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AUGUST 2017

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By Richard Nephew*

AUGUST 2017

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FOREWORD

Sanctions are here to stay as an instrument of US foreign policy. But they remain faintly understood by most policy makers, a risk considering how frequently they are utilized. Of particular concern, many policy makers still view sanctions as a panacea and even a victimless form of warfare. They see the application of sanctions as an alternative to violence rather than an element along its spectrum and even worse, as now being sufficiently targeted and precise so as to avoid the risk of misuse or collateral damage.

As part of my research into sanctions more generally, I have sought to explore the upswept corners of sanctions policy, starting with the risk of sanctions overuse in May 2015 and continuing with consideration of how previously sanctioned jurisdictions can be reconnected to the global community. In this vein, the Center on Global Energy Policy has commissioned papers on Myanmar (by Peter Kucik) and Cuba (by Peter Harrell), in addition to my own paper on Iran.

This paper is intended to be another in this broad series of papers, touching upon the issue of collateral damage from sanctions. Or, put another way, how do sanctions targeting one country affect another, potentially one with strategic—if not global—importance? And, to be more pointed, are sanctions that cause discomfort for one country yet potentially even more pain for another in the end worth it—both as a general matter and to the country imposing the sanctions?

Leaving consideration of the conclusion of this research to the paper itself, it is worth noting that it is these sorts of questions that this program—looking at economic statecraft, sanctions, and energy markets—will continue to address in the months and hopefully years to come.

EXECUTIVE SUMMARY

By definition, sanctions are intended to inflict pain on others. But, ideally constructed, that pain is only felt by the target of the sanctions, which then is inclined to change its policy to something more consistent with the interests of the sanctioner. Yet, notwithstanding many suggestions that modern sanctions have become "smart," like "smart" bombs, they can still miss. Unintended consequences are a well-established phenomenon in the use of sanctions but are usually considered only in the context of the target. This paper assesses the unintended consequences of sanctions on those who are prevented from doing business with a sanctioned entity—in this case Pakistan's energy firms due to sanctions against Iranian natural gas development and investment.

The question that motivated this research is simple: Did US sanctions against Iran, which were first imposed in 1996 in the Iran-Libya Sanctions Act (ILSA) and in the comprehensive embargo erected by President Clinton against Iran, have a discernable, deleterious impact on Pakistan and if so, how much and in what form? And were they, simply put, worth it?

This paper finds that Pakistan was harmed by the imposition of sanctions against Iran, though it requires some degree of counterfactual analysis to divine exactly to what degree and how Pakistan might have developed absent US sanctions. I also conclude that the impact of US sanctions against Iran that implicated Pakistan was marginal but that it is impossible to ascertain how much the effectiveness of the sanctions regime would have been impaired in their absence.

Three overarching conclusions and associated recommendations can be identified from the resulting analysis:

1. First, when imposing sanctions, policy makers should ensure that their preparations for action include an extensive exploration of the range of consequences that may result from those sanctions. Long-term economic damage is less often considered, particularly insofar as denial of new activities and business is concerned, and especially with respect to the interests of those beyond the sanctioned and the sanctioner.

2. Second, policy makers should ensure that when imposing sanctions, they do more to help address the inevitable, if unintended, consequences that will result. Beyond the many good reasons to do so from a perspective of fairness and decency, taking such an approach can also strengthen sanctions enforcement on the part of others.

3. Third, policy makers should be required to conduct a more detailed analysis on the potential consequences of sanctions imposition, including through use of public information and comment periods.

INTRODUCTION

By definition, sanctions are intended to inflict pain on others. They are designed to impose real costs to states, entities, and individuals for the purpose of shifting their policies, changing their behaviors, or abandoning illicit or illegitimate conduct. Since pain is an essential part of the endeavor, it is not surprising that sanctions have also been found to inflict pain beyond what is necessary or desirable, including against those beyond the immediate target. The unintended consequences of sanctions can cover a range of ills, from the denial of humanitarian goods to the increased cost of goods that remain available to the curtailing of legitimate activity by private companies fearful of government retribution. But the prevailing theme is that even tightly designed and well-executed sanctions programs can exceed their mandates for the type of pain applied and its destination.

For good reason, unintended consequences have also been a subject of intense study, usually by advocacy groups for either the targets involved or more general causes, such as the availability of humanitarian resources for vulnerable populations. Less frequently considered are the unintended consequences of sanctions regimes on entirely separate populations or governments. In part, this is because it is difficult to identify or quantify those consequences. Unintended consequences are often hard enough to identify—much less prove—because there could be many different reasons for something tentatively judged to be an unintended consequence of sanctions. Iran is a good case in point: during the 2006 to 2013 period, sanctions were tight but never touched Iranian access to food as a direct matter. The fact that food prices went up due to inflation and currency exchange rates probably had something to do with sanctions—and in some cases, even scarcity—but making this link explicitly causal is tough to do. This is particularly an issue when a sanctioning party wants to avoid being linked to the unintended consequence in question, as I have written about separately.[1]

Proving an unintended consequence outside of the intended target—particularly if the target in question is a country—is an order of magnitude more difficult and fraught with political significance. Governments are particularly disincentivized to make such a link, owing to the Powell dictum of "you break it, you own it,"[2] and this is doubly the case if the damage wrought by sanctions happens to fall especially hard on an ally, a fragile state, or a country that—in part because of the consequence of sanctions—becomes fragile.

At the same time, just because a problem is hard to identify or politically sensitive does not mean that it does not exist. Rather, it underscores the degree to which policy making must be a complex, time-consuming, and thoughtful effort if it is to be done right. Failing to consider carefully the second and third tier consequences of a state's actions effectively means taking a posture of willful ignorance, which is neither conducive to a positive outcome from the policy in question nor a particularly responsible attitude from the state in question. It is the replacement of confidence, certainty, and hope over prudence, analysis, and sobriety.

In this paper, I look at the potential consequences of US sanctions against Iran on the development of Pakistan, particularly its energy sector. The question that motivated this research is simple: Did US sanctions against Iran, which were first imposed in 1996 in the ILSA and in the comprehensive embargo erected by President Clinton against Iran, have a discernable, deleterious impact on Pakistan and if so, how much and in what form? And were they, simply put, worth it? In looking into this question, I considered the nature and scale of US sanctions, the energy needs and planning of Pakistan, the opportunity cost to Pakistan from being denied access to Iranian natural gas, and the benefits to the sanctions regime obtained regardless.

The paper finds that Pakistan was harmed by the imposition of sanctions against Iran, though it requires some degree of counterfactual analysis to divine exactly to what degree and how Pakistan might have developed absent

US sanctions. I also conclude that the impact of US sanctions against Iran that implicated Pakistan was marginal but that it is impossible to ascertain how much the effectiveness of the sanctions regime would have been impaired in their absence. This is because, though we can identify within reasonable ranges the direct, monetary cost of the sanctions against Tehran, it is impossible to ascertain the degree to which Iran's abnormality and inability to secure even a simple, direct natural gas relationship with Pakistan played on the minds of Iranian leaders, economic decision makers, and eventually nuclear negotiators.

While the paper clearly concludes that Pakistan is a clear example of a third party state that has been damaged by sanctions, it does not assert that sanctions against countries should never be contemplated nor even that sanctions against Iran should be avoided regardless of future circumstance. Rather, I argue that it is worthwhile to expand the framework for analysis of sanctions imposition before action is taken, particularly when sanctions that could have unintended regional or global economic consequences are contemplated. More than anything, my suggestion is that policy makers ensure that in addition to the Powell rule, they also consider the wisdom of looking more carefully before they leap.

US SANCTIONS ON IRAN AFFECTING PAKISTAN

Many different aspects of the long-standing US sanctions regime against Iran may have affected Pakistan in one way or another. After all, the two countries are neighbors, sharing a 500-mile border as well as common concerns about trade, security, natural resources, and regional politics. Even very extreme unintended consequences due to sanctions, such as any diminution in Iran's ability to police the border to prevent smuggling, could have negatively affected Pakistan.

However, several factors limit the overall impact of sanctions against Iran on Pakistan. Importantly, despite their shared border, the economic interactions between the two states are limited. Two elements of the US sanctions regime against Iran were and are particularly relevant to Pakistan:

1. Targeted designations of individuals and entities, and

2. Prohibition on investment in Iran's oil and natural gas sector.

Targeted Designations

The first category of sanctions pertain to the administrative decision of the US executive branch that particular people or entities are involved in activities that run contrary to US law. There are a number of specific activities that could result in such a decision, each of which relate to either executive orders or statutes that have been adopted to date. These include engaging in activities that

- support the proliferation of weapons of mass destruction and their means of delivery
- support acts of terrorism,
- violate human rights, and
- seek to evade US sanctions against already targeted entities and individuals.

Under most US sanctions programs, the international effects of these designations are somewhat muted. Most banks and international businesses use the US Specially Designated Nationals and Blocked Persons (SDN) list to perform their necessary due diligence activities, but the SDN list—for non-Americans—is more advisory than compulsory, absent any US linkage to the underlying trade or business activity. The Iran sanctions program is different. Under the 2010 Comprehensive Iran Sanctions, Accountability and Divestment Act (CISADA), particularly as amended by later statute, the United States reserves the option to impose sanctions on any individual or entity that engages in significant transactions with the designated Iranian target. In other words, the United States creates a risk of direct sanctions against anyone who undertakes substantial business activity with a designated Iranian entity, broadening the scope of US sanctions and their reach.

Over the course of 2006 to 2016, few—if any—Pakistani entities and individuals were subject to US sanctions due to their business activity with Iranians, and none remain sanctioned at this time. Compared to the number of Pakistanis directly sanctioned for activities with little or nothing to do with Iran, this category of sanctions is not likely to have been responsible for much if anything in the way of damage to the Pakistani economy.

This may not be the case with respect to our second category: sanctions targeting investment in Iran's oil and natural gas sector.

Prohibition on Investment

In 1996, President Clinton signed the ILSA into law. ILSA was constructed to deter international oil and gas companies from investing in Iran and thereby contributing to its ability to fund and support a variety of bad acts, including terrorism. It followed the imposition of US sanctions via executive order that created a unilateral, comprehensive embargo against Iran. In this, ILSA can be seen as an attempt to level the playing field for US companies vis-à-vis Iran, which would otherwise be open for business to third party countries.

Specifically, the law required the president to impose sanctions on any entity or individual that "with actual knowledge, on or after the date of the enactment of this Act, made an investment of $40,000,000 or more (or any combination of investments of at least $10,000,000 each, which in the aggregate equals or exceeds $40,000,000 in any 12-month period), that directly and significantly contributed to the enhancement of Iran's ability to develop petroleum resources of Iran."[3] Petroleum resources were defined elsewhere in the statute as including natural gas, and similarly, the statute also defined *develop* to mean "the exploration for, or the extraction, refining, or transportation by pipeline of, petroleum resources." The statute contained waivers as well as language that would permit some degree of definitional flexibility on the part of the executive branch. That said, it was designed as a way of clamping down on significant support to Iran's oil and gas sector.

Various foreign governments, especially in Europe, immediately opposed ILSA; they were in part emboldened by similar US sanctions adopted earlier in 1996 with respect to Cuba. The French company Total served as the most direct flash point when it agreed to help develop the South Pars gas field in 1997 along with Petronas and Gazprom. When the United States began the investigation of Total, pursuant to ILSA, it precipitated a confrontation with Europe in which the European Union (EU) both passed legislation that forbade European companies from adhering to US law if contrary to EU law and began a suit at the World Trade Organization (WTO), claiming the US legislation was inconsistent with WTO commitments. The result was a climb down by both parties, in which the United States waived the sanctions that could be imposed on Total, Petronas, and Gazprom and decided not to pursue further such investigations provided that the United States and the European Union worked to prevent Iranian acts of terrorism and proliferation.[4, 5]

But notwithstanding the decision to walk back aggressive sanctions enforcement under ILSA in Europe, the United States kept up the pressure on companies around the world to not engage in new business ventures with Iran. This included Asian companies similarly interested in oil and natural gas production in Iran, as well as those seeking to develop new natural gas pipelines using Iranian gas as the source. The most prominent project that could have been affected was the Shah Deniz gas pipeline, which was intended to bring gas from the Caspian Sea to Europe (and provide an alternative source of gas to Russian supply). However, out of recognition of the geopolitical concerns attached to this issue, the United States declined to press home its potential prohibition on such activities, essentially grandfathering phase 1 of the project and waiving phase 2 from sanctions, even those which followed ILSA and strengthened it in time.[6, 7] The United States' interpretation of ILSA as pertains to pipelines was also in flux during this time, as various countries (Turkey foremost among them) sought to differentiate between pipeline construction and investment, suggesting a distinction that was debatable to say the least given the real focus of the legislation was impeding Iran's ability to export more of its hydrocarbon resources.[8]

The other pipeline of principal interest involved Pakistan and—at least for a time—India. Iranian natural gas was intended to play a substantial role in Pakistan's future as of the mid-1990s. In fact, Pakistan arguably banked on Iranian gas and suffered consequences after it didn't materialize.

Proposed Iran-Pakistan Pipeline Project

Source: The Wall Street Journal, April 9, 2015. https://www.wsj.com/articles/china-to-build-pipeline-from-iran-to-pakistan-1428515277.

PAKISTANI ENERGY NEEDS AND PLANNING

Like many other emerging markets, Pakistan's energy needs have intensified over time as development and popular expectations drove the Pakistani government and its utilities to identify the means of delivering power around the country.

Between 1971 and 1990, Pakistan's energy consumption went from 93.5 kilowatt hours (kWh) per person to 277.5 kWh, an almost 200 percent increase in approximately 30 years.[9] Yet, by the 1990s, Pakistan's population was still underserved with respect to electricity consumption. In 1990, 59.6 percent of Pakistan's population had access to electricity, according to the World Bank (official Pakistani numbers were lower).[10] Most of those people were unsurprisingly located in urban areas, as only 44.7 percent of the rural Pakistani population had access to electricity in the same year.[11] The Pakistani government understood that to take the next step in the country's development, it needed to increase the population's access to electricity.

Pakistani Plans

Pakistan's plan was focused on bringing the private sector into power development, creating "incentives…devised in order to attract foreign and domestic entrepreneurs."[12] The Pakistani government assessed that the core problem was "a high degree of suppressed demand" caused by the absence of sufficient production capacity.[13] The Pakistani government was not terribly concerned with the source of fuel for its desired capacity expansion, noting in its official policy statement from 1994 that "investors are free to propose the site and opt for the technology and fuel, including residual furnace oil, diesel oil, natural gas, LPG etc. for the project, depending on the availability of fuel, cooling water, infrastructure, environmental impacts and economics of the tariff."[14]

In the end, Pakistan chose to concentrate on quick progress by relying on fuel oil, and "of the additional generation capacity installed between 1994 and 2004, more than two-thirds required fuel oil to function."[15] In the late 1990s and early part of the 2000s, this was not an unreasonable decision. It was, however, shortsighted and premised on the low oil prices of the period. With the "sharp increase in oil prices in the 2000s" came "skyrocketing costs of power generation" and inevitable damage to Pakistani industry and development.[16] Additionally, the rigid and inefficient structure of the power sector with misaligned incentives could not adjust. This led to power generation cuts and reduced investment into future generation capacity.

Pakistan also pursued natural gas as means of satisfying the country's energy needs due to its domestic reserves and extensive natural gas distribution network. Pakistan is believed to have significant natural gas reserves,[17] and in the 1990s through the 2000s, Pakistan sought foreign participation in extraction and production arrangements. Notwithstanding these efforts as well as the 1994 policy statement and incentive packages, exploration and production of those reserves lagged because the prices offered to foreign companies simply were insufficient inducement.[18] Foreign imports were a potential way for Pakistan to bridge the gap between domestic demand and supply, providing energy needed for both industrial and public consumption.

Pakistan therefore considered imports from two sources: Turkmenistan to the north and Iran to the west. The pipeline that would originate in Turkmenistan would have gone through Afghanistan and terminated in India (it was called the TAPI pipeline as a result). But, even in 2017, progress on TAPI has been slow and halting due to the complexities of constructing a pipeline through war-torn Afghanistan and other economic, security, and political issues among the players.[19]

Conflicting reports suggest that the Iran-focused project began as early as 1993,[20] while others point to a memorandum of understanding signed by the two governments in 1995 as the starting point.[21] Regardless, by the mid- to late 1990s, there were frequent discussions being held bilaterally by Iran with Pakistan and with India about the construction of a pipeline—at one point, dubbed the "Peace Pipeline" by politicians eager to suggest it could serve as a confidence building measure between the countries—to bring natural gas from Iran through Pakistan and into India.

The U.S. imposition of sanctions on Iranian natural gas supplies came at an important time for this process. The United States spent the bulk of the 1990s and 2000s warning India and Pakistan away from constructing the pipeline and more generally from doing business with the Iranians (an effort I was part of starting in approximately 2007). The pipeline also ran into trouble due to rising tensions between India and Pakistan, both of which tested nuclear weapons in 1998 and seemed on the brink of war at multiple points over the next 4 to 5 years. Bilateral discussions continued between the parties but were adversely affected by this regional drama,[22] and the project was delayed. Eventually, India dropped out because of lingering concerns over Pakistan's ability to interrupt supplies to India in a crisis;[23] US political pressure at the time (when the United States and India were negotiating a deal on how the world might treat India's nuclear weapons program);[24] and perhaps pricing.

Pakistan and Iran continued their conversation and planning for the construction of the pipeline and Pakistani import of Iranian natural gas. In 2005, Pakistan and Iran signed a memorandum of understanding that established a timeline for the construction of the pipeline and deliveries of natural gas, which were to start in 2012 to 2013.[25] Construction on the Iranian side of the border proceeded apace, with Iran completing its portion of the pipeline by July 2011.[26] But, as of the time of this writing, the pipeline has not been completed nor obviously has any natural gas been transmitted by it. Instead, Pakistan ran into funding shortfalls that delayed its ability to complete construction on its side of the border.[27] (It is also worth noting that, as Pakistan's energy and gas needs specifically have mounted, Pakistan has also turned to the liquefied natural gas (LNG) market for significant volumes of gas.[28]) Certainly, Pakistan's own economic issues played a role in the delay. But so too did the imposition of sanctions that made it more difficult for Pakistan to obtain foreign investment in support of the pipeline.[29] In fact, the Pakistani government itself displayed at times a willingness to ignore US arguments against the pipeline, particularly in the context of US-Pakistani tensions, deteriorating relations over the activities of militants operating in Pakistan, and US operations to eliminate them.[30] But notwithstanding this public commitment to the pipeline, progress on the Pakistani side was moribund for years.

Assessment of Impact on Pakistan

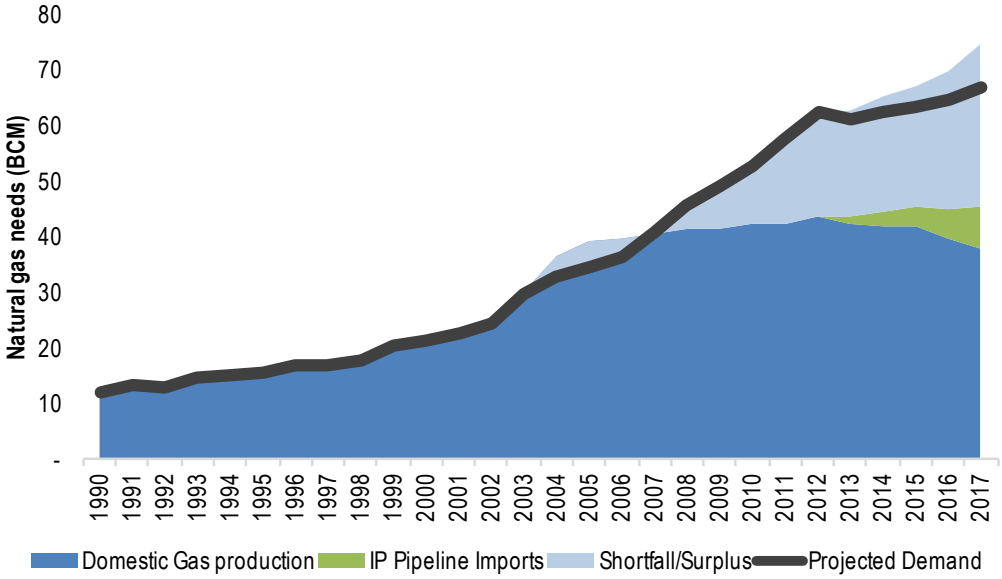
The question becomes whether Pakistan suffered—and to what degree—when it could not secure natural gas from Iran.

The case is arguably mixed and inherently counterfactual. Even assuming the Iran-Pakistan pipeline had not been hindered through US sanctions pressure, it would have been a multiyear project, and Iranian-Pakistani projections did not anticipate gas flowing before 2013.[31, 32, 33] Consequently, though Pakistan's energy shortages prior to 2012 and 2013 are important factors to consider in the context of its overall development, they are not especially relevant to my assessment of sanctions impact.

Even with the pre-2013 period excluded, there is still compelling evidence to suggest that Pakistan was adversely affected by the inability to take Iranian natural gas from 2013 to 2016 and consequently, US sanctions pressure.

During this period, Pakistan suffered an acute natural gas shortage. Figure 1 demonstrates that the gap in Pakistani supply and demand could have been substantially filled by imports from Iran had they been available. Absent those imports, Pakistan lacked reasonable options to fill that gap using natural gas.[34]

Figure 1: Pakistan Natural Gas Market, 1990–2017



Source: Author/research assistant's calculations based on Pakistani data.

Pakistan's emphasis on fuel oil, so destructive to investment in alternative sources of energy in the 1990s and Pakistani finances in the 2000s, was at least somewhat beneficial to the country when oil prices collapsed in 2014. But, as Rashid Aziz and Munawar Baseer Ahmad noted in their 2015 report, "multiple factors, compounded across multiple governments, have contributed to Pakistan's current energy crisis."[35] They note the following:

- Physical shortage, with supply not increasing along with demand
- Financial shortfall, with an inability on the part of utilities to cover the cost of supply
- Broad governance crisis, with the government "unable to impose commercial discipline, particularly on government-owned utilities and institutions."[36] This includes issues of electricity theft and some entities not paying their bills.

The Aziz-Ahmad report goes on to explore the many different interrelationships that exist between these three factors and the deficiencies in government policy and legislation that led to their eventual metastasizing into the crisis from which Pakistan is now seeking to extricate itself. As their report makes clear (and Asian Development Bank's (ADB) own analysis of Pakistan underscores), solutions to all three challenges were and are necessary for Pakistan to make progress in arresting its energy problem. But the supply problem was a crucial, central variable among them.

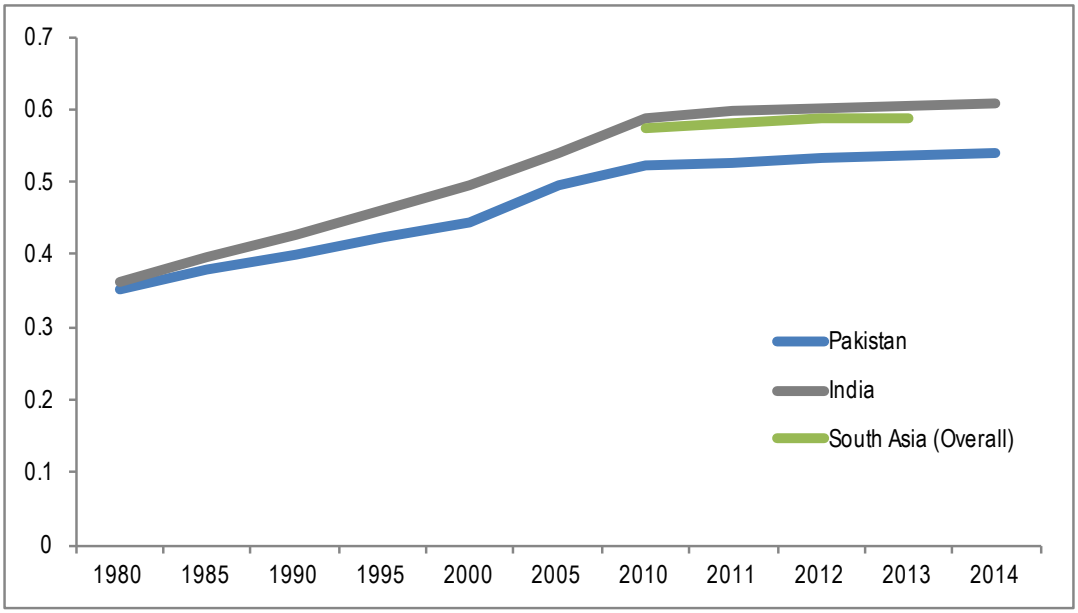
Assessment of Broader Impact on Macroeconomic and Political Issues in Pakistan

Pakistan's poor energy situation over the past 20 years has directly contributed to its macroeconomic weakness and potentially its political and social instability.

As the ADB reported in its annual development outlook, "continued energy shortages" are a reason why Pakistan has not met annual government growth targets given the drag effect they have on large-scale manufacturing, in particular.[37] The situation has improved since 2013, when the ADB assessed that prolonged power shortages cut GDP by 2 to 3 percent in 2013[38] and that ongoing reforms have shown progress, but the ADB judges both that the price of oil will remain a wild card for Pakistan and that further improvements are necessary.[39] The ADB underscored that the power deficit is the "greatest impediment to manufacturing and growth."[40]

These problems exacerbated the overall poor state of the Pakistani economy. Pakistan's economy remains one of the world's largest, ranked 41st in gross domestic product (GDP) in 2015.[41] But GDP per capita has not kept up with Pakistan, consistently ranking in the bottom tier of states. Pakistan ranks 147th in the UN Development Programme's Human Development Index, below Nepal and above Myanmar, and its development index score has stagnated since the 1980s (figure 2). This is particularly notable in contrast with India, which started in more or less the same place in 1980, and across South Asia in general.

Figure 2: Pakistan's Human Development Index Score, 1980–2014



Source: UN Development Programme.

Pakistan has also suffered a variety of political and social upsets at least in part as a result of its poor economic growth. It is well established that political instability undermines economic growth.[42] But it is also true that weak economic growth—particularly when tied to questions of fairness, income inequality, and the appropriate distribution of resources—can contribute to instability. This seems like an appropriate description of some of the problems Pakistan has had in the past decades, typified by multiple changes of government—including through military coups and as a result of violent demonstrations—over the past 50 years. Pakistan's economic difficulties have been tied in studies to the increased prevalence of terrorism,[43] and allegations of corruption have coincided with many of Pakistan's more turbulent political episodes.[44]

Certainly, not all of Pakistan's internal difficulties stem from energy much less the inability of the country to access Iranian natural gas. There are many different reasons why Pakistan has labored through multiple coups, assassinations, and violent demonstrations over the past two decades. Iranian supply would not have come online prior to 2013. Moreover, as discussed, there are various reasons why Pakistan has been incapable of sustaining its energy needs, let alone the many factors that contribute to economic performance and political upheaval. Some of these factors are themselves an element of Pakistan's inability to develop energy resources: without the internal turmoil seen in the country over the past 10 years, Pakistan may have been able to develop alternative sources of energy production, potentially through its domestic resources. But the lack of Iranian supply was potentially a contributing factor, particularly in the last 3 years.

ASSESSMENT OF BENEFIT FROM SPECIFIED SANCTIONS ON IRAN POLICY

Even if one assumes that the damage wrought on Pakistan was severe, it may be justified from a US perspective if it prevented the greater harm to international stability and security that would have resulted from Iranian acquisition of nuclear weapons. If we assume that US sanctions were an instrumental part of Iran's decision to come to the negotiating table, then one might conclude it is reasonable to believe that sanctions against Iranian natural gas development were also an important constituent element of this endeavor.

However, this merits more scrutiny, as there were a range of US—not to mention UN Security Council (UNSC) and EU—sanctions brought to bear against Iran. The question naturally arises: Out of the overall mix of sanctions applied against Iran, how significant was the prohibition on natural gas investment?

Two levels of analysis are appropriate to consider here:

1. The loss of hard currency revenue for Iran resulting from Pakistan's inability to complete the project and to buy the gas.

2. The systemic impact on sanctions enforcement resulting from a tough stance on Pakistan.

Lost Revenue

The most straightforward damage Iran faced from the absence of a Pakistani pipeline is the lost revenue from those potential natural gas sales. As noted previously, making calculations with respect to lost revenue is complicated, not least because critical variables, including price, could have shifted with the inclusion of new Iranian supply on the market. But, even acknowledging the complexity of making such assumptions, there is enough information about Iranian-Pakistani negotiations around their supply arrangement to give a credible ballpark for the opportunity cost to Iran from pipeline-related sanctions.

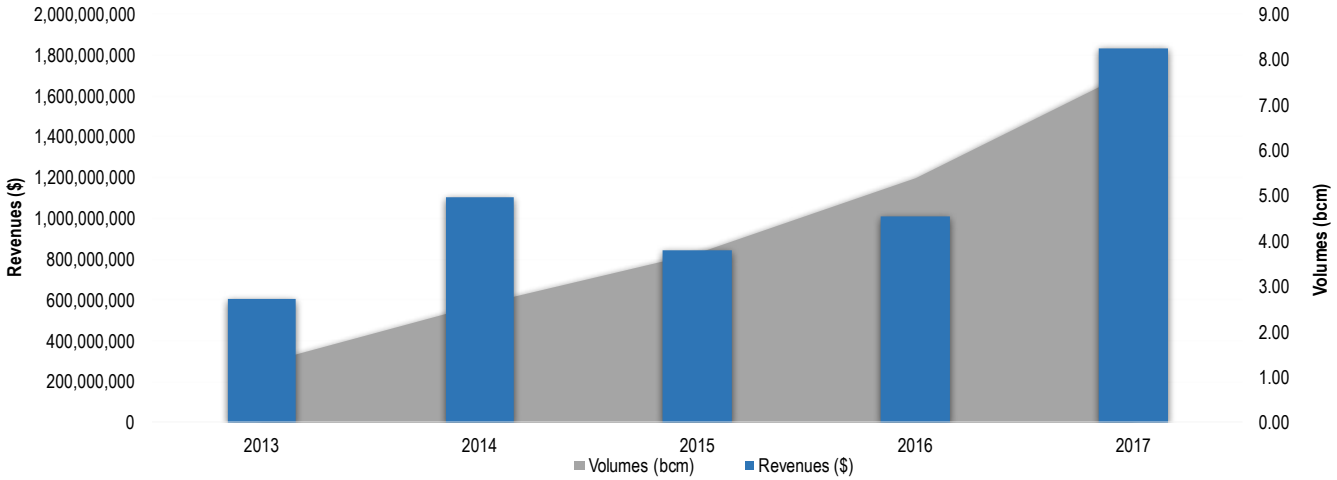
1. First, the Iranians and Pakistanis had come to a general agreement on the overall supply that would be provided by Iran. As noted previously, supply was to begin in 2013 and over 5 years would reach approximately 7.75 billion cubic meters (bcm) annually.[45, 46, 47]

2. Second, the Iranians and Pakistanis were also in general agreement on the price of the gas, though there is some ambiguity as to the exact figure. Natural gas pricing in large parts of Asia is indexed to crude oil prices,[48] and reports suggest that Iran and Pakistan intended to continue with this practice. Writing for the Oxford Institute for Energy Studies, Ieda Gomez noted in 2013 that "the price formula has been re-negotiated several times, and apparently stands at 13.4% Brent/JCC. Pakistan is asking to renegotiate the price to 12% Brent, in line with the price apparently agreed for the TAPI pipeline."[49] Other reports indicate that the Iranians and Pakistanis were also considering a price as low as 11 percent of Brent [50] and as high as 14 percent of Brent.[51] Using an average of all of these numbers and acknowledging that this is a gray area, we can assume a 12 percent Brent figure for purposes of illustrating a ballpark impact on revenues.

Taken in combination, the picture formed is one of increasingly valuable revenues for Iran but not necessarily a revolutionary revenue stream.

Figure 3 shows that over the course of 5 years, Iran would receive less than $2 billion annually from Pakistan for its natural gas exports.

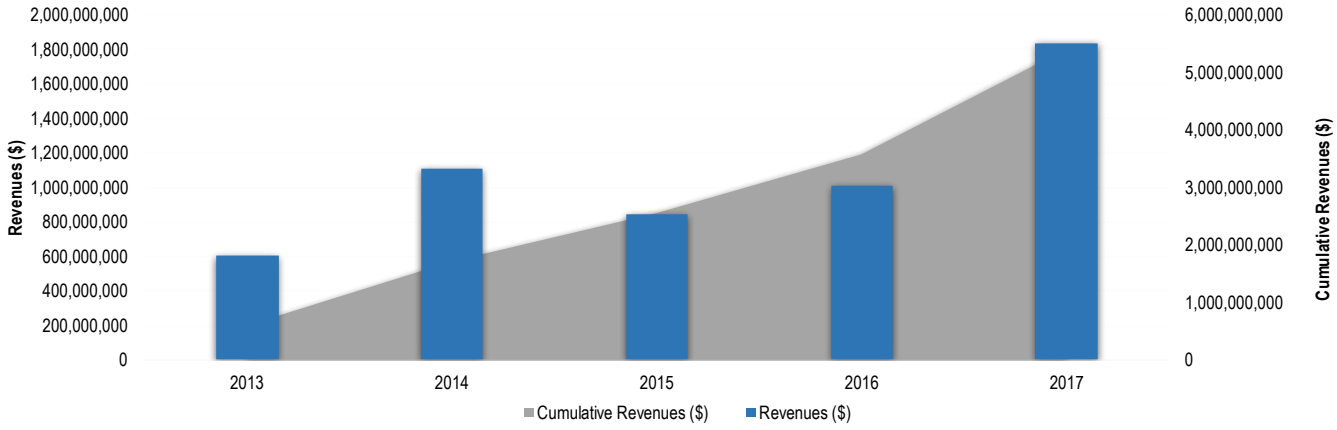
Figure 3: Volumes and revenues for Iran from IP Pipeline



Source: author calculations, using average annual Brent crude oil price and assessed steady increase in natural gas export over 5 year period to contractually agreed amount.

Cumulative revenues also suggest a fairly modest impact in terms of Iranian receipts during this period of time, with less than $6 billion in revenue in aggregate.

Figure 4: Cumulative and annual revenues for Iran from IP Pipeline



Source: Author's calculations, using average annual Brent crude oil price and assessed steady increase in natural gas export over 5-year period to contractually agreed amount.

The picture appears even more stark when these revenues are considered in comparison to Iranian exports of crude oil. In 2011, Iran was earning approximately $7.2 billion per month in crude oil sales (assuming an average of 2.4 million barrels per day (mbpd) and $100 per barrel). Even when subject to heavy US sanctions in 2013, Iran was earning approximately $3 billion per month in crude oil sales (assuming an average of 1 mbpd and $100 per barrel). In this context, curtailing the export of natural gas to Pakistan by clamping down on the construction of the pipeline may have been essential in limiting Iran's ability to earn those associated revenues. But it paled in comparison to crude oil sanctions' overall impact on revenue terms alone.

That said, the scale of the annual revenues is only one part of the story. The United States and its sanctioners had no way of knowing in 1996, 2005, or even 2013 when negotiations would start in earnest. Over the years, the cumulative value of the exports could have been much higher as, linked to Brent, oil prices would have suggested a far greater revenue stream in 2011 than 2016. Additionally, by taking a hard line on the Pakistani pipeline, other pipelines—with their own respective revenue streams—were probably also affected. Moreover, it is vital to remember the United States' imperative at the time was to prevent Iran from earning any hard currency that could insulate itself from the effects of the pressure campaign and thereby resist the need to come to the negotiating table. Regardless of one's view of the efficacy of that endeavor (and of the instrumental nature of sanctions for the negotiations), it is reasonable to conclude that exports totaling more than a $1 billion annually were a worthwhile target for sanctions. In fact, this fits with the overall US approach at the time, which targeted not only crude oil but also petrochemical exports (valued at $10 billion in 2011, when initial sanctions were applied) and automotive exports (valued at only $500 million in 2013, when initial sanctions were applied). Targeting a $2 billion market was not only consistent with this overall approach, but failing to do so would have suggested a dangerous inconsistency in US sanctions policy and treatment of individual states.

Systemic Impact on Enforcement

The inability to make money from the sale of new natural gas limited Iran's revenues. But, by taking a firm stance on this issue and enforcement across the board, sanctions against Iran may have been significantly strengthened beyond the specific issue of the pipeline prohibition for three reasons:

1. Targeting new natural gas exports helped to create an increasingly severe de facto blockade on Iranian exports. Natural gas was and is a potentially major source of wealth for the Iranian government, particularly given that Iran has among the largest reserves of gas in the world.[52] For this reason, it was repeatedly investigated as a potential target for sanctions, along with all other major export industries being developed in the country. During the 2010 to 2013 period, the United States took aim at crude oil but also at automobiles through sanctions enacted by Congress and the Obama administration. Other industries were also considered for sanctions, and had negotiations toward a long-term settlement not commenced in 2013, it is possible that other export industries—cement, for example—could have been the subject of sanctions. Without new natural gas exports as part of the existing regime, it would have been difficult to sell the necessity of targeting less important industries.

2. This targeting also facilitated US executive branch communications with the US Congress about legislative proposals that might have damaged the effort. Congress was willing in 2010 to 2013 to consider nearly any possible source of sanctions leverage. Natural gas, as a potentially prominent export with alternative suppliers, fell within the target set. However, existing Iranian natural gas supply arrangements with Azerbaijan, Armenia, and Turkey were excluded from consideration because the damage that would be done to these states (and US interests with respect to preventing Russia from dominating their supply) if all natural gas exports were targeted. Gas was already flowing, and targeting it would have created a major supply problem for these countries that may have been difficult to fill, particularly on short notice. With the exception of LNG, which has its own complications, natural gas is more difficult to transport, and consequently, replacement is more cumbersome than

with crude oil. On more than one occasion, the executive branch was able to convince members of Congress—even those deeply skeptical of the Obama administration—that US interests were best served by focusing on new natural gas exports rather than existing arrangements. This might not have been possible were it not for sanctions covering pipelines like that being pursued by Pakistan. Moreover, if the United States had targeted those other arrangements, it may have been difficult to secure crude oil reductions, particularly from Turkey, with net damage to US sanctions efforts.

3. By focusing on a US partner and taking a tough approach, the United States signaled to other states that there would be no preferential treatment on sanctions enforcement. Though the United States and Pakistan were no longer as close as partners by 2011 as in the past, the broader international community still recognized that this relationship was important to both sides. The U.S. readiness to consider sanctions against Pakistan—along with periodic designations of individuals and entities located in Europe, the UAE, Israel and other partner jurisdictions—may have contributed to the overall sense that no country was immune to US sanctions targeting and thereby to willingness to cooperate with US sanctions efforts more generally.

CONCLUSIONS AND RECOMMENDATIONS

A troubling, if mixed, picture results from the analysis. It is reasonably well established that Pakistan's energy sector has been a source of considerable economic difficulty for the country. Pakistan's weak economy has been a factor in the country's internal political turmoil, creating a vicious circle of damage to its development and stability. And as a result, Pakistan has also become a potential source of international terrorist threats and violence around the world.

The central question of this paper is to what degree US sanctions against Iran exacerbated these problems for Pakistan. It is reasonable to argue that even if US sanctions did not create Pakistan's energy crisis (nor would the removal of those sanctions have solved Pakistan's energy supply gap or indeed the larger problems of electrical generation and distribution that exist), these sanctions certainly did not make it easier for Pakistan to resolve the crisis.

At the same time, it is unclear that the threat of US sanctions on Iran's pipeline to Pakistan played a material role in solving the Iranian nuclear crisis. Certainly, it is also reasonable to argue that though the sanctions may not have led Iran to seek a diplomatic solution in their own right and that other sanctions had greater impact on the Iranian economy, the threat of pipeline-related sanctions were part of the incremental and all-encompassing sanctions picture that undermined Iranian confidence in resistance as a means of securing economic growth. It is also reasonable to argue that if pipeline sanctions did not create the diplomatic opportunity seized upon in 2013, they may have helped and thereby prevented an even worse geopolitical crisis from emerging on Pakistan's western border. In fact, given the hypothetical nature of the exercise, it is even reasonable to conjecture that had pipeline sanctions not existed and that diplomatic success not been achieved, military conflict would eventually have resulted between the United States and Iran, disrupting natural gas supplies regardless. This is the inherent problem in undertaking a hypothetical, counterfactual assessment.

But taking aside the questions and imprecision that still remains, three overarching conclusions and associated recommendations can be identified from the preceding analysis.

1. First, when imposing sanctions, policy makers should ensure that their preparations for action include an extensive exploration of the range of consequences that may result from those sanctions. From personal experience, I can attest that some such analysis takes place but usually from the frame of immediate humanitarian damage. Long-term economic damage is less often considered, particularly insofar as denial of new activities and business is concerned. Sanctioners tend to soft-pedal risk and damage analysis of activities that have yet to be begun, in part because there is an implicit assumption that those involved are already doing without whatever good or service is in question and can do so in the future. This is a flawed assumption, and it should be changed in favor of a more holistic, open-ended consideration of consequence in all its dimensions—political, economic, and social.

2. Second, policy makers should ensure that when imposing sanctions, they do more to help address the inevitable, if unintended, consequences that will result. It is not apparent that the early years of US implementation of ILSA and ISA also involved detailed discussions with Pakistan about how to replace the lost opportunity of Iranian natural gas. Certainly, there were discussions with Pakistan about how it might resolve its energy shortfall, including consideration of TAPI and other sources of electricity. But prior to the creation of the Energy and Natural Resources (ENR) Bureau at the State Department in 2011, the picture of US involvement in foreign energy development is cloudy. ENR has many missions, but one of these is addressing the problems of energy distribution as a potentially serious element of foreign policy and national security. This is a vital development and one that should aid US sanctions personnel in the future in designing and mitigating the consequences of

their actions. But outside of the energy sector, it is less apparent that US sanctions imposition involves much discussion with affected third parties about how to address the problems that they will then encounter (and, in my experience, that was rarely a focus of US internal discussions). This can and should change in the future, if for no other reason than to strengthen adherence to and cooperation with US sanctions policy.

3. Third, as noted previously,[53] policy makers should be required to conduct a more detailed analysis on the potential consequences of sanctions imposition, including thorough use of public information and comment periods. No government has the capacity to look around every corner and identify every potential flaw in an approach. For this reason, regulators have enlisted public commentary periods to ensure that there is reasoned debate around potential courses of actions. Certainly, this cannot take place in all circumstances or in addressing every problem; one cannot ask the public if a particular terrorist group ought to have its assets frozen. It is certainly possible that this process would not have addressed the problem that Pakistan faced, particularly when the timeline of 20 years of sanctions imposition is considered. But for state-level sanctions where there is a long, often legislatively determined debate and consideration schedule, there ought to be a companion process of public dialogue with decision makers to ensure that—at a minimum—issues are given a fair hearing.

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