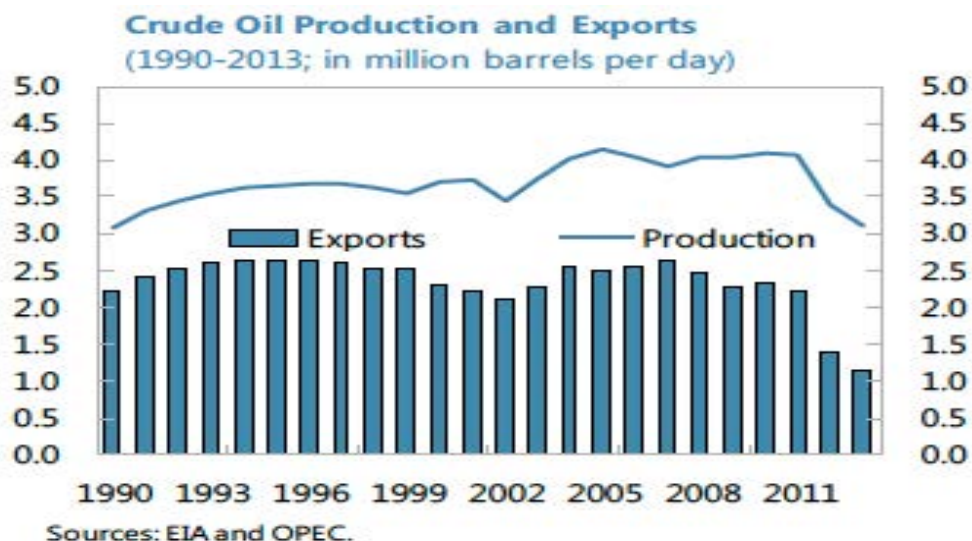
Figure Six: IMF Estimate of the Economic Impact of Lifting Sanctions

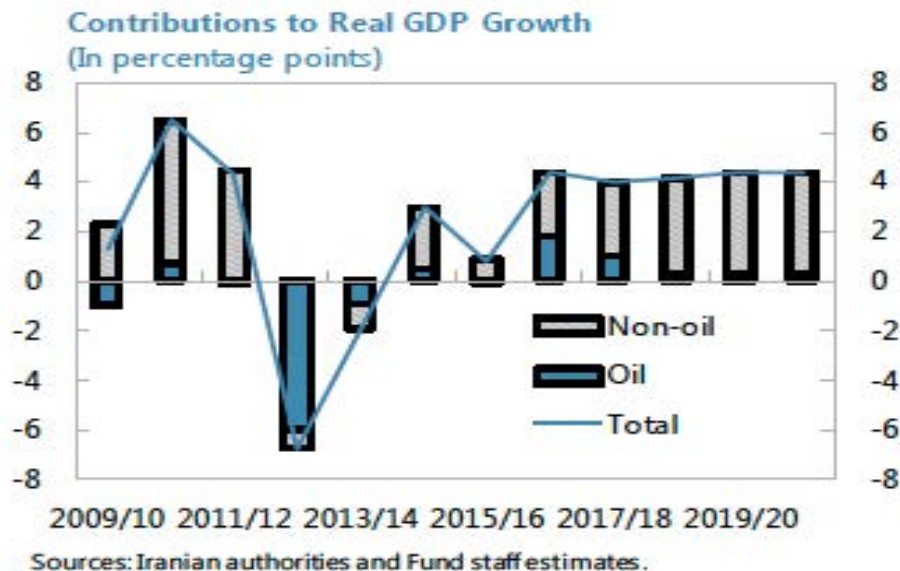
Medium-Term Baseline Scenario, 2013/14–2020/21 1/

	2013/14	Est. 2014/15	Proj. 2015/16	Proj. 2016/17	Proj. 2017/18	Proj. 2018/19	Proj. 2019/20	Proj. 2020/21
Real nonoil GDP growth (percent)	-1.1	2.8	-0.1	2.8	3.4	4.3	4.6	4.6
CPI inflation (end of period)	19.7	16.2	14.0	9.0	7.5	5.0	5.0	5.0
Non-oil net lending/borrowing (percent of non-oil GDP)	-10.6	-8.2	-7.2	-7.1	-6.9	-6.7	-6.5	-6.3
Current account balance (percent of GDP at market prices)	7.8	4.1	1.3	2.1	2.6	2.8	2.4	2.2
WEO Oil Price adjusted for Iranian year (per barrel)	103.7	83.3	50.7	52.9	57.6	61.0	62.6	63.0
Crude oil exports (millions of barrels/day)	1.13	1.16	1.24	1.81	2.13	2.22	2.29	2.38
Crude oil production (millions of barrels/day)	2.85	3.09	3.11	3.7	4.0	4.2	4.3	4.4

Sources: Iranian authorities; and Fund staff estimates and projections.

1/ The Iranian fiscal year ends March 20.





(Source: International Monetary Fund, ISLAMIC REPUBLIC OF IRAN, 2015 ARTICLE IV CONSULTATION—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR THE ISLAMIC REPUBLIC OF IRAN, IMF Country Report No. 15/349, December 7 2015, IMF Country Report No. 15/349, data and analysis as of November 18, 2015)

The Uncertain Security Dimension

There is also the further problem that analysis of sanctions relief based largely on petroleum export capacity and global markets assumes that there will at least be an uneasy peace and considerable stability in the midst of serious regional tension and a major regional arms race in missiles, conventional arms, and asymmetric warfare capabilities. It also assumes that the Iranian-Arab struggle for control and influence in Lebanon, Syria, Iraq, and Yemen will not lead to any incidents or conflicts that affect the flow of petroleum exports out of the Gulf.

More broadly, many key aspects of the JCPOA are still undefined and have not been fully institutionalized, and the future of nuclear competition could lead to a partial or full “snap back” of sanctions, as well as new U.S. and other sanctions legislation that is not tied to the Iran nuclear agreement. As noted earlier, Iran also faces considerable political uncertainty and internal disputes between its “moderates” and “hardline” factions, and has two critical elections coming up on February 26th – one for its national assembly and the other for its Council of Guardians, which would have to choose any new leader.

There is a real risk of serious military incidents or clashes, and even conflict. The tensions between Iran and its Arab neighbors, and to some extent Turkey, are acute and rising. Iran and the Arab states are actively competing for influence in the Gulf, and particularly in Iraq. They are also competing in Syria and the Levant. Iran’s backing of the Assad regime against Arab rebels in Syria, Shi’ite factions in Iraq, the Houthi in Yemen, and Shi’ite minorities in Bahrain and Saudi Arabia create tensions that may well overwhelm the impact of the JCPOA in easing regional tensions even if Iran totally complies. Tensions with Israel and the resulting impact on U.S. non-nuclear sanction legislation is already a key uncertainty, as are some of the more extreme statements about regional security coming from leaders of Iran’s Islamic Revolution Guards Corps as well as its Supreme Leader.

Moreover, there is a separate non-nuclear arms race in missiles and missile defenses in the region, and another over the ability to threaten or defend maritime traffic through the Gulf and the Gulf of Oman. There is also a third and truly massive conventional arms race within the Gulf region that affects Iran’s future military posture and the risk of a conflict – even if one ignores the increases in U.S., British, and French power projection capability.

This arms race is driven largely by the import of modern arms, and it is important to note that Iran’s past behavior in seeking nuclear weapons, and ongoing behavior in creating massive conventionally armed missile forces, asymmetric warfare forces to “close the Gulf,” and search for military and strategic

influence over Iraq, Syria and Lebanon is driven by the fact that this is a race that rival Arab states are decisively winning, and where they have major support from the far more modern power projection forces of the United States, Britain, and France.

Iran is still heavily dependent on 1970s vintage U.S. and European arms that have never been supported by the seller country since the fall of the Shah in 1979, and on relatively low-to-moderate quality imports from Russia, China, and Vietnam. It is still heavily dependent on combat-worn aircraft, surface-to-air missiles, land weapons, and ships it imported from the United States and Europe before the fall of the Shah. It has lacked access to most imports of advanced modern weapons since 1980, and has made comparatively few recent arms imports in spite of the fact it has done so much to drive up the arms imports of neighboring Arab states and lost substantial arms during the Iran-Iraq War.

A study by the U.S. Congressional Research Service (CRS) – based on declassified U.S. intelligence – shows that the Arab GCC states ordered nearly 45 times more arms during 2007-2014 than Iran, and took delivery on 45 times more. This advantage also rose with time. The Arab GCC states ordered a total of \$49,900 million in new orders, and took \$17,300 million worth of deliveries during 2007-2014 – largely from the United States.²⁰

(Catherine A. Theohary, *Conventional Arms Transfers to Developing Nations, 2007-2014*, Congressional Research Service, CRS 7-5700 R44320, December 21, 2015; <https://www.fas.org/sgp/crs/weapons/R44320.pdf>.)

Iran has made limited progress in manufacturing its own arms, and the CRS report does not cover its nuclear and most missile efforts. However, the CRS study shows that Iran only imported \$700 million worth of arms in 2007-2010, and imported less than \$50 million worth in 2011-2014, for a total of little more than \$700 million in 2007-2014. It took delivery on only \$500 million worth of arms in 2007-2010, and \$100 million in 2011-2014, for a total of \$600 million.²¹

(Anthony H. Cordesman, *The Changing Patterns of Arms Imports in the Middle East and North Africa*, CSIS, <http://csis.org/publication/changing-patterns-arms-imports-middle-east-and-north-africa>, February 1, 2016)

These data do not include the arms transfers affecting competition between Iran/Russia and the U.S./Arab states in shaping the civil war in Syria. They do, however, affect the equally serious competition for influence over Iraq – another major petroleum exporter. Although Iraq is subject to considerable Iranian influence, it has also had massive military support from the United States and should be seen as a separate case from the Iran-Arab Gulf arms race. Iraq bought \$5,600 million worth of arms in 2007-2010, and a massive \$21,700 million in 2011-2014. It took delivery on \$2,600 million worth of arms imports in 2007-2010, but this total rose to \$6,100 million in 2011-2014.²²

(Anthony H. Cordesman, *The Changing Patterns of Arms Imports in the Middle East and North Africa*, CSIS, <http://csis.org/publication/changing-patterns-arms-imports-middle-east-and-north-africa>, February 1, 2016)

Predicting the Unpredictable

The fact is that neither outsiders nor Iran can predict its near-term economic future, or the course of action its government will take given the competing needs of the military and civil sectors. What they can predict is that the impact of the nuclear agreement on Iran's future petroleum revenues will be far more limited than many thought when the agreement was signed, and that Iran will face serious internal pressure over how any additional revenue will be used.

There will also be a significant risk that some mix of regional conflict, growing tensions between Iran and its neighbors, the different non-nuclear arms races and struggles for strategic influence in the region, and/or disputes over the implementation of the JCPOA could sharply affect the future economy and stability of Iran and the region.

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- ¹ <http://csis.org/expert/anthony-h-cordesman>
 - ² <http://www.state.gov/e/eb/tfs/spi/iran/jcpoa/>
 - ³ <http://www.eia.gov/todayinenergy/detail.cfm?id=24592&src=email>
 - ⁴ <http://www.eia.gov/forecasts/steo/>
 - ⁵ <http://www.eia.gov/beta/international/analysis.cfm?iso=IRN>
 - ⁶ http://www.eia.gov/forecasts/steo/pdf/steo_full.pdf
 - ⁷ <http://www.eia.gov/todayinenergy/detail.cfm?id=24632&src=email>
 - ⁸ <http://money.cnn.com/2016/01/19/investing/saudi-arabia-oil-prices-iran/>
 - ⁹ <http://www.arabnews.com/featured/news/869216>
 - ¹⁰ <http://susris.com/2016/01/23/saudi-steady-on-oil-production-bleak-picture-aramco-chairman/>.
 - ¹¹ <https://www.eia.gov/beta/international/analysis.cfm?iso=IRN>
 - ¹² <https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>
 - ¹³ http://www.eia.gov/forecasts/steo/pdf/steo_full.pdf
 - ¹⁴ <http://www.nasdaq.com/markets/crude-oil-brent.aspx?timeframe=5y>
 - ¹⁵ <https://www.eia.gov/petroleum/weekly/>
 - ¹⁶ <http://www.state.gov/e/eb/tfs/spi/iran/jcpoa/>
 - ¹⁷ <https://www.treasury.gov/press-center/press-releases/Pages/jl0144.aspx>
 - ¹⁸ <http://www.worldbank.org/en/country/iran/overview>
 - ¹⁹ [*World Bank, Economic Implications of Lifting Sanctions on Iran, July 2015*](#)
 - ²⁰ <https://www.fas.org/sgp/crs/weapons/R44320.pdf>
 - ²¹ <http://csis.org/publication/changing-patterns-arms-imports-middle-east-and-north-africa>
 - ²² <http://csis.org/publication/changing-patterns-arms-imports-middle-east-and-north-africa>