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JULY 2015

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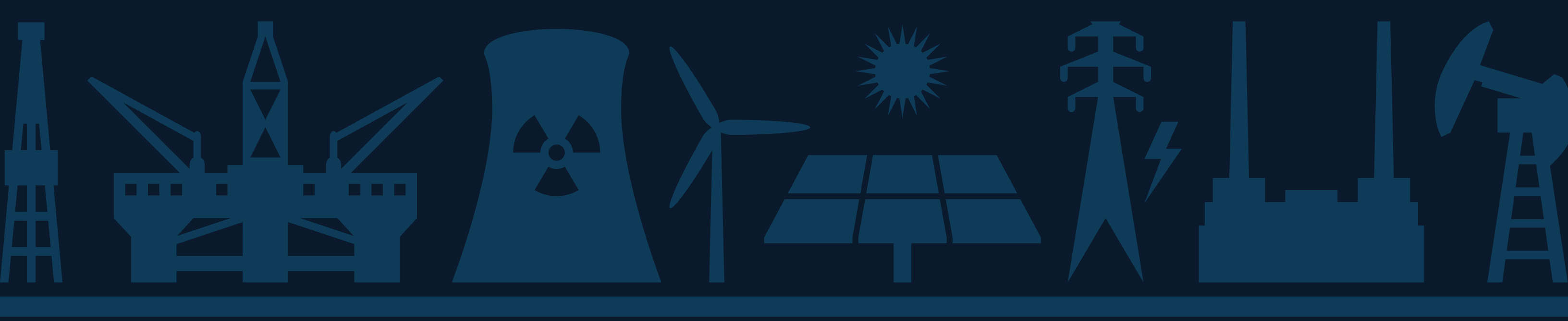

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IMPLICATIONS OF SUSTAINED LOW OIL PRICES ON IRAN

By Richard Nephew and Djavad Salehi-Isfahani*

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ACKNOWLEDGEMENTS

The author wishes to thank Bijan Khajehpour, Katherine Spector, Jason Bordoff, Matthew Robinson, and two anonymous reviewers for their very helpful comments on earlier drafts.

This policy paper represents the research and views of the authors. It does not necessarily represent the views of the Center on Global Energy Policy.

This paper may be subject to further revision.

EXECUTIVE SUMMARY

Unlike many other major petroleum exporting countries, the drop in oil prices since mid-2014 has affected the Iranian economy modestly, at least in comparison to the international sanctions regime in place against Tehran. The sanctions regime imposed against Iran three years ago created the sort of massive shock for the Iranian economy that is being faced now by other oil-producing states. The oil price drop was, therefore, a second, lesser issue for Iran that—for all of its effects—is less of a fundamental problem for the Iranian economy than the sanctions imposed against it.

Iran's limited access to the revenue from its oil sales since February 2013 acted, in effect, like a major price reduction. Under US sanctions, banks holding Iran's oil revenues in China, India, Japan, Korea, Taiwan, and Turkey have prevented these revenues from being used or transferred, other than in support of bilateral trade or for the purchase of humanitarian goods. This situation has not improved through P5+1 (China, France, Germany, Russia, the United Kingdom, and the United States) and Iran's Joint Plan of Action (JPOA), under which Iran only has access to $700 million of its oil revenues held abroad per month. Iran's imports have shifted to favor its remaining oil customers but still has not equaled the amount of money that Iran has earned through oil sales to them. The result has been an accretion of revenues in restricted accounts in those six customers' banks and a requirement for Iran to plan as if these revenues are largely inaccessible.

In response to this first fundamental shock, Iran has already begun undertaking the appropriate policy response. First, Iranians elected Hassan Rouhani to the presidency in June 2013, in part in response to his campaign promises to right the Iranian economic ship. Through his election, a coterie of technocrats—last in office under President Khatami (1997–2005)—has returned to power in Tehran, bringing with them a more rational economic approach and policies. This has included but is not limited to efforts to change the manner in which Iran spends national revenue, reduce Iran's dependence on the availability of oil revenues, and address problems of government-related corruption. Given vastly improved management over the last administration, Rouhani's government is consistently posting better numbers regarding inflation and economic growth, although job creation and unemployment reduction remain more difficult hurdles to overcome.

The authors conclude that President Rouhani's long-term plans for Iran's economy, however, hinge on sanctions being removed. Iran could benefit from diversifying away from dependence on oil for export revenue, but sanctions have also limited Iran's ability to obtain support and materiel necessary to create viable, nonoil export sectors. If sanctions were to remain in place, Iran could benefit from higher oil prices and from changing its approach to domestic fuel subsidies to permit the government to collect revenues from internal consumption. But without sanctions relief, Iran will not be able to achieve its goals of increasing employment and bringing inflation down further and bringing the country's overall growth trajectory closer to its potential. Sanctions simply create too many problems and impair Iran's ability to undertake policy adjustments to address its broader economic challenges.

INTRODUCTION

Distortions are present in the oil industries of many major petroleum exporting countries. However, perhaps no other country has as many different factors at play in its oil sector as Iran. Even prior to the imposition of international sanctions against it, Iran managed its oil production in different ways than others and in response to a complex history of foreign concessions, nationalization, and, ultimately, popular uprising. With international sanctions, Iran's oil sector operates under constraints that make it even more difficult to discern precisely what will happen in response to individual stimuli and, in particular, what the implications would be of a major, sustained reduction in oil prices. Moreover, with international sanctions presently the subject of negotiations between Iran and members of the P5+1 (China, France, Germany, Russia, the United Kingdom and the United States), it is possible that these sanctions might soon be modified, reduced, or terminated altogether.

Taking these various factors into account, this assessment has formed the following conclusions about Iran's oil economy under a low-price scenario:

- Although a drop in oil prices naturally affects Iran like any other oil supplier, the effects are distorted by virtue of the international sanctions regime in place against it.
- The decline in Iran's oil exports, as well as its limited access to the revenue of its oil sales since 2012, have, in effect, acted like a major price reduction in terms of Iran's near-term ability to utilize its oil revenues. For example, imports in 2014 were down by 23 percent compared to 2012. As such, Iran experienced the oil-price shock that is only now being confronted by other oil producers as early as three years ago.
    - Under P5+1 and Iran's Joint Plan of Action (JPOA), Iran only has access to $700 million per month of its oil revenues held abroad.
    - Under US sanctions, and with the exception of the aforementioned $700 million, banks holding Iran's oil revenues in China, India, Japan, Korea, Taiwan, and Turkey have prevented these revenues from being used or transferred, other than in support of bilateral trade or for the purchase of humanitarian goods.
    - Iran's imports have shifted to favor its six remaining oil customers but still has not equaled the amount of money that Iran has earned through oil sales to them. Over time, a sustained, major reduction in oil prices would undermine Iran's ability to engage in even this trade, but this would take time to manifest.
- Iran has already responded to the loss in access to oil revenue by electing Rouhani to the presidency in June 2013, thus restoring to power a competent assemblage of experts and technocrats. It has also responded by changing its budgeting to reduce dependence on the availability of oil revenues.
- President Rouhani's long-term plans for Iran's economy, however, hinge on sanctions being removed. Oil price will be a factor, and a recovery in oil prices could enable Iran to reform still further its damaged economy, but sanctions relief remains the main driver for Iran's economic future.

This paper begins by reviewing the history of Iran's oil industry and the impact that sanctions have had on it to date. The paper then describes the steps taken by President Rouhani since his election to reform the Iranian economy. The paper concludes by providing an assessment of what the future looks like for Iran's economy, both in the context of a deal that removes sanctions and given the possibility of future moves in the price of oil.

IRAN'S OIL AND GAS SECTOR

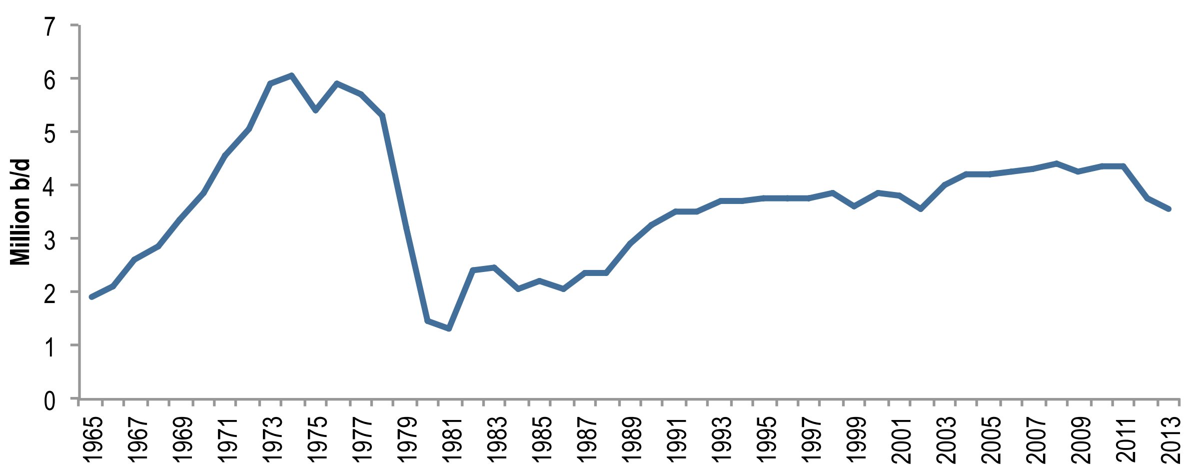
Oil, natural gas, and related products have been at the center of Iran's economy and development, as well as its political life, since oil was first discovered there in 1908.

Prior to World War II, Iran was a critical link in the British Empire's supply chain in Asia, providing the fuel needed to support the British army and navy in their operations in India and Southeast Asia. The importance of Iran to Allied war efforts was underscored when British and Soviet forces occupied Iran at the start of World War II. Following World War II, the British continued to play a significant role in the development of Iran's oil and gas sector. However, growing dissatisfaction in Iran, linked to the unequal distribution of the profits from the sale of Iranian oil, resulted in the Iranian Majles's decision to nationalize Iran's oil industry in 1951. This decision was effectively reversed in 1953, following the coup against Prime Minister Mossadegh, when foreign companies were permitted to, once again, play a role in Iran's oil extraction. In 1979, during the Iranian Revolution, the oil industry was again nationalized by the new government. Since that time, the Iranian constitution has prohibited foreign concessions of any Iranian natural resource, and the sale of oil is controlled exclusively by the Iranian government.

Oil has remained the essential economic sector of the Islamic Republic of Iran. However, Iran has been unable to replicate the production levels it enjoyed prior to the revolution, which reached as high as 6 million barrels per day (bpd) in the late 1970s, in large part due to the absence of sustained foreign technical support, unattractive economic policies (especially the "buyback" contracts that were considered commercially unappealing to international investors), political instability immediately following the revolution, and the damage that resulted from the war with Iraq in the 1980s.

As Figure 1 shows, Iran was able to achieve some recovery following the end of the war with Iraq and throughout the 1990s with the reforms undertaken by then-president Rafsanjani that loosened restrictions on foreign access to and profits from Iran's oil industry. Still, relatively low oil prices in the 1990s, political instability, mismanagement, lagging private-sector investment, and low foreign participation in Iran's oil sector limited the benefit of these reforms. Some attempts were made to reform Iran's cumbersome bureaucratic structure and to

Figure 1: Iranian Oil Production, 1965–2013
(In millions of barrels per day)



Source: BP Statistical Review 2014.

As Figure 1 shows, Iran was able to achieve some recovery following the end of the war with Iraq and throughout the 1990s with the reforms undertaken by then-president Rafsanjani that loosened restrictions on foreign access to and profits from Iran's oil industry. Still, relatively low oil prices in the 1990s, political instability, mismanagement, lagging private-sector investment, and low foreign participation in Iran's oil sector limited the benefit of these reforms.[1] Some attempts were made to reform Iran's cumbersome bureaucratic structure and to offer foreign companies ways to invest in Iran's oil sector in a fashion consistent with the constitution through new contract structures. These included "buyback" contracts that offered service contracts to international oil companies for their work on Iran's fields and an agreed rate of return but still lacked the more attractive upsides available in other countries. But the overall complexity of operating in a revolutionary country with an intensely anti-Western posture played a substantial role in deterring investment. After US sanctions were announced in 1996 to target foreign investment in Iran's oil and gas sector, some firms were also deterred by the threat of exclusion from the US market. However, throughout the 2000s, major energy firms in Europe and Asia sought and performed contracts in support of Iran's oil and gas sector, intended to repair and stabilize damaged oil fields and improve their productivity, while at the same time exploring and developing new sites.

However, intensified US, European, Japanese, and Korean sanctions in 2010 undermined these developments, and with the imposition of new sanctions in January 2012 targeting Iran's Central Bank and, by extension, Iran's oil exports, oil production has dropped to levels not seen since during the Iran-Iraq war.

Natural gas, for its part, is an increasingly important element of Iran's economy, but its benefits have yet to be fully exploited because of the high consumption of natural gas domestically and weak infrastructure to transport it abroad. Iran operates pipelines for the sale of natural gas to Turkey, Azerbaijan, and Armenia, but the latter two customers operate on the basis of natural-gas swaps (whereby Iran agrees to sell natural gas to Azerbaijan and Armenia in exchange for purchasing the same amount from them as a way of dealing with incomplete infrastructure in the northwest portion of Iran). Despite holding the world's second-largest natural-gas reserves after Russia, Iran has been thwarted in its goals to expand production and sales of gas by sanctions that impede its ability to develop pipelines with its neighbors or liquefied–natural gas plants.

IMPACT OF OIL SANCTIONS

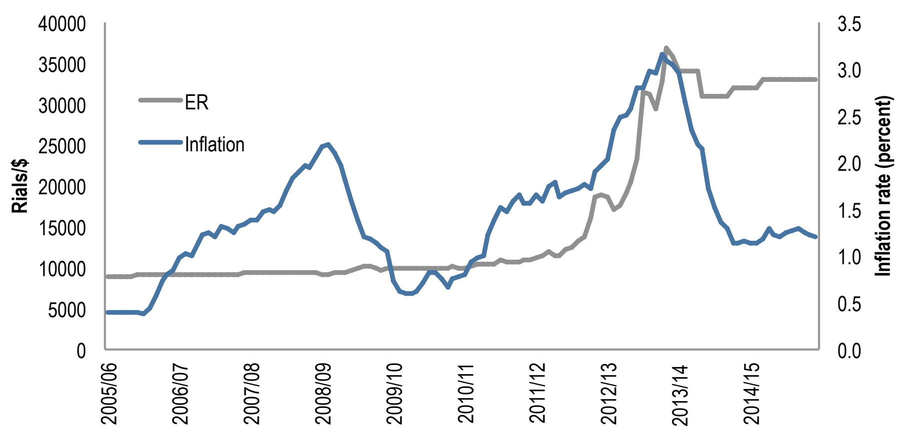
As noted previously, sanctions have impaired Iran's oil sector since 1996. However, the overall impact on Iran's economy of sanctions targeting the oil sector was more a long-term problem to be managed and countered than an immediate threat prior to US and European efforts to reduce Iran's oil exports significantly beginning in January 2012. Europe's decision to cut off all purchases of Iranian crude oil, refined petroleum, and petrochemicals cost Iran 25 percent of its oil sales at that point. Similar decisions on the part of four other purchasers to reduce their purchases to zero, combined with reductions on the part of the remaining six, cut Iran's sales from around 2.5 million bpd in 2011 to between 1 and 1.1 million bpd at the end of 2013.

The loss of this revenue damaged the overall economy and undermined ongoing attempts to improve it, such as subsidy reform. However, the combination of lower sales and the February 2013 imposition of new restrictions on foreign banks receiving Iran's oil revenues proved catastrophic. From that point forward, though Iran could still sell oil to the six remaining customers, it was prohibited from repatriating its oil proceeds or using them in anything other than strictly bilateral or humanitarian trade. This was achieved through a new US law—the Iran Threat Reduction Act and Syria Human Rights Act of 2012—which stipulated that, as of February 6, 2013, any financial institution that conducts transactions on the part of the Central Bank of Iran (CBI) would be prohibited from holding or opening correspondent relationships with US financial institutions. The only exceptions granted were transactions involving humanitarian or strictly bilateral trade. The end result is that Iran, caught off guard by the adherence of foreign banks to the sanctions imposed by the United States, lost the ability to utilize a large—and growing—portion of its national reserves, which became informally restricted from that point forward.

Naturally, the loss of most of Iran's oil revenue and access to the rest contributed to a shortfall in Iran's national budget, with a resulting drain in Iran's ability to engage in a variety of national projects, such as infrastructure development, subsidies for other export industries (such as the auto sector), and even subsidy payments for individual Iranians. Iran's currency—the rial—was also put under severe stress. As confidence waned in Iran's ability to weather the economic storm that sanctions intensified, so did confidence in the rial itself. Iranians began to seek alternative stores of currency, purchasing gold and hard currency in order to manage the effects of near 40 percent inflation and the

Figure 2: Inflation and the Exchange Rate

Rials/$



Source: Central Bank of Iran. Inflation is a twelve-month moving average, and the exchange rate is the free-market rate.

depreciation of the rial, and contributed to what came to be seen as, in effect, a run on the rial in October 2012. In just one day alone, October 1, the rial lost 15 percent of its value.

As a direct consequence of these sanctions, Iran's economy experienced a significant downturn in 2012 and 2013. According to the Central Bank of Iran, GDP in 2013 was 9 percent below its value in 2010.[2]

ADJUSTING TO LOWER OIL REVENUES

The standard textbook analysis of economic adjustment to a decline in export earnings begins with the depreciation of the country's exchange rate. This, in turn, affects relative prices in the local economy, which help to boost exports and limit imports. The result is that resources are pulled from domestic consumption and redirected into export sectors, hopefully restoring a semblance of the balance lost when export earnings declined in the first place.

This mechanism does not work well in Iran's case for two reasons:

1. Iran's exports are mostly based on hydrocarbons—crude oil and petrochemicals—that do not use many local resources that can be diverted. In other words, their supply is inelastic and does not respond to the stimulus of devaluation. In 2013, following the 200 percent devaluation of the rial in 2012 (Figure 2), oil exports actually fell 5 percent and nonoil exports (mostly hydrocarbon-based petrochemicals) rose by 6.4 percent.

2. Iran's economy is not very flexible. Markets play an important role, but government interventions supersede market signals at crucial junctions. The most important is the exchange rate itself. As the main earner of foreign exchange due to the Iranian constitutional restriction on who owns and can sell Iran's oil, the government plays a large role in the determination of the exchange rate. Government control over the exchange rate allows political influences to blunt this important tool for adjustment to lower oil revenues. During the Ahmadinejad administration (2005–2013), due to a combination of high oil prices, low exchange rates, and a desire for foreign imports within the population, cheap imports flooded the Iranian market and weakened the country's industrial base. The exchange rate remained fairly stable during a decade-long oil boom (2002–2011), while prices for goods in Iran increased three times faster than did prices in the United States and other OECD countries. The disparity of the dual exchange rate that developed both served a political purpose for Iran's government, which took some pride in a strong currency, and enabled profiteering by some in the government and security forces who were able to import goods at the official rate and sell them at the real one.

As noted, this changed significantly with the tightening of international sanctions in 2011–2012 and the resulting drop in the value of the rial. Although the large adjustment in the exchange rate was a huge shock to Iran's economy, it did help correct some of the worst distortions, in part by eliminating the opportunity for the aforementioned profiteering and creating an incentive for domestic manufacturers of goods that Iran might have otherwise imported. It also created an opportunity for Iranian manufacturers to export goods that had not traditionally been part of Iran's modern trade, such as cement. Unfortunately for Iran, though, the relative price corrections were insufficient to bring about an orderly economic adjustment to lower oil revenues. In addition to a lack of responsiveness of oil exports to the exchange rate, the large role of the state in the economy prevented some key prices, such as energy, food, and medicine, from adjusting, and—in doing so—redirected more resources toward exports.

More importantly, restriction on Iran's access to global trade made it difficult for the economy to adjust. Iranian agricultural and industrial production relies heavily on imported inputs. Though these items may be modest in value relative to a sector's value added, they are often critical inputs in production. Sanctions inhibited, and continue to inhibit, Iranian producers' access to a wide range of technologies that enable them to reorient their production toward exports, deepening Iran's import dependence. Similarly, in the medium and long terms, adjustment requires changes in production technology, which require access to global markets and normal financial relationships, such as the availability of letters of credit to conduct trade. These were curtailed by sanctions as well.

PRESIDENT ROUHANI'S EFFORTS SINCE JUNE

The year 2013 was, therefore, critical for Iran and its ability to manage the constraints placed upon it. Iran's economy was placed front and center in the presidential campaigns that took place in the first half of the year, culminating with the election of the candidate who laid out a clear path for improving the state of the Iranian economy, starting with seeking the lifting of sanctions: Hassan Rouhani.

Upon taking office, Rouhani would have liked to pursue a stimulus program for the economy and to reduce unemployment, particularly youth unemployment, which had been over 20 percent for more than a decade. However, with inflation topping 30 percent for two consecutive years, in 2012 and 2013, containing inflation became his first priority. Rouhani had little choice but to follow tight fiscal and monetary policies to rein in inflation. This meant that he had to forego development expenditures, which are historically the impetus for private-sector investment and economic growth. As a result, they fell by two-thirds in 2012–2013 compared to prior years. On the positive side for Iran, Rouhani achieved lower inflation in 2014 as a result of these efforts, with rates less than half of the 40 percent mark reached in 2012 (Figure 2).

Rouhani also took painful steps to reduce government expenditures by dealing with two large programs inherited from his free-spending predecessor that placed heavy burdens on the government budget and banking system: the subsidy-reform program and a low cost–housing scheme known as Maskan Mehr.

- The subsidy-reform program was intended to deal with the distortions created in Iran's economy by a long history of artificially low food and energy prices by turning the program into a direct social-assistance effort for Iran's poorest citizens. The program involves letting prices on food and energy rise but compensating for the resulting impact on the poor by creating a direct cash-transfer program. The energy aspect of the program was also intended to deal with the impact of international sanctions, particularly on gasoline. Before gasoline sanctions in 2010, Iran imported about one-third of its gasoline consumption, and although it was then the third largest producer of natural gas in the world, Iran was a net importer of natural gas due to wasteful consumption at home. Iran remains a net importer of natural gas, but has—by necessity—trimmed its imports of gasoline.

  Well intended but not well executed, the program had stalled at the end of the Ahmadinejad era with prices still artificially low and direct transfers not fully funded. In 2013, the program's deficit amounted to more than 100 trillion rials ($3 billion), about 8 percent of total government expenditures. During his first year, President Rouhani all but eliminated this deficit by increasing prices of subsidized goods by 30–50 percent. However, political and legal considerations, as well as economic need, demanded that the subsidy program remain in effect. His government continues to honor the monthly cash transfer of about $15 per person per month, for a total of 420 trillion rials ($14 billion) per year. Similarly, with respect to energy, the price increases since 2010 have been in large part eroded by subsequent inflation. Since taking office, Rouhani has raised energy prices once, by about one-third, which leaves Iranian energy prices still below the global market and far below prices in neighboring countries.

- The low-cost housing scheme known as Maskan Mehr, which started in 2006, was not directly funded from the public purse but placed a heavy burden on the banking system and eventually the Central Bank, which printed money to cover the program's shortfalls. Rouhani practically stopped this program, with hundreds of thousands of apartments half-complete, in order to stop the financial bleeding from what had become an overly expensive project.

Still, Rouhani and his advisors concluded upon his election that only through relief from sanctions would Iran be able to reverse its current course. The Iranian government began to meet secretly with the United States in August 2013 to see whether a diplomatic solution to the nuclear standoff could be achieved.

The JPOA reached by the P5+1 and Iran in November

2013 eased the constraints on Iran to a modest degree. Pursuant to the JPOA, Iran was permitted to gain access to $700 million per month of its "restrained" oil revenues. However, at the time in which the JPOA was concluded, this was only approximately 23 percent of the total monthly revenue of its much-diminished oil sales. (At $100/barrel, Iran was estimated to be selling approximately $3 billion a month of oil.) Iran would still be permitted to use the remaining balances for humanitarian or bilateral trade with its six remaining oil customers, but with the expectation that—as with the previous two years—these purchases would be less than the total amount of Iranian oil revenue and that restricted balances would continue to rise.[3]

However, one curious effect of the sanctions is that the restrictions on Iranian oil revenues also insulated Iran somewhat from the impact of the sudden decrease in oil prices since mid-2014. The sanctions imposed on Iran sharply curtailed the purposes to which its oil proceeds could be applied. As a consequence, when oil prices dropped, the incremental shock to Iran's revenue stream was relatively small: in effect, the price drop and resulting shock had already occurred to Iran three years before. The drop in oil prices, therefore, represented a second, smaller shock to the Iranian system. Iran had already begun to adjust its government-budgeting process to account for less oil being sold even prior to the drop in oil prices in mid-2014. Rouhani's budget proposal of December 2013 set oil's price at $100 per barrel, even as oil was trading at $110, and assumed that only 1.1 million bpd would be sold.[4] This step reflected the Rouhani administration's recognition that sanctions were affecting the price of Iranian oil and that increasing its sale of oil would not be plausible in the international-sanctions environment. It followed previous President Ahmadinejad's budget estimate for 2013–2014 of $91 per barrel, even as oil was trading at $102, with exports of 1.3 million bpd.

The budget response to dropping oil revenues was swift and began before Rouhani took office (see Table 1). Real government expenditures were reduced by 32 percent in 2012 compared to 2011, with a much sharper decline in real development expenditures (60 percent). This decrease was sharper than the economy-wide adjustment as manifested in the 15 percent drop in imports.

Rouhani's first budget for 2013 remained highly contractionary, though development expenditures increased by 7 percent in real terms. His proposed budget for 2014, reflecting the gains from the JPOA, envisaged a 20 percent increase, most of it in development expenditures.

Table 1: Percent change in real public expenditures

Year	Total	Current	Development
1391 (2012-2013)	-31.5	-22.3	-59.6
1392 (2013-2014)	0.9	-0.2	7.3
1393 (2014-2015)	20.3	11.6	67.6

Source: The Central Bank of Iran.

Certainly, it is true that a further reduction in oil revenues, caused by the halving of oil prices, would complicate Iranian budgeting. However, the scope and scale of the problem was less than in previous years. By having already absorbed the reality of lower oil sales at lower prices, Iran's government acknowledged the reduced role of oil exports in national-revenue generation. Addressing a budgetary impact of now-lower oil prices required Iran to reduce its estimate of oil prices to $40 per barrel for 2015–2016, but the absolute value of the loss to revenue was far less in 2015 than in 2013.

The price impact on Iran is more severe in the long term than in the short term. Table 2 bears out the lost economic opportunity created by a long period of lower prices when set against Iran's current and possible future oil-export potential:

Table 2: Comparing the Income Effect of Oil Price Versus Oil Reductions

Oil production (bpd)	$20/barrel	$40/barrel	$60/barrel	$80/barrel	$100/barrel
1 million b/d	$20 million per day	$40 million	$60 million	$80 million	$100 million
1.25 million b/d	$25 million	$50 million	$75 million	$100 million	$125 million
1.5 million b/d	$30 million	$60 million	$90 million	$120 million	$150 million
1.75 million b/d	$35 million	$70 million	$105 million	$140 million	$175 million
2 million b/d	$40 million	$80 million	$120 million	$160 million	$200 million

Source: Author calculations.

The last few years have put Iran well behind its own goals as envisaged in the twenty-year strategic plan issued as a decree in 2005. Even growing at the East Asian rates of 8 percent per year would not be enough to fulfill the plan's lofty goals. But growth at more than 5 percent would at least begin to reduce unemployment and with luck bring the unemployment rate for youth to single digits. Much more than high oil prices is needed to grow at rates higher than 5 percent, including:

- Investment in infrastructure: Iran has a decent infrastructure of roads, transportation, and ports, and its supply infrastructure for electricity and natural gas domestically is well developed. The weakest part of Iran's infrastructure is its access to the Internet, though at this point the impediments to raising Internet speed and accessibility are primarily legal and ideological rather than financial.
- Privatization: The government owns and operates some 50 percent of Iran's enterprises. Instead of leading enterprises to pull the rest of the economy forward, the government's enterprises are a heavy drain on public resources and a drag on private investment. Attempts to privatize in the last two decades have been one failure after another, from sham privatization—selling large enterprises to government-owned banks—to sales of valuable enterprises to cronies at cut rates, to enterprises that no one wants to buy. Rouhani's economic team is working on a new model of privatization, but it is hampered by a weak private sector more interested in trade than production and more prone to seek rents than profits.
- Improving the business climate: Business climate is a buzzword that is repeated in Iran's media, but little action has been taken to improve it. For example, Iran's legal system still operates with some uncertainty, which stymies domestic business and would also interfere with international investment.
- Corruption: Rouhani has made countering corruption a signature cause, but this effort has shades of political maneuvering due to the widespread belief that hard-line elements—including the Iranian Revolutionary Guard Corps (IRGC)—are the primary beneficiaries of corruption.

For a country with the ambitious development goals that Iran has, as well as its pressing needs, lower oil prices for a long period of time would have a major, systemic effect on the country and its future development.

LOOKING INTO THE FUTURE OF IRANIAN POLICY

Rouhani owes his decisive election victory to his promises of reversing the populist policies of the Ahmadinejad administration and reviving Iran's stagnating economy. He has done much to make good on the first promise, but he is far from achieving the second. He must have known from the start that his winning card for economic revival—repairing relations with the West and ending the sanctions—was not a sure bet. But with oil prices in the $100 range, even a modest easing of the sanctions would have given enough of a boost to turn the economy around. Now, after the collapse in oil prices and with no sign of returning to the previous $100-per-barrel level, ending the sanctions must take a greater urgency if President Rouhani is to convince voters that he can deliver. With parliamentary elections less than a year away (February 26, 2016) and his own reelection two years from now, the political clock is ticking fast.

The two largest unknowns at the time of this writing are the fate of the negotiations and the future of the price of oil. As with the causes of Iran's current economic slump, Iran's recovery depends more on the outcome of the negotiations (and the future of sanctions) than on the price of oil. This paper has shown how the impact of sanctions has impeded Rouhani's efforts to improve the economy through normal mechanisms. His ability to make further use of these tools will be hindered if sanctions remain in place. For example, the option to cut expenditures further (mostly development expenditures) is not realistic given the deep cuts that have come already and because it would be inconsistent with Rouhani's promise of economic recovery. Similarly, efforts to cut people from subsidy rolls have been hindered by the political nature of such a decision and claims that doing so would undermine growth. Boosting government revenues through tax reform and stopping tax evasion have also been part of Rouhani's effort but have only improved the situation marginally. Rouhani needs full access and use of Iran's economy—which can only come with sanctions relief—to make good on this promise.

IF SANCTIONS ARE RELIEVED

If there is a deal and sanctions relief is manifest, then continued low oil prices would put pressure on Rouhani's government from two directions: it must find a way to balance its budget and spend enough on investment to get the economy going. It is in part for this reason that Rouhani is working to address bureaucratic problems and improve the investment climate for foreign companies so that they can inject more money into the country.

Iran's dependence on oil revenues for its budget is high, but it is lower than countries of the Persian Gulf or Venezuela. About a decade ago, close to two-thirds of Iran's government revenues came from oil exports. Today, and since the last Ahmadinejad budget proposal, the figure is down to less than 40 percent. As such, Iran is not as dependent as other countries on shoring up the price of oil to create balance in its budget, though naturally collecting more revenues from the sale would make this task easier.

This points to an interesting opportunity for Rouhani to change the manner in which the Iranian government gains revenue from oil sales: collecting from internal oil sales. The government of Iran sells roughly 4 million bpd of oil equivalent, between oil and natural gas, to its domestic customers compared to the 1 to 1.5 million bpd that it exports. However, the Iranian budget only accounts for revenues from oil exports, not total oil production and sales that include the domestic market (aside from as an input into petrochemical production). For political reasons, it was useful to the government to only account for oil sold abroad and to not generate revenue from domestic consumption. Historically, this was agreeable, because until domestic consumption surged in the last several years, oil exports accounted for three times as much as domestic consumption. Inside of Iran, prices of energy products barely covered the cost of their distribution. After the huge price hikes of 2010's subsidy reform and the smaller adjustment in 2014, the revenues from domestic sales still only cover the cash transfers paid to Iranian families as compensation for the first price increase.

Today, further increases in energy prices, though highly unpopular, remain a viable option for Rouhani's government. In principle, government oil revenues should come from the sale of all energy products, not just crude oil sold abroad. Domestic pricing policies may change, however, once the country faces squarely the choice between growing the economy and growing energy consumption: raise energy prices, or let development projects go unfunded. The potential earnings from the oil and gas sold domestically cannot only replace the shortfall of revenues from oil exports due to lower oil prices; they can also finance an expanded public-investment program.

Raising energy prices is a politically risky move, especially if it is taken without an increase in the amount of cash transfers to compensate poorer consumers for the rise in prices. Here, Rouhani's government is in a real bind, because it has rejected the idea of increasing cash transfers. It is, in fact, under great pressure from the parliament and the wider public to take the wealthy Iranians off the roll. So far, it has resisted such a move because it does not have sufficient information on household income and wealth and is, therefore, unable to make a clean distinction between the haves and the have-nots. But there are also signs—including an open letter published in May 2015 by Rouhani's minister of labor and social welfare—that this is on the table.

For these reasons, as well as the current lower oil-price environment, the proposed budget for this year (2015–2016) does not foresee any increase in energy prices or in cash transfers. The government is expecting to increase next year's development budget by two-thirds in real terms and is evidently planning to find the money to do so from taxes.

This level of increase in public investment is likely enough to keep the economy growing at 2–3 percent per year if sanctions ease significantly. But reaching a growth rate of more than 5 percent to start making a dent in unemployment is not possible without substantial recovery of oil prices and, of course, sanctions relief.

IF SANCTIONS REMAIN

For the economy as a whole, replacing lost oil revenues is much more difficult and would depend greatly on Iran's ability to access the global financial and trading system. Absent a comprehensive nuclear agreement, sanctions would likely tighten on Iran. This would make it hard to maintain the positive-expectations equilibrium that has allowed the economy to grow by about 3 percent since Rouhani took office. In addition, as noted earlier, the ability of Iranian producers to obtain new technologies and source critical input would be limited, resulting in further economic contraction.

In such a scenario, the value of the rial, which has remarkably stayed constant in the last two years, would drop. In the last two years, capital flight has been kept in check (or may have even reversed) thanks to a combination of high expectations in Iran for a compromise at the nuclear table, high interest rates, and natural fear about the loss of access to capital held abroad in the future. After being in the negative range for several years during the Ahmadinejad era, interest rates are now some of the highest in the world, about 7 percent in real terms.

This would be followed by a surge in inflation in response to the falling rial, dampening any hope of raising energy prices and, with it, the ability to balance the budget. Government investment expenditures would likely be the first cut, which would hurt the incentives of private investors, domestic or international. This would, naturally, prevent Rouhani from sustaining his efforts to improve national infrastructure, building new plants for the more efficient use of Iran's natural resources, and, more generally, speeding the pace of Iran's economic development. Under these scenarios, it is hard to imagine any new source of growth in the short run. In the medium to long run, Iran could grow its economy, but it would have to reinvent its industrial economic base to produce a more limited range of goods, particularly those it could produce without assistance from existing foreign suppliers.

In the no-deal scenario, higher oil prices would be somewhat beneficial if Iran could use its increased foreign-exchange earnings to continue trade at the margins of the world economy, where sanctions might not reach. Iran could perhaps continue to grow at 2 or 3 percent with the combined effect of such trade and higher oil prices, particularly if sanctions both forced and allowed Iran to slowly disengage its industrial production from the grip of Western technology to become more self-sufficient in intermediate inputs it currently imports as well as in machinery used in capital formation. However, sanctions could also be targeted at such marginal trade and at denying Iran the inputs it still needs to support these industries. In such a scenario, it is hard to predict the implications in specific growth terms, but it would be implausible to expect sustained and strong positive growth in Iran as a result.

CONCLUSION

The impact of the oil price drop on Iran is distinctly different from that felt by other major oil producers because of the impact of sanctions. As such, Iran experienced some of the effects of the price drop almost three years ago, which are only now becoming problems for other oil-producing states, and has taken steps to address them. Both reduced export volumes under sanctions and low oil prices cripple foreign-exchange revenues, but sanctions are more damaging to the economy because they reduce Iran's ability to spend its foreign-exchange earnings effectively and to import technologies that help the economy adjust to lower oil prices.

President Rouhani has called for reforms of national budgets and infrastructure priorities, in part as a response to the economic impact of oil sanctions. But, ultimately, while he has rationalized some of Iran's economic decisions, absent sanctions relief, his ability to restore the Iranian economy will be seriously curtailed. Increased oil prices would help the Iranian economy more generally to compensate for the problems created by sanctions but would not be sufficient to solve the system's problems without major, long-term retooling of the Iranian economy, something hard to achieve without access to oil revenues in the first place.

NOTES

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2 "Iran Overview," World Bank, last modified 1 March 2015, http://www.worldbank.org/en/country/iran/overview.

3 Then–Treasury undersecretary David Cohen testified to the US Senate Foreign Relations Committee on 21 January 2015, that this remains the case. United States Senate Committee on Foreign Relations, "Written Testimony of David S. Cohen," 21 January 2015, http://www.foreign.senate.gov/imo/media/doc/Cohen_Testimony1.pdf.

4 Fineren, D. and George, M., "Iran Sees Limited Improvement in Oil Exports Next Year," Reuters, 3 December 2013, http://uk.reuters.com/article/2013/12/03/uk-iran-oil-idUKBRE9B20RD20131203.

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