

ISSUE BRIEF: IMPLICATIONS OF NEW OIL SANCTIONS ON IRAN

By Richard Nephew

MARCH 2015



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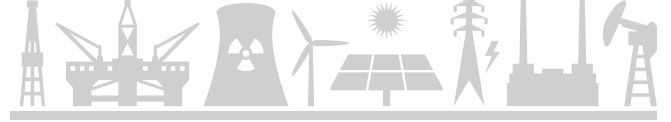
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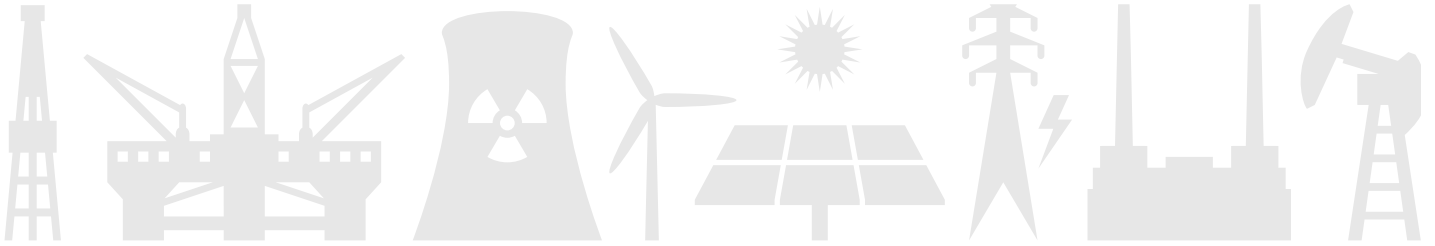


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By Richard Nephew*

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***Richard Nephew** is the Program Director for Economic Statecraft, Sanctions and Energy Markets at the Center on Global Energy Policy. Prior to joining the Center, Nephew served as Principal Deputy Coordinator for Sanctions Policy at the Department of State, a position he held since February 2013. Nephew also served as the lead sanctions expert for the U.S. team negotiating with Iran, and from May 2011 to January 2013, he was the Director for Iran on the National Security Staff where he was responsible for managing a period of intense expansion of US sanctions on Iran.



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EXECUTIVE SUMMARY

Sanctions imposed by the United States and its partners against Iran's oil sector have had a major impact in debilitating both the sector itself and the broader economy. It is likely that this sector will be the target of additional pressure should the international sanctions campaign against Iran be renewed in full.

Leaving aside the current political debate over whether new US sanctions should be imposed on Iran or threatened in law at this moment in time, it is critical to consider what impact such sanctions would actually have on Iran, Iran's customers, and oil markets in general. Though some argue that the United States could re-create its success from 2012–2013 in imposing high costs on Iran, this is not guaranteed, and changes in oil markets, the international environment more generally, and Iran's response to sanctions pressure will have a bearing on both the effect of more sanctions and their utility.

This briefing examines the recent history of Iran oil sanctions and seeks to draw lessons for their renewed application to date. In short, I find:

- It may be possible to achieve steeper cuts in Iran's oil exports in the event of a renewed sanctions campaign following a collapse in ongoing nuclear negotiations between Iran and the members of the P5+1 (China, France, Germany, Russia, the United Kingdom, and the United States, coordinated by the European Union).
- Steeper cuts would be predicated both on the continued oversupply of oil markets from non-Iranian sources and the collapse of the process being blamed on Iran (or, at a minimum, not definitively blamed on the P5+1).
- However, the overall impact on Iran from both the economic and political perspectives may be less than anticipated by its advocates because of the resiliency of the Iranian economy, its diversified export sectors, the low price of oil and

relatively high value of non-oil exports to Iran, and the restricted cash reserve that sanctions have forced Iran to build abroad.

- Given this, as well as Iran's usual "resistance" approach to international pressure and general readiness to advance its nuclear program in response to new sanctions, an appropriate sanctions approach to take would require both a broader and a deeper reach into the Iranian economy. Still, such an effort would be—in effect—a bet being laid by the P5+1, in general, and by the United States, in particular, that Iran's response would—in time—be positive in the face of additional pressure. This cannot be guaranteed and is, at best, speculation by all sides of the debate.

INTRODUCTION

Sanctions imposed by the United States and its partners against Iran's oil sector have had a major impact in debilitating both the sector itself and the broader economy. It is likely that this sector will be the target of additional pressure should the international sanctions campaign against Iran be renewed in full. US Senate bill 269 (S. 269), which was sent to the floor at the end of January 2015, would further restrict oil exports as well as the export of other oil products.

Leaving aside the current political debate over whether new US sanctions should be imposed on Iran or threatened in law at this moment in time (when the potential for a deal with Iran exists), it is critical to consider what impact such sanctions would actually have on Iran, Iran's customers, and oil markets in general. Some proponents of the new sanctions legislation optimistically point to the profound success enjoyed by the United States and its partners in reducing Iranian oil exports in 2012–2013, and they argue that additional pressure on Tehran could be achieved in 2015 provided Washington gets serious about enforcement on oil. Others note that the trend of significant reductions in Iranian purchases was already flattening out by the end of 2012, suggesting that it would be difficult—absent fundamental changes to the oil market or to international views of Iran—to squeeze more water from the stone.

The recent collapse in the price of oil may indeed qualify as a fundamental change to the oil market, theoretically freeing those who were otherwise resistant to reducing their purchases of Iranian oil. Similarly, a breakdown in talks between Iran and the P5+1 (China, France, Germany, Russia, the United Kingdom, and the United States, coordinated by the European Union) could create a situation in which deeper cuts to Iranian oil exports are diplomatically achievable, assuming that a breakdown in nuclear talks is blamed on Iran rather than the United States. But even if sanctions are politically possible, there remains an open question about the value of them. This brief starts with a summary of the sanctions in place on Iran today. It then discusses Iran's current economic status and the status of Iran's oil sales today. It then examines the

economic impact on Iran, on Iran's oil customers, and on the market more generally from a further reduction. Finally, this brief concludes with a discussion of the political impact of further oil sanctions.

Overall, the conclusion of this analysis is that, although more sanctions on Iran may prove to be necessary, focusing those sanctions on Iran's oil sector would be insufficient to apply serious pressure and that deeper, broader, and more aggressive measures would be necessary. That said, this analysis also argues that it is possible that—in the footrace between sanctions and Iranian nuclear developments—additional sanctions may also not prove sufficient to achieve a positive resolution of international concerns with Iran's nuclear program.

CURRENT SANCTIONS ON IRAN

Although other sanctions programs may have cut deeper into a country's ability to engage in normal activity (e.g., the Iraq sanctions regime in the 1990s), perhaps no other country in history has been the target of so many different, individual sanctions authorities as Iran. This program has emerged as an outgrowth of both the policy responses to Iranian provocations since the Iranian revolution in 1979 as well as sanctioners taking advantage of what the international market could bear over time. The cumulative effect has been a sanctions program that is extensive in reach and comprehensive in application. While a longer research paper would be necessary to outline the sanctions according to individual statute or national decision, for the purposes of this piece, the below serves as a nonexhaustive description of particularly relevant sanctions:

- Crude oil:** Importers of Iranian oil and their banks are potentially subject to prohibitions in their activities with US persons unless the country importing Iranian oil has reduced its purchases significantly. However, under the Joint Plan of Action (JPOA) agreed to by the P5+1 and Iran in November 2013, sanctions are being waived by the United States so long as purchasers do not increase their purchased amounts beyond the levels at the time of the JPOA. This does not include purchasers within the European Union, which has a general prohibition on the purchase of Iranian crude oil.
- Other petroleum products:** The purchase of any other petroleum product from Iran is potentially sanctionable in the United States, regardless of whether reductions in the purchase of these goods have taken place. The European Union similarly has an import ban on these products.
- Petrochemicals:** The purchase of petrochemical products from Iran is potentially sanctionable in the United States generally, and the European Union similarly has an import ban on these products. However, under the JPOA, US and EU sanctions on Iranian petrochemical exports have been suspended.
- Financial:** Iranian financial institutions are not permitted to undertake transactions in the United States unless specifically licensed by the Department of the Treasury. The European Union, Canada, Australia, and other countries have similar lists and prohibitions. Further, any transactions with a large number of specific Iranian financial institutions (e.g., Banks Sepah, Saderat, Melli, Mellat) by any financial institution worldwide are potentially sanctionable under US law.

The Central Bank of Iran is treated somewhat differently. Transactions with the CBI are permitted so long as they take place only in countries that have significantly reduced their purchase of Iranian oil since December 2011 and so long as the transactions only involve bilateral or humanitarian trade. US sanctions could potentially be triggered by any other use of CBI funds, including transferring oil or other revenues on the CBI's behalf. This provision has been modified under the JPOA to permit Iran to repatriate \$700 million per month in restricted assets.

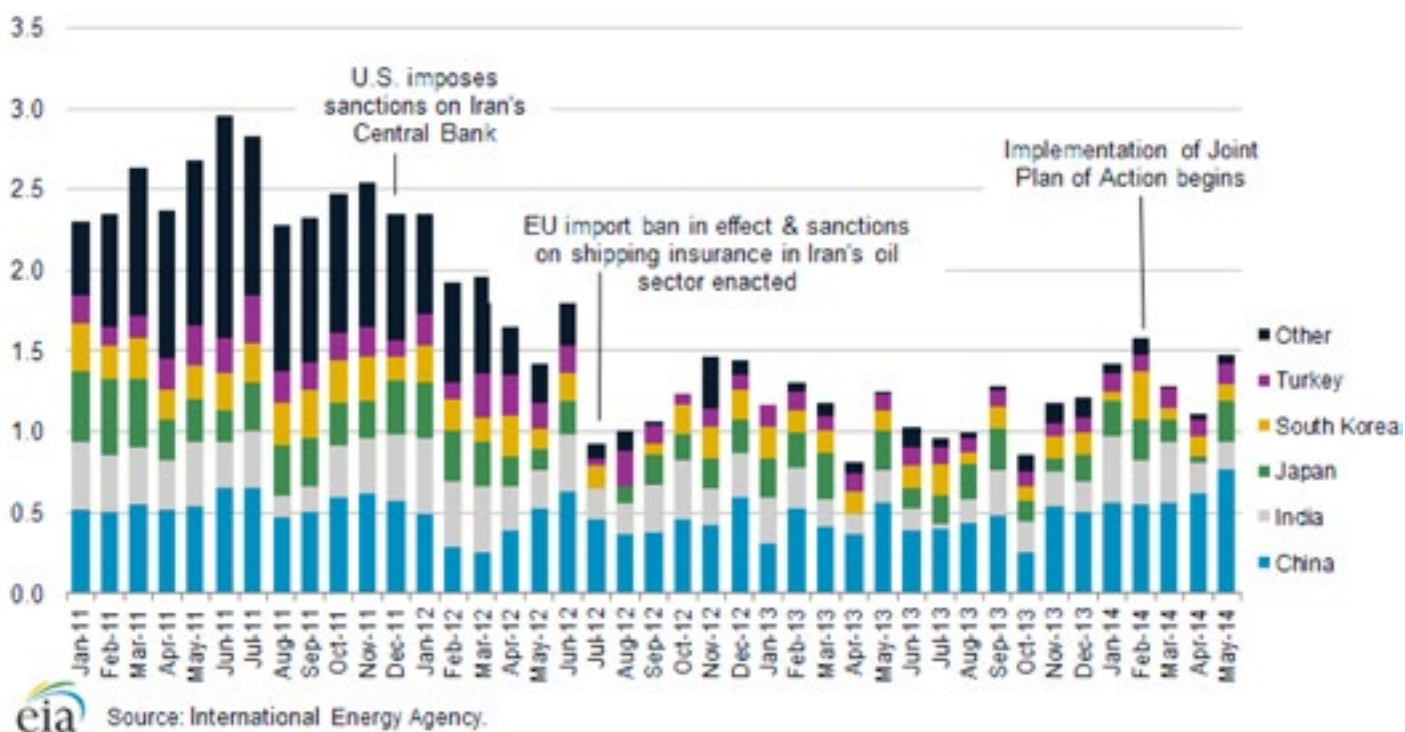
IRAN'S CURRENT ECONOMIC STATUS AND CRUDE OIL EXPORTS

One of the results of the sanctions described above (and the many others not cited) is that Iran's economy has steadily deteriorated since 2011. The deterioration picked up markedly in 2012 with the passage of the FY12 National Defense Authorization Act (NDAA)—which imposed the threat of sanctions for states that did not reduce their purchases of Iranian oil—and its robust enforcement by the Obama administration. Both the administration and Congress reinforced these authorities with other measures that sought to close loopholes and tighten enforcement of the measures, including through the expansion of the authorities to put at risk not just banks but also the importers themselves (in Executive Order 13622) and to tie up Iran's accrued revenues in restricted accounts abroad.

The result is that, from 2012 to 2013, Iran's economy cratered. According to the World Bank,

Iran experienced a GDP contraction of 5.8% during those years, and by a further 1.7% in 2013–2014. Unemployment hovered around 13% according to official statistics—with suspicion abounding that it was higher than 20%—and overall economic participation figures remained around 37%. Inflation reached 30–40%, again according to official statistics. In 2011, Iran was the third-largest exporter of crude oil in the world at 2.4 to 2.5 million barrels per day (million b/d). Today, Iran's oil sales hover between 1.0 and 1.1 million b/d. Iran's total number of customers also dropped from twenty at the end of 2011 to just six: China, India, Japan, South Korea, Taiwan, and Turkey. When the exports of condensates and some off-the-books Iranian shipments of crude to the Assad regime are added to the equation, Iran presently exports around 1.4 to 1.5 million b/d.

Figure 1: Monthly Iranian exports of crude oil and condensate
(Millions of barrels per day)



ECONOMIC IMPACT TO IRAN OF FURTHER REDUCTIONS IN OIL SALES

Assuming that Iran's customers can be convinced to reduce their purchases, Iran would suffer significant consequences from a further loss in oil sales, but it is unclear what near-term impact these consequences would have on the overall Iranian economy and Iranian decision-making. As mentioned above, current sanctions already restrict Iran's ability to use the money it earns from the sale of its oil. It is obviously true that reducing its sale of oil and related products to zero would also decrease its revenue from this sector to zero, depriving Iran of a major source of national income as well as the ability to conduct the only trade presently permissible under US sanctions: bilateral trade with Iran's six current customers or humanitarian trade. Similarly, it is obvious that any reduction of Iranian oil sales adds up to less available funds for the government as a whole.

However, there are five key factors that could mute the impact of further reductions in Iran's export sales:

1. Non-oil trade remains a viable way for Iran to earn foreign currency and, depending on oil prices, may equal, if not exceed, Iran's present crude oil revenues under sanctions. Iran is working hard to reduce its overdependence on oil as its primary source of national income. Even prior to Rouhani's election, the Iranian government was investing in other industries (e.g., the automotive industry) with the ambition of finding new sources of export income and reducing Iran's vulnerability to swings in the oil market. Similarly, Iran sought to increase tax collection and to reduce its targeted subsidy obligations to shift the balance of its overall receipts and liabilities and to minimize the importance of oil revenue on the national budget. This has been reinforced under Rouhani and within the concept of the "Economy of Resistance," with FM Zarif only the latest official to underscore the importance of getting out from under oil.

This has been somewhat successful to date. According to Iranian customs data from mid-January, non-oil trade accounted for \$17.7 billion in total export revenue over the first ten months of the present Iranian fiscal year (which ends in March). This includes a variety of goods beyond the usually cited textiles and food products, such as cement, which is traded widely within the region and in ways that are difficult to monitor, police, and sanction. Non-oil trade's result for the Iranian economy has been quite favorable compared to oil as of late. At \$50 per barrel, for instance, Iran's current sales of 1.0 to 1.1 million b/d are only worth \$1.5 to \$1.6 billion per month, against the aforementioned rate of \$1.77 billion for non-oil trade.

2. The situation looks considerably less dire depending on how much oil and related products Iran may be permitted to sell even under the sanctions. Taking just crude oil aside, under S. 269, Iran would theoretically lose only 30% of its oil revenues within the first year and then reach an unspecified, *de minimis* level by September 2017. At a 30% reduction—for example, from 1,100,000 barrels per day to 750,000 barrels per day—Iran's revenue from oil sales would still be approximately \$27 billion per year at \$100 per barrel and \$14 billion per year at \$50 per barrel.
3. Iran may still be able to sell illicitly. Arguably, with oil prices today, there would be scant incentive for a major foreign purchaser to risk confrontation with the United States to buy one or two illicit cargoes. That said, in a crisis, the discounts that Iran might offer could be of sufficient value to risk a few cargoes a year, and individual smugglers—such as Dimitris Cambis, sanctioned in 2013 for his efforts to sell Iranian oil illicitly—would see a potential benefit of sufficient scale to try. Economically,

such sales would probably not amount to much, but in an environment of an attempted oil lockdown, they may be of some value to the Iranian government. Sanctions can respond to these transactions, but only after they have happened—unless intelligence information is extraordinarily good. US sanctions experts are skilled at “whack-a-mole,” but even they will miss a few cargoes without a complete blockade of Iran.

4. The balance of trade between Iran and the six customers is such that substantial positive balances have been built up in China, Japan, and South Korea. Indeed, this is one reason why, during negotiations on what became the JPOA, the United States offered—and Iran found attractive—the proposal to permit limited repatriation of some of these restricted assets. It was the only way that Iran could find to extricate even a portion of its held-up oil sales. As a consequence, the actual, practical economic impact of further reducing Iran’s oil sales—even to zero—may take time to manifest.
5. Iran has enough money saved up in its restricted accounts to keep humanitarian transactions flowing, even if other exports were not taking place. Humanitarian trade continues to be viewed as a third rail for US sanctions policy. Neither the administration nor Congress—including in S. 269—have proposed curtailing humanitarian trade. Iranian trade in humanitarian-related products has varied over time. However, according to data available from the World Trade Organization, Iranian imports of agricultural products and pharmaceuticals have been approximately \$10 to \$20 billion per year since 2010.

As such, current Iranian foreign-held reserves could still help them manage humanitarian imports for two to four years, assuming Iran continued to import such goods at the same rate as the previous several years and applied

all of its remaining reserves to meeting this demand. Maintaining humanitarian trade would also help insulate the regime from some of the backlash that otherwise could befall it.

Proponents of an oil-centric sanctions program would likely note that the current Senate bill also would expand the reach of sanctions to include other petroleum products, including gas condensates, which—taken in combination with reversal of JPOA relief on petrochemicals—amounts to a \$24 billion industry, based on latest Iranian customs data. A clampdown on these exports would also magnify the overall impact of the sanctions proposed. However, arguably many of the same problems described above—nonzero exports even under sanctions and smuggling—would still exist for these products. Moreover, such sanctions would not address the overall resilience of the Iranian economy and the rising exports of non-oil goods beyond condensates and petrochemicals.

Table 1: Iranian imports of agricultural products and pharmaceuticals, 2010–2014
(In US \$billions)

	2010	2011	2012	2013
Agricultural Products	9.4	11.3	14.0	14.6
Pharmaceuticals	1.4	1.8	1.6	2.0

Source: World Trade Organization, Time Series Database.

IMPACT OF LOWER OIL PRICES

As with any other oil exporter, low oil prices are hurting Iran's overall revenues, but the degree to which this may affect Tehran's thinking is hard to predict. Certainly, for the long term, lower revenues will hamper Iran's ability to conduct international trade and overall economic development. Similarly, lower prices on lower sale volumes would naturally result in lower revenues. Doubtless for this reason, Iran has publicly advocated that OPEC countries reduce production to help the price of oil to rebound. But with restrictions largely in place on its ability to utilize its oil revenues—with the exception of the modest \$700 million Iran is permitted to access monthly under the JPOA—the impact of lower prices on Iran from an immediate, pressure-inducing perspective is relatively small. Iran has already had to manage its economy on a smaller allotment of oil revenue and to adjust its budget accordingly. From this perspective, the sanctions on Iranian oil have acted as a major price cut already.

IMPACT ON IRAN'S CUSTOMERS AND OIL MARKETS

Prior to the recent collapse in global oil prices, there was widespread concern that there was insufficient spare capacity in global production to make up for a loss of Iran's present exports. Such concerns led Congress to include in the FY12 National Defense Authorization Act, which set up the oil reduction sanctions, a requirement for the president to determine every 180 days whether the oil market has sufficient spare capacity to afford an Iranian reduction in exports. Indeed, when the United States first began to implement its oil reduction strategy in 2012, there was wide speculation that the president would not determine that there was enough supply of oil in the market to permit the sanctions to be implemented. Contrary to these predictions and in keeping with the administration's strong support for vigorous application of US sanctions laws, the Obama administration pressed forward with the reduction campaign following the president's determination that there was, in fact, sufficient oil in the market. Successive presidential determinations led to the same conclusion.

With oil prices far lower than in 2012–2013, the expected market impact from losing Iran's production now would be limited. As CGEP Founding Director Jason Bordoff and Harvard University Professor James Stock concluded in their recent policy brief, "The Implications of Lower Oil Prices for the US Economy amid the Shale Boom": "while oil prices may not stay in the \$60s for long, it is reasonable to think they will be in the \$70s or \$80s for the next year or even several years, as the market may need to pull off as much as 1.5 million b/d of supply to balance, according to estimates by several market analysts." Such an amount of production neatly fits the volume that could be lost were Iran to be cut off from export markets altogether and may suggest that, far from imperiling global oil markets or threatening the economic interests of Iran's oil customers, removing Iran could help balance the currently oversupplied market.

This begs the question of whether Iran's customers

would follow the United States (and presumably the European Union) in pursuit of tougher oil sanctions in the event of the collapse of the negotiating process. As noted above, much of this decision may rest on how the talks collapsed and on perceptions of the quality of the offers presented to Iran.

Taking those issues aside, of the six remaining customers, it is reasonable to assume that Japan and South Korea, as close US allies, would support the United States in its efforts to reduce Iran's oil sales further. They would likely seek assurance from the United States that it would seek similar reductions from China, India, and Turkey, but—particularly given the drop in oil prices and no expectation of a return in the near term to prices of \$100 per barrel—convincing the Japanese and South Koreans that the United States was undertaking the necessary effort would not be insurmountable. Taiwan's purchases are sufficiently small to not be a major issue.

For China, India, and Turkey, the analysis is somewhat mixed. China has insisted that its reductions of purchases from Iran are the product of diversification of supply and nothing more. From this perspective, it would be reasonable to assume that China would prefer to keep some imports from Iran ongoing, both to maintain its diversification and to demonstrate its independence from Washington pressure. As a matter of government policy, India and Turkey have similarly insisted that they will not take direction from the United States on their energy import policies, but their refiners had made the reductions necessary to secure an exception to US sanctions until the JPOA was concluded in 2013. But, ultimately, price played a major role in the decisions of all three importers to remain customers of Iran to date, and the lower prices in the market—prompted by slumping international demand and market oversupply—would help each to decide to extricate themselves further from Iran.

POLITICAL IMPACT OF FURTHER REDUCTIONS IN IRANIAN OIL SALES

Given the economic analysis above, it is reasonable to conclude that a sanctions strategy that is focused on oil and still dedicated to achieving a diplomatic outcome on the nuclear issue may be achievable but could be less effective than in the past. Tehran's customers may be willing to part with Iran or at least to further draw down their reliance on the OPEC nation as a supplier, given oil market conditions. However, Iran's reliance on oil has dropped as a result of sanctions and a deliberate effort on the part of the Iranian government to reduce its vulnerability to oil as a weapon.

Iran has similarly been doing its best to prepare its population for the possibility that talks will collapse and promised sanctions relief will not materialize. Iranian national economic planning often comes with an inspiring moniker, meant to galvanize the population to manage difficult circumstances. (This past year was the "Economy of Resistance," following such others as the "Year of Economic Jihad" in 2011.) It is certainly true that, in the event of further sanctions, Iran's leaders would once again endeavor to bring the population along to support it by referencing the history of Iranian defiance and resistance against foreign oppression and invoking Shia religious heritage. This may capture some hearts and minds, and for those which it does not, Iran's leaders have demonstrated significant capabilities in crowd control and in squelching dissent. Over time, it is certainly possible that Iran's leaders could be forced to make concessions to get out from under sanctions, but this would take time, persistence, and unity in the international community to maintain the pressure.

Iran's efforts to insulate itself from the effects of further pressure have, ironically, been aided by sanctions in two respects. First, as noted above, Iran's inability to access the majority of its oil revenue in an unrestricted manner has already imposed fiscal stringency upon it.

But, second, international reductions in Iran's oil sales have gone low enough that it is unlikely that future reductions would replicate the same dramatic impact on the Iranian system. On December 31, 2011, Iran was earning approximately \$259.1 million per day in crude oil sales (using Brent's oil price on that day of \$107.97 per barrel). Two years later, when the JPOA was agreed to, Iran was earning approximately \$118.9 million per day in crude oil sales, a 54% reduction but an absolute loss of \$140.2 million per day (using Brent's oil price on November 30, 2013, of \$108.08 per barrel). As noted above, Iran's total oil sales now are worth approximately \$55 million per day. Simple arithmetic demonstrates that the absolute impact on a daily basis from further reductions will be less than in the past. This analysis can be taken too far, of course: half of something that used to be substantial is still better than nothing. But taken in combination with Iran's steps to reduce its vulnerability to oil sanctions as a weapon, it is possible that the shock value with which oil sanctions in 2012–2013 had some of their most important impact on Iranian thinking may be muted.

Moreover, Iran itself can raise the stakes—and historically has—when faced with new sanctions pressure. Hamid Baeidinejad, the Iranian MFA's political director and head of its expert delegations, made Iran's intention to renew this footrace abundantly clear in an interview with the Islamic Republic of Iran Broadcasting Corporation in Moscow on February 5, when he said: "Iran will certainly go ahead with its nuclear program in case of new US sanctions. We are going to install more centrifuges."¹² Though this topic could naturally be the focus of hundreds of pages of analysis, even a simple review of Iran's nuclear advances since 2005—when Iran's nuclear program was first emerging from its suspension negotiated with France, Germany, and the United Kingdom—shows this trend:

Table 2: Iran enrichment advances versus sanctions imposition

Year ¹³	# of installed centrifuges ¹⁴	Amount of enriched uranium gas stocks ¹⁵	Sanctions, laws, or actions from previous year
2005	0	0	E.O. 13382, permitting the imposition of sanctions on WMD proliferators
2006	359	0	
2007	3,194	75 kilograms (kgs) ¹⁶	UN Security Council resolutions 1737 (December 2006) and 1747 (March 2007)
2008	3,830	630 kgs	UNSCR 1803 (March 2008)
2009	4,766	1,653 kgs	
2010	8,794	2,770 kgs (3.5%) 33 kgs (20%)	UNSCR 1929 (June 2010) Comprehensive Iran Sanctions, Accountability, and Divestment Act (June) EU sanctions expansion (July)
2011	8,970	4,157 kgs (3.5%) 80 kgs (20%)	E.O. 13590, sanctioning Iran's petrochemical industry
2012	14,070	5,303 kgs (3.5%) 135 kgs (20%)	FY12 National Defense Authorization Act (NDAA), which created the oil reduction structure Iran Threat Reduction Act of 2012 (TRA) E.O. 13599, 13606, 13608, 13622, 13628, implementing aspects of Congressional legislation, expanding sanctions on human rights violators, Iran's energy sector, and those who evade sanctions
2013	20,103	7,154 kgs (3.5%) 196 kgs (20%)	Iran Freedom and Counterproliferation Act of 2012 (IFCA) E.O. 13645, sanctioning Iran's auto sector and exchange of the rial
2014	20,130	7,395 kgs (3.5%) 0 kgs (20%) ¹⁷	

¹³ In general, I chose November for the reporting because that is the last month for which we have an IAEA quarterly report each year. Picking November permits a closer “apples to apples” comparison across years, though this chart is purposefully oversimplified to show trends. Choosing November also helps to capture the FY12 and FY13 National Defense Authorization Act (NDAA) sanctions on Iran, both passed in December, in the year in which they had their immediate effects.

¹⁴ It is worth noting that the IAEA's reporting on centrifuge installation has become more granular over time and that, for several years, the IAEA reported simply that certain types of centrifuges were installed but offered no details as to precise numbers. Moreover, given that the usual R&D practices involve removing centrifuges, reconfiguring them, and similar, the numbers fluctuate even within short periods of time. These figures should be taken, therefore, as rough orders of magnitude.

¹⁵ The same applies to UF₆ gas amounts.

¹⁶ The IAEA's report of November 2007 indicated that the IAEA was waiting for results from an inspection to be conducted three weeks later. The February 2008 report indicated that the total amount of enriched 3.5% gas was 75 kilograms in early December.

¹⁷ In this case, I took the total amount of 3.5% UF₆ as reported by the IAEA in its November 24 update, given that, as of the quarterly report, Iran was feeding some of this material into its conversion process line. As of the November 7 IAEA report (as corrected), the total amount of 3.5% gas was 8,290 kilograms.

CONCLUSION

The question, therefore, is not whether Iran will respond to US sanctions pressure, but rather how swiftly and to what end. Iran's moves would, therefore, place a premium on truly robust pressure being applied in turn if the United States and its partners are to not only maintain parity with Iran's attempts to create a nuclear *fait accompli*, but also to try to either arrest its nuclear advances or force Tehran back into talks.

The analysis provided in this paper suggests that Iran will be more resilient to intensified pressure on its oil sector than proponents have hitherto argued, in part because the impact of sanctions already in place will continue to hinder Iran to perhaps even a greater degree than anything new that could be added. Indeed, the fact that Iran is already existing on limited oil revenues, due to US sanctions that restrict access to them, may help Iran insulate itself from any future sanctions pressure by forcing it to prioritize humanitarian trade over other national trade desires. Certainly such a reserve would not last forever, and tapping into it, without the possibility of broader foreign trade, would have dramatic implications for the value of the Iranian rial, the rate of inflation, and the quality of life for Iran's people. But if this analysis is correct, then a strategy of focusing on Iran's oil industry will likely not result in overwhelming pressure on the regime to abandon its nuclear program, at least in the near term.

The Iran sanctions effort has often been likened to a global game of “whack-a-mole”; if such a scenario as outlined above were to unfold, the better analogy may be to a medieval siege.

A key risk of such a strategy, of course, is that it is not certain that a nuclear sanctions race would be won by the sanctioning side. It is for this reason that any decision to terminate the ongoing nuclear talks should be informed by the possibility—if not yet the likelihood—that what is on the table now from Iran would be improved by additional time and sanctions. This may not be the case, and for this reason, the author supports moving forward as a general matter with a nuclear deal with Iran that—even if not perfect—addresses core US national security interests. However, should such a deal not be achievable or should the administration and Congress decide to test the alternative path of reentrenched sanctions pressure to achieve a better deal in the future, then it will be necessary to ensure that the sanctions path is as clear, effective, and facilitated by international support as possible if this strategy is to succeed.

In my next policy brief, I will provide some options and strategy suggestions on how to approach a renewed sanctions effort that goes beyond oil reductions, drawing on the analysis presented here.

BIBLIOGRAPHY

¹ IMF Article IV Staff Report, April 2014.

² World Bank Iran Overview, dated September 30, 2014, downloaded on February 17, 2015.

³ IMF Article IV Staff Report, April 2014.

⁴ IMF Article IV Staff Report, April 2014.

⁵ Krauss, Clifford. August 12, 2014. "With Natural Gas Byproduct, Iran Sidesteps Sanctions." New York Times. <http://www.nytimes.com/2014/08/13/business/energy-environment/with-a-natural-gas-byproduct-iran-sidesteps-oil-sanctions.html>

⁶ Tehran Times, February 7, 2015. "It's necessary to cut dependence on oil revenues, Zarif says." <http://www.tehrantimes.com/politics/121620-its-necessary-to-cut-dependence-on-oil-revenues-zarif-says>

⁷ Which does not include petrochemicals or gas condensates.

⁸ Department of Treasury Press Release, March 14, 2013. "United States exposes Iranian shipping scheme." <http://www.treasury.gov/press-center/press-releases/Pages/j11879.aspx>

⁹ Data as downloaded on February 4, 2015, from the WTO Time series database entry for Iran.

¹⁰ Moghtader, Michelle. January 19, 2015. "Iran sees no OPEC shift toward a cut, says oil industry could withstand \$25 crude." Reuters.

¹¹ McQuaile, Margaret. July 28, 2014. "Iran's oil exports hold at higher levels as nuke deal extended." Platts. <http://www.platts.com/news-feature/2014/oil/iran-oil-sanctions/index>

¹² IRIB, February 5, 2015. "Iran to expand N-program if US pursues bans: Baeidinejad." <http://english.irib.ir/news/iran1/item/204207-iran-to-expand-n-program-if-us-pursues-bans-baeidinejad>

