

Poles Apart:

Comparing the conditions for sanctions in Iran and North Korea

Inwook Kim (University of Hong Kong)

Jung-Chul Lee (Soongsil University)

ABSTRACT

The design and rationale of the latest economic sanction against Pyongyang is predicated on the Iran sanction model, or a maximal use of economic sticks to induce denuclearization. And yet, no proper discussion took place regarding whether the Iran sanction success is indeed replicable in North Korea. By conducting comparative studies on the sanction's ability to inflict economic pain, the target state's political resilience, and the cost of concessions necessary to reach a negotiated outcome, we argue that sanctions on North Korea are likely to fare worse on all three counts than did the sanctions against Iran, and hence unlikely to succeed. Unfortunately, ostensible similarities across the two cases have too often created a false sense of Iran sanction's replicability in North Korea in many policy circles. This paper deconstructs such a myth and briefly discusses its policy implications.

KEYWORD: Economic sanction, nuclear program, North Korea, Iran, US foreign policy

Please do not cite or circulate without authors' permission

The Iran nuclear deal reached in July 2015 was, by most accounts, a ‘historical breakthrough’, meeting “key nonproliferation and security objectives...by reducing the risk of a destabilizing nuclear competition” (Statement from Nuclear Nonproliferation Specialists 2015) Behind the success lied the pivotal role that sanctions have played. As Wendy Sherman remarked, “...economics and to end isolation from the international community were two of the objectives” behind Iran’s decision to come to an agreement on its nuclear ambitions (Sherman 2015). Indeed, the “ferocious impact of sanction” has reportedly prompted the Supreme Leader Ayatollah Khamenei’s stance to shift from resistance to negotiation (Khalaji 2015).

Shortly after the conclusion of the Iran nuclear deal, many shifted their eyes to the next, more daunting, nuclear challenge—how to dismantle Pyongyang’s seemingly unwavering nuclear aspirations. A dominant view in Washington and Seoul held that inducing denuclearization through maximal use of economic sticks—as seen in Iran—can and should be replicated against Kim Jong Un’s regime. Indeed, two UNSC Resolutions 2270 and 2321 in 2016 imposed “the strongest set of sanctions imposed by the Security Council in more than two decades” (Power 2016) on mineral exports, North Korea’s most important source of trade income, while U.S. Treasury Department enacted a secondary sanction that barred any international financial transactions with North Korea, replicating the core element of the 2012 Iran sanction.

Despite the comparable coverage and severity of sanctions, the 2016 North Korea sanction completely failed in altering the target’s nuclear calculus, as manifestly demonstrated in the fifth nuclear test in September 2016 and missile tests that have occurred with greater frequency and higher technical sophistication. What made the sanction against Iran successful, and why was it not replicated against North Korea?

To account for the divergent outcomes, we construct a framework that conceptualizes an operation of economic sanction, and thereby help conduct cross-case comparisons on sanction effectiveness. More specifically, we first disaggregate the operation of sanctions into three sequential phases—imposition of economic pain, conversion to political coercive pressure, and creation of a zone of possible agreement (ZOPA), and then compare how relevant institutional and structural factors to each phase fared in the case of Iran and North Korea.

The in-depth cross-case analysis shows that sanctions on North Korea fared worse on all three counts than did the sanctions against Iran. In the case of North Korea, economic pain was less severe, political institutions more resilient, and the bargaining objectives too wide to be easily reconciled relative to the conditions in Iran. While we carefully detail each component later in the paper, it is worth noting the central message of our analysis upfront—Iran and North Korea operated under vastly different institutional setting and structural context.

Too often, ostensible similarities across the two cases create a false sense of one case' replicability in the other (Khong 1992). Indeed, a belief in the replicability of Iran sanction's success appears declining but still abundant in Seoul and Washington. Even when contextual differences are acknowledged, a proper framework is missing to rigorously and reliably gauge where and to what extent the two sanction cases diverge. The sequential model addresses these shortcomings by identifying points of the divergence and, by extension, deconstructing a myth of the sanction success replicability. Theoretically, by conceptualizing an operation of sanction in its entirety, the sequential model helps correct an imbalance in the sanction literature which has been disproportionately dominated by the partial equilibrium statistical analysis.

The first section establishes and explains the three phases of economic sanction's operation. Next, we examine how Iran and North Korea fared in each phase by systematically comparing the relevant factors in order. The last section concludes with policy implications.

How Sanctions (are supposed) Work

Although the sanction literature is vast (Pape 1997; Drezner 2003; Hufbauer 2007; Drezner 2011), it offers little guidance to compare the Iran and North Korea case in much depth. The sanction literature has evolved with statistical analysis and formal modelling, and generated a number of conditions under which sanctions may coerce the target more effectively (or not). The controlled nature and different model specifications of these theoretical endeavors, however, makes it analytically highly challenging to pick relevant conditions and compare the two nuclear sanction cases in any theoretically rigorous manner. To overcome these challenges, we selectively employ ideas from the existing literature and deductively construct a model that conceptualizes an operation of economic sanction in its entirety.

The sanction against nuclear state is implemented because states could not find a mutually acceptable arrangement regarding the target's nuclear program. The sanction, in turn, reveals the resolve of the sender (sanctioning) state to dismantle and target (sanctioned) state to preserve the nuclear program under dispute. Under the new information, both actors adjust their behaviors accordingly, determining the sanction's outcome. The sanction succeeds if the target complies with the senders' demands for nuclear rollback. It fails if the sanction has little to no coercive effect in deterring the target's nuclear aspirations. A negotiated deal is possible if, under the new informational setting, both target and sender decide to strike a bargain.

For a sanction to work, therefore, it has to change the target's calculus and shift its perception about the value of its nuclear program. This change happens in three sequential phases. First, the sanction inflicts economic pain on the target. Second, this economic pain creates political pressure on the target's regime. Third, the target state learns that the cost of withstanding the sanction is greater than at least partially conceding to the sender state's demands. This shift creates a ZOPA under which a new round of nuclear negotiations begins.

Conversely, a sanction is less likely to succeed if the opposite conditions hold. In other words, the target will stand firm on its nuclear program if it finds the economic pain caused by the sanction is bearable, evadable, and/or a short-term prospect; its own political institutions are resilient and insulated against economic hardship; and the bargaining objectives are too wide to be reconciled by the sanction.

What determines the target state's vulnerability at each phase? This section explains how each of the three phases work and posits variables relevant to the operation of each phase as well as overall sanction effectiveness.

First Phase—'Imposition of Economic Cost': While sanctions can take different forms (Kirshner 1997), ultimately they are designed to begin by inflicting economic pain on a target state. They do so by disrupting its aid, finance, trade, or asset linkages to foreign economic entities. In an increasingly globalized arena of economic activities, cutting ties to international economic opportunities can potentially inflict highly significant hardship on the target state.

In essence, the target's economic vulnerability is a function of three economic structural variables. First, *the comprehensiveness of the sanction* regime matters. The level of sanctions widely differ, ranging from relatively minor bans—such as those on specific items of traded commodities or travel bans on designated individuals—to more ambitious and comprehensive bans such as embargoes on a target state's overall trade or prohibition of a target's financial transactions with the rest of the world. Economic suffering increases as the economic sanction measures become more comprehensive.

Second, a target's economic vulnerability increases with *its dependence on trade*. Banning trade on self-sufficient economies will not do much damage, while for a country whose source for welfare and prosperity comes from international trade, sanctions will have greater effect.

Third, a target's level of economic suffering is subject to *the level of participation of its major trading partners*. In essence, the more participation the sanction mobilizes, the more economic pain it can exact. The long-term sustainability of sanctions is not a constant, but a variable, as some sender states themselves may find the trade ban too costly to enforce, or the divergent strategic priorities among a target's major trading partners may undermine the cohesiveness of the sanction regime.

Second Phase—'Conversion into Political Coercive Pressure': Sanction resilience is not only a function of the magnitude of economic pain (Renwick 1981). Indeed, the determination whether to capitulate to economic sanctions is essentially a political and not an economic decision. For instance, although the economic sanction halved the Iraq's economy in the 1990s, it nevertheless failed to change Saddam Hussein's behavior (Drezner 2011). Domestic institutional and

international strategic environments are what translate the economic impact into political coercive pressure and hence determine the target state's political resilience against sanctions (Blanchard and Ripsman 1999). Whether this institutional transmission belt dampens or magnifies the effectiveness of sanction statecraft is subject to three non-economic variables.

The first factor is *a size of the winning coalition*, defined as “a group that a leader needs to satisfy in order to stay in power.” (de Mesquita 2003) The size affects both a chance of the sanction hitting the welfare of the regime's winning coalition and costs to counter the impact. Accordingly, the equal amount of economic pain do not necessarily become equal amount of political pressure—regimes with large winning coalition are likely to face greater political pressure as the sanction subjects them to greater prospect of its key supporters harmed by the sanction and increases resources required to satisfy the material welfare of its principal supporters. In contrast, small-sized winning coalitions are likely to suffer less, require less resource to maintain its material welfare, hence likely generates less coherent political pressure.

The second factor is *an institutional arrangement for leadership change*. If the leadership is selected competitively on a regular basis (e.g. by election, party conference, etc.), the leadership will be more conscious of the economic welfare of its winning coalition. In the absence of such a mechanism, the threshold for a regime change is higher and the target state's leadership will remain more insulated from sanction-inflicted economic pain.

The third factor is *the strategic orientation of the target's patron states*, through which the target state can judge the likely duration and severity of sanctions. This informs the target's decision whether to endure or submit to the sanction. Any belief, reasonable or blind, that the participants have divergent strategic priorities or that some are against regime-threatening sanctions will lead

to an expectation that the multilateral sanction cannot go indefinitely and likely to end up being a short-term discomfort and not a long-term agony. The resulting perception of the fragility of a sanction encourages the target leadership to endure the economic pain.

Third Phase—‘Creation of Zone of Possible Agreement (ZOPA)’: Where a sanction ends up depends not only on how much pressure the sanction can exert on the target’s economy and the regime, but also on the cost of the concessions that at least one of the actors needs to make in order to reach ZOPA. For instance, if the sender and target are disagreeing on a relatively minor issue, the required economic pain does not need to be large to coerce the target’s compliance with the sender’s demands. If the range of disagreement is large, however, even a highly effective sanction may not be sufficient to induce a change in the target state’s nuclear behavior (Morgan and Schwebach 1997).

Two factors determine the cost of the concessions necessary to create a ZOPA. One is *the level of nuclear program development*. In short, the more developed the program, the more costly it is for the target state to comply with the sender’s demand for nuclear rollback. Nuclear rollback nullifies the target’s technological, financial, and political capital thus far invested in its development program. The target state with more advanced nuclear program will, therefore, be more reluctant to agree to the nuclear rollback for it entails greater opportunity costs, and political and strategic risks.

It also depends on *the amount of “passive carrots”* available for a sender state to employ. *Passive carrots* refer to a set of economic benefits that the sender state can provide without resorting to additional resources. In most cases, this means a simple removal of existing sanction

measures, such as releasing frozen foreign assets or lifting a ban on trade and financial transactions. If these passive carrots are sufficient for the target state to anticipate a chance of economic recovery and revival, then the chance for a negotiated deal increases as it will entail little cost for the sender to bear, while the target receives immediate and tangible economic benefits through the resumed access to international trade and finance.

When the target state has reasons not to view the nuclear rollback as viable or attractive, the sender states may consider the option of offering “active carrots,” or additional economic benefits in the form of economic aid, loans, investments, or even security assistance or guarantees. However, while this expands the scope for reaching ZOPA with the target state, the provision of active carrots is a costlier and usually more controversial option for the sender. Overall, the number of passive carrots a sender state possesses through sanction lifting also affects the degree of incompatibility between the states during the nuclear negotiation.

	1 st Phase	2 nd Phase	3 rd Phase
Phase	Imposition of Economic Pain	Conversion to Political Coercive Pressure	Creation of Zone of Possible Agreement (ZOPA)
Variables	(1) Comprehensiveness of sanction (2) Target’s dependence on trade (3) Participation of major trading partners	(1) Size of winning coalition (2) Institutional mechanism for regime change (3) Strategic orientation of patron states	(1) Level of nuclear technology (2) Availability of passive economic carrots

Table 1. How Economic Sanctions Work

Table 1 summarizes our framework, noting the three phases and the determinants for the success of each phase. In short, a sanction is likely to work more effectively in favor of a sender's demands if it can inflict greater economic pain (1st phase), which gets converted more completely as political coercive pressure (2nd phase), and the bargaining conditions between sender and target states are more compatible (3rd phase).

Comparing Sanction Effectiveness between Iran and North Korea

Based on the framework set up above, this section conducts a theoretically-informed qualitative assessment of the relevant conditions surrounding the sanctions on Tehran and Pyongyang. Doing so allows us to explain the success of the Iran sanctions in an organized way and to evaluate the replicability of their success in North Korea. Despite many apparent similarities, the evidence overall strongly suggests that North Korea fares far worse on all relevant variables, casting deep doubts on the Iran sanction's replicability in North Korea.

1st Phase: Imposition of Economic Cost

The evidence suggests that, though the two nations are quite comparable in terms of the comprehensiveness of the sanction regime and the level of trade dependence, Tehran faced much more stringent and determined participation in the sanction by its major trading partners. This alignment of major powers' strategic objectives was further enhanced by the exogenous shock of the shale oil revolution, which made sanctions more endurable for oil-importing sender states but more painful for oil-dependent Iran.

Sanction Comprehensiveness: The 2012 Iran and 2016 North Korea sanctions are defined by two similarly stringent sets of sanction provisions. One is an embargo on the target's major export item. In the case of Iran, this item was crude oil, which made up 85% of its foreign exchange, 60% of government revenue, and 90% of export revenue (Farzanegan 2011). By 2012 sanction, major oil importers joined in the previously implemented U.S. sanction on Iran oil, with EU immediately halting its 600,000 bd of oil import entirely, which Japan and Korea also agreed to rapidly reduce (Katzman 2016). With their participation, the sanction on Iran oil moved from a mere U.S. diplomatic statement to a truly substantive coercive measure. The two North Korea sanctions in 2016 similarly target its major export—mineral resource, chiefly consisting of coal and iron ore. In 2015, their export value reportedly represents 47% of 2.7 billion of its total export, and 51% of its 2.5 billion worth of export to China, its largest trading partner (KOTRA 2016). Sanction comprehensiveness was further enhanced by mandatory cargo inspections in and out of North Korea.

Another sanction measure that added a true sense of comprehensiveness was the erection of secondary sanctions, by which both Iran and North Korea were effectively blocked from conducting financial transactions with dollar-based international banking systems. In particular, by targeting any financial institutions that are suspected of transacting with the target, the secondary sanctions put enormous constraints on the two states' ability to find any willing international financial intermediaries. For instance, this proved highly damaging for Iran when sanctions included maritime insurance for shipping oil and petrochemicals. EU-headquartered maritime insurers covered at least 90% of Iran's oil tanker trade and there were no immediately available alternative providers for oil shipping insurance (The Economist 2012).

Trade Dependence: Due to the lack of data reliability, any estimate on Iran or North Korea's trade dependence should be taken with great caution. The available estimates, however, indicate that in both countries, trade accounts for about 50% of their total GDP. One may note that oil revenue makes up by far the largest source of government income and therefore has always been central to the functioning of Iran's political economy. In North Korea, the estimate of trade/GDP was as low as 15% in the late 1990s, but went up to around 56% (Kim 2014). The increase occurred as a result of the complete breakdown of the Public Distribution System (PDS) in the late 1990s, and the resulting inflow of foreign aid and the expansion of trade with China and South Korea (Choi 2012; Haggard and Noland 2010).

Participation of Major Trading Partners: Although the form of an optimal sanction was made obvious by Iran's well-known overreliance on oil, mobilization of multilateral support for banning Iranian oil presented huge policy challenges. Simply put, in the eyes of many interested outside parties, Iran's oil was too strategically valuable, economically critical, and commercially tempting to be removed from the supply chain—in 2011 Iran was producing around 2.5mbd, representing about 4% of the global supply. Its removal was expected to precipitate a sharp strain on the already tight global oil supply in 2011.

Indeed, the prospect of a high cost borne by importers created an initial skepticism about the 2012 sanction regime's sustainability. For instance, Ali Moruri, the vice chair of the *Majlis'* Energy Commission declared that, "the possibility of the elimination of Iran's oil does not exist because the world needs Iran's oil and Iran's oil cannot be ignored...." (Maloney 2015) Khamenei similarly argued that "continuing these sanctions for a long time is not in the interest of western countries." (Maloney 2014) Analysts agreed—coupled with a decades-long history of

enduring economic sanctions itself, political and economic environment appeared to favor Iran rather than the sanction regime (Takeyh and Maloney 2011).

However, initiatives for additional sanction measures gained momentum beginning in the late 2000s. First, following the revelation of a secret uranium enrichment facility near Qom and a report that Iran began enriching to 20% U-235 in the Natanz and Fordow plants in 2010–2011, there was a renewed sense of urgency regarding the nuclear threat, particularly among the European Union. Second, the escalating nuclear tension was coupled with then-President Ahmadinejad’s disturbing and unacceptable rhetoric, such as his infamous Holocaust denial or the remark that “Israel must be wiped out of the map of the world,” (CNN 2005) all of which further tarnished Iran’s already bad international image. From the point of view of sanctions, the perception shift was a bit of unforeseen ‘luck’ as the heightened political anxiety helped to initiate and mobilize multilateral efforts in ratcheting up sanctions against Iran.

Third, perhaps more significantly, a shale oil revolution had transformed the political economy of sanctions by lowering the cost of sanctions borne by oil-importing sender states. Almost by sheer serendipity, a rapid increase in shale oil production roughly coincided with the timing of the January 2012 economic sanctions, moving from about 0.63mbd in January 2010 to 2.01 mbd in June 2012. By the time of the July 2014 agreement, the volume stood at 3.91mbd (EIA 2015). This volume of an additional 2-3mbd roughly equaled the amount of supply loss from Iran, which meant that the West now could “put the squeeze on Iran without disrupting the global market or jacking up the price.” (Philips 2013)

Overall, the strategic objectives of Iran’s trading partners became more or less aligned toward strict enforcement of sanctions, forged upon the shared growing concern and mistrust about

Iran's nuclear program and a new shale oil dynamics that cancelled out the effects of the loss of Iranian oil supply to the market. Eventually, the multilateral sanctions severely hampered the Iranian economy. Iran's oil exports came down by 1mbd, leading a fall in its oil and gas export by 47% from \$118 billion in the 2011/12 fiscal year to \$63 billion just a year later, and then dropped even further to \$56 billion the next year (EIA 2015). With the underperformance of its dominant industry, Iran's GDP was contracted by 6–9% in 2012, its inflation reached 35–40% in 2013, and its currency, *rials*, depreciated by more than 50% in 2013 (The Economist 2016; Kwon 2016).

In contrast, the strategic priorities diverge widely among major trading partners with North Korea. The U.S., South Korea, and Japan support sanctions, have instituted their own economic punishment, and closely cooperate on the North Korean nuclear issue. On the other hand, China's commitment to sanctions is widely known to be indeterminate at best, an inevitable reality born out of China's complex strategic priority toward the Kim regime. It is true that Xi Jinping repeatedly showed his displeasure with the Pyongyang-sanctioned nuclear provocations, a trend that accelerated after the purge of two top party officials in charge of the bilateral party relations, Jang Song-Taek in 2013 and Zhou Yongkang in 2014 (Lee and Kim 2015). Furthermore, to surprises of many, China cooperated with the U.S. in drafting UNSC resolution 2270 and 2321 last year.

A dominant view, however, still holds that as onerous as North Korea is, Beijing is sharply opposed to further destabilization of Pyongyang for the strategic interest of keeping its buffer state secure and preventing a refugee crisis in the unwanted event of a sudden regime collapse. This opposition is strong, particularly given the context that a regime change is openly discussed

in the policy circles in Washington and Seoul. Furthermore, the Sino-DPRK alliance carries diplomatic value in being a military counterweight against the U.S. pivot to Asia policy. For instance, Xi Jinping received Ri Su-Yong, a vice chairman of KWP in the midst of sanctions implementation in June 2016, following the rising tensions with the U.S. in the South China Sea, signifying a possible departure from the sanctions regime should it find other policies of the U.S. in the region to be hostile and unacceptable. The ongoing heated disagreement regarding the decision to deploy THAAD in South Korea adds further complication to Beijing's Korea policy.

This strategic ambiguity inevitably puts a big question mark on Beijing's long-term commitment to enforce the sanctions, leading to a series of sanction-evading measures as well as Pyongyang's active search for alternative trade and financial arrangements. Already there are reports of sanction evasions (Perlez 2016). Despite the sanction mandate to inspect all cargoes going in and out of North Korea, for example, many trucks pass through the bridges on the Sino-DPRK border without inspection (Rivers 2016). Illegal smuggling is still rampant, a well-known combined product of determined smugglers, corrupt officials, and the sheer difficulty of sanction enforcement with limited resources along this long, porous border. Previous sanctions have been reported to have deepened, not stifled, Sino-DPRK trade and commercial ties through an inadvertent improvement in private procurement networks (Park 2014). The apparent ambiguity of China's stance further creates a permissive atmosphere for private entrepreneurs to engage in illicit trading practices.

The incentives and resources to circumvent sanctions are prevalent and plentiful in Sino-DPRK economic relations. This is, in an almost literal sense, fatal to the 2016 sanction regimes. Thanks to geographical proximity and historical ties, China forms by far the North Korea's largest

economic partner. This trade dependence intensified during the 2000s, and approximately 90% of North Korea's export is destined to China. Unfortunately, China's full commitment is an elusive prospect under the current strategic landscape, severely undermining the credibility and sustainability of the 2016 sanctions.

2nd Phase: Conversion to Political Pressure

Even if Pyongyang goes through suffering as equally painful as Tehran did, it does not guarantee the comparable nuclear deal. This is because whether economic pain becomes a political reality is ultimately contingent upon the target state's political will and its institutional ability to endure economic hardship. The comparative analysis of political setting shows that Pyongyang can endure sanctions more resilient than Tehran could. The Kim regime relies on a smaller winning coalition, while a legitimate route for regime change is virtually non-existent and China is strategically, though reluctantly, inclined to preserve rather than destabilize the Kim regime. None of these factors existed in relation to the sanctions against Iran, which compelled the Iranian leadership to consider and act to promptly relieve the economic suffering.

Size of Winning Coalition+Institutional Mechanism for Regime Change: Iran's regime proved politically to be rather vulnerable to economic sufferings following the January 2012 sanctions, which hit Iran's economy hard at an unprecedented level. Gauging Iran's winning coalition size is challenging, due to "a strange combination of remarkable competitive election and harsh repression." (Plattner and Diamond 2000) On balance, although the Iranian public does not form a credible winning coalition in the same way that a fully democratic society allows, their power to elect the President, members of Majlis, and the Assembly of Experts on a regular and fairly

competitive basis makes themselves relevant in the making of its domestic and foreign policy. As a seasoned observer of Iranian politics notes,

“When visualizing how decisions are made in Tehran, I picture fifteen bearded men sitting around a long table, with Khamenei seated at the head...the election of a more moderate president could change the makeup of who sits at that table... you could have five or six people advocating less strident domestic and foreign policies. Their impact won't be enormous, but it would not be negligible.” (Sadjadpour 2009)

Accordingly, it is hard not to emphasize the significance of two elections held after the 2012 sanctions. The first was the presidential election of 2013, when reformist politician Hassan Rouhani was elected to be the new president, a result that reflected the growing frustration with Iran's economic underperformance and the public's desire to ease the sanctions and speed the overall recovery of Iran's economy. The election result sent a credible signal to outside nations about Iran's desire to reopen and expedite the nuclear negotiation. Indeed, soon after the election, the interim agreement materialized in November 2013.

The second were two national elections—the Majlis and the Assembly of Experts—scheduled in 2016. The upcoming elections effectively served as a deadline for the Iranian negotiators (Zarif 2015), before which Rouhani's administration had to present tangible results in support of the ongoing nuclear negotiation. Combined with an increasingly crippled economy, the election schedules made the political necessity to strike a deal more urgent in Tehran than in Washington (Nader 2014). In short, the 2016 elections had an effect of ‘tying the hands’ of the Iranian negotiators—without securing an acceptable deal with the U.S., Rouhani's domestic standing

would have weakened, while paving way for hardliners' comeback to the Iranian political landscape (Adebahr 2014).

The contrast is nothing but stark in North Korea. Given the notorious opacity of North Korean domestic politics, the size and composition of its winning coalition is anyone's guess. And yet, given the absence of any regularized and competitive leadership selection process, there is a broad consensus that the winning coalition is limited to a small number of elites, with estimates ranging from several thousand to Pyongyang population of 4–5 million (Byman and Lind 2010; de Mesquita and Smith 2011; Kang 2011/12). While the Korea Workers' Party (KWP) members, military officers, and bureaucrats typically form the central pillars of the winning coalition, the number of those in the winning coalition appears to be shrinking even further, driven by the marginalization of the military. Recent developments such as Kim Jong Un's repeated purges of military generals since 2011, the reinstatement of KWP in the 7th Party Congress, and the creation of a new organ, the State Affairs Commission, all appear to support this hypothesis. On the other hand, the ordinary populace lacks any legitimate channels to express social and economic grievances. Furthermore, hereditary succession is the de facto rule for leadership changes in North Korea. The power and wealth of the country is passed down through generations, while its social hierarchy and ideological indoctrination continually inhibits popular capacity to organize systematic resistance against poverty and repression.

Since Kim's political survival primarily hinges on the welfare of his small winning coalition, if a sanction dries up the resources for distribution, Kim's rational course of action is to marshal and allocate the remaining resources to the ruling elites at the expense and impoverishment of the general public. For instance, the dead and other victims of the infamous 1990s famine were

disproportionately concentrated in the poorest provinces, such as North Hamgyong, and in the weakest and most politically vulnerable populations (Haggard and Noland 2007). Insofar as the regime's political survival is concerned, the mass suffering was "a regrettable but necessary price." (Moore 2013) Sanctions that target the elites themselves, such as blacklisting individuals or banning the import of luxury goods, are unlikely to succeed because the political fate of these elites is, in effect, already tied to the fate of Kim Jong Un. Indeed, if the leader can give privileges to the members of his winning coalition in times of severe economic hardship, it might even enhance the dependence of these select groups of people on Kim's personal leadership (Byman and Lind 2010).

Overall, despite their oft-assumed shared authoritarian nature, Tehran and Pyongyang politics operate in vastly different ways. Tehran politics have been shown to be considerably responsive to sanction-originated economic hardships, as the political success of President Rouhani and the reformist faction was predicated upon winning the support of those voters who were "far more focused on their day-to-day economic needs... and (not) united behind the government's nuclear ambition." (Sadjadpour 2016) No comparable accountability exists in Pyongyang. Kim's political survival requires fewer resources. The absence of institutional mechanisms to challenge, let alone change, the leadership means there is no political deadline to meet as far as nuclear negotiation is concerned. Political sensitivity is evidently much higher in Tehran politics than in Pyongyang.

Strategic Orientation of Patron States: It is very likely that Iran viewed the strategic orientation of major powers as unfavorable. Indeed, no sustained support, either explicit or implicit, was available during the period of economic sanction. China, despite seeing Iran as an attractive

oil-rich partner in light of the rising oil price, soaring domestic demand, and strategic vulnerability to access to oil, decided not to purchase Iran's oil fields or to increase its oil import volume, all of which were opportunities created by the sanction. At the end, China's interest in Iran was more limited, geographically distant, and commercial in nature, while China's top policy agenda always and still resides in its bilateral relationship with the U.S.. The exploitation of commercial opportunities in Iran simply deemed not worth the cost of probable deterioration in the U.S.-China relations (Downs and Maloney 2011).

Similarly, proclivity of Russia's foreign policy, another potential friendly, was also against wrecking the nuclear deal. Initially, many raised a possibility of strategic alignment between Iran and Russia, who once remarked the sanction as "unacceptable" and that Iran "has the right to peaceful use of atomic energy, including enrichment operations." (RT 2013) The concern intensified with their shared foreign policy objectives in Syria and its sharp tension over the Ukraine crisis with the U.S. At the end, however, Russia recognized the danger of Iran's nuclear threat to the region and a lack of alternative solution to the problem, while its economic stakes in the trade with Iran were meager and the regime stability of the theocratic state were not a game changer for Russia's core foreign policy objectives (Maloney 2014). Investing its own diplomatic capitals to support the unpopular and dangerous Iran's regime did not warrant all political backlash it would additionally create against Moscow.

The absence of major stakeholders friendly to Iran favored an emergence of an active "honest broker," a role assumed by the European Union. The EU is a bloc friendly to the U.S. but also with a rich history of interaction with Iran. The European public was also indifferent and far from hostile in comparison to the U.S., which in turn created room for diplomatic flexibility

during the negotiations (Adebahr 2015). The sustained presence of an “honest broker” may not have predetermined success of the nuclear negotiations, but was highly facilitative of it (Sherman 2015).

In contrast, none of the international strategic environment variables are favorable to the sanction regime against Pyongyang. The central factor is the strategic orientation of China. China is a major stakeholder in North Korea’s regime, to whom China allegedly gives priority in the prevention of economic collapse over Pyongyang’s nuclear proliferation program. The aforementioned half-hearted enforcement of sanctions already raised a suspicion that “China will squeeze for a little bit, but not too hard.” (Morrello and Mufson 2016) While undoubtedly Beijing is genuinely upset at Pyongyang’s defiance of its repeated calls to tamp down its nuclear pursuits, many are hesitant to call China fully committed to the latest sanctions implementation. From Pyongyang’s perspective, the sanction regime absent of any credible honest broker and filled with major stakeholders with divergent strategic objectives is a source for doubts about the sanction’s long-term sustainability and room for diplomatic maneuvering to minimize the sanction’s adverse consequences.

Between Tehran and Pyongyang, the international settings are not alike. The absence of any sympathetic patrons left little room for Tehran to exploit against the sanction’s sustainability. In contrast, Pyongyang is well aware of China’s strategic inclination to preserve rather than destabilize the Kim regime. This creates room for sanctions fragility in the medium-term, and naturally one rational course of available action is to continue its nuclear program, wait for the sanctions to break down, and enjoy a better bargaining position in the future.

3rd Phase: Creation of Zone of Possible Agreement

The last phase concerns whether ZOPA now exists after calculating the impact of sanctions. From the target state's point of view, the cost of withstanding the sanctions must be balanced by the cost of making concessions. The sender states similarly must consider the cost of striking a bargain. Unfortunately, the comparison of the two factors—the level of nuclear development and the economic carrots available—again lends support for pessimistic assessment on the replicability of the Iran deal in North Korea. North Korea's nuclear program is much more advanced than Iran's, so a rollback represents a larger concession for Pyongyang. On the other hand, the sanctions removal alone is unlikely to be as powerful of a carrot to induce denuclearization as was the case with Iran. This greater degree of incompatibility makes ZOPA harder to reach under the current conditions of U.S.–North Korea relations.

Level of Nuclear Development: First, in terms of nuclear development, the difference in the level of nuclear weaponization is nothing less than staggering. On the one hand, despite the development of extensive nuclear fuel cycles in the 2000s, Iran still fell short of enriching uranium to weapons grade amid the nuclear negotiations. Although the shortening 'breakout time' for Iran to produce a nuclear weapon created a sense of urgency for the U.S negotiators, what needed to be done to credibly dismantle its weaponization program nevertheless did not require unmanageably extensive rollbacks. In other words, the zone of a mutually agreeable solution was not far from the realities on the ground.

This is not the case in North Korea. While details and history of its nuclear development and international responses are well-documented and need no repetition here, what distinguishes North Korea from Iran is that since the NPT withdrawal in 2003, Pyongyang has gone well past

the stage of enriching uranium and plutonium to weapons grade, and already conducted five nuclear tests. Pyongyang has also actively pursued missile tests, seeking to increase the range of missile and to diversify the launching methods, including the recent SLBM tests.

Though the exact level of its nuclear and missile technology is a topic of ongoing controversy, for the purposes of this paper, it is sufficient to say that unlike Iran, North Korea has a fully-developed nuclear capability with possibly as many as twenty one nuclear bombs in its possession (Albright and Kelleher-Vergantini 2016). In terms of bargaining prospects, what Pyongyang has developed is far above where the U.S. wants its nuclear program to be—“comprehensive, verifiable, irreversible dismantlement”. This increased distance introduces a great deal of complication and challenges for a negotiated settlement to be reached. Indeed, the history of the North Korea nuclear program had been a much fiercer and ultimately unsuccessful struggle to decide how far, at what speed, and under which conditions North Korea should dismantle its nuclear capabilities.

Amount of Passive Economic Carrots: The U.S. possessed enough “passive carrots” to lure Iran to a negotiation table and ultimately an acceptance of nuclear rollback. These passive carrots were a combined product of the historical legacy of Iran’s extensive linkage to international finance during the Shah period and the inseparable ties of its oil industries to the global economy. Accordingly, the removal of these sanctions could deliver immediate and substantial monetary and trade benefits. For instance, approximately \$120 billion worth of Iran’s foreign assets were held frozen under the sanctions (Katzman 2016). In addition, sanctions on Iranian oil exports are estimated to have cost \$160 billion in oil revenue since 2012 (Katzman 2016), while its oil fields were becoming increasingly obsolete, and its industry was reported to have needed around \$150–

400 billion in investments in order to modernize its oil installations (Erdbrink 2016; Katzman 2016).

These trade opportunities and financial resources were immediately collectible following the removal of sanctions, and were vital for Iran's economic recovery. Such a financial situation meant that the U.S. lifting the sanctions alone could be a workable and meaningful carrot for Iran. Indeed, Foreign Minister Zarif remarked in 2014,

"...all that the United States needs to do is to get an agreement that can lead to the removal of sanctions. There is nothing else that we're asking the U.S. to do. We are not asking for security guarantees, we are not asking for any money, we are not asking the United States to do anything — simply to remove the sanctions." (Zarif 2014)

From the U.S. perspective, simple removal of the sanctions was a *passive carrot*, meaning that the U.S. does not need to spend any of its own resources. One should note, however, that a decision may entail reputation cost against the credibility of future U.S. foreign policy, and therefore cannot be assumed to be entirely costless. Still, the sanctions' vitality in Iran's economic recovery and the relatively inexpensive nature of removing it makes them quite compatible, or at least worthy of serious negotiation in search of mutually acceptable terms.

In contrast, both North Korea's economic realities and its strategic concerns indicate that the amount of passive carrots the U.S. possesses is unlikely to meet Pyongyang's expected return for giving up or even halting its nuclear program. The North Korean economy lacks adequate infrastructure to quickly recover, and was never quite prosperous even prior to the sanctions. The acceptance of passive carrots accordingly does not quite promise tangible economic benefits at all, while rolling back its nuclear program represents an immediate loss of security. Cognizant of

the limitations, the previous nuclear negotiations involved provision of active carrots such as aid, infrastructure building, or even security assurance in return for implementation of counter-proliferation measures. However, along with Pyongyang's continuing nuclear program, these policies became increasingly controversial as well as politically costly among sender states such as the U.S., South Korea, or Japan. Consequently, the lack of cheap carrots and the aversion to the use of active carrots further shrink the bargaining space for the sanction senders at the negotiation table with Pyongyang.

The Way Forward

Evidence clearly shows that the Iran sanctions operated under unusually favorable conditions, defined by Iran's economic vulnerability, its institutional exposure to general economic pain, and relatively low cost of concessions required to both Iran and the U.S to strike a bargain. Unfortunately, the North Korea sanctions run contrary to its apparent similarities to Iran, and instead work under diametrically opposite circumstances. Despite the highly intrusive sanction measures already in place, China's willingness to enforce the strangulation measures is questionable at best. Furthermore, Pyongyang is institutionally more insulated from economic isolation and impoverishment. Its small-sized winning coalition dictates that as long as the Kim regime can sufficiently distribute private goods, the core of regime can stay stable and intact. Lastly, the more advanced Pyongyang's nuclear program and the needs for active carrots from the U.S. requires larger concessions from both parties, complicating a task of reaching ZOPA further.

An immediate conclusion of this analysis is that sanctions, either intendedly or unfortunately, are unlikely to succeed in CVID, effectively allowing a nuclear Pyongyang to persist and to continue its nuclearization. This presents a policy challenge familiar to many observing Korea—the cost and compromises required to resolve this nuclear tension increase together along with the development of North Korea’s nuclear technology.

One possible alternative option to avoid the sanctions’ worst outcome is to engage with Pyongyang sooner rather than later. Instead of an immediate and full resumption of diplomatic dialogue, Washington and Seoul may favorably consider making small steps such as initiating exploratory talks or even temporary suspension of the annual US–ROK joint military exercises. Though far from optimal, these gestures may open up the possibility to dampen down nuclear tensions at a far lower cost than it will be later. Such engagement will be unpopular in many policy circles in Washington and Seoul. If the Iran deal has any lessons for North Korea, however, it is that compromises and risks were what made a negotiation successful and binding.

References

- Adebahr, Cornelius. 2015. "The Linchpin to the Iran Deal's Future: Europe." *The Washington Quarterly* 38, no. 4. (October 2): 115–31.
- . 2014. "What Iran Would Do without a Nuclear Deal." Carnegie Endowment for International Peace, November 13.
<http://carnegieendowment.org/2014/11/13/what-iran-would-do-without-nuclear-deal>.
- Albright, David, and Serena Kelleher-Vergantini. 2016. "Plutonium, Tritium, and Highly Enriched Uranium Production at the Yongbyon Nuclear Site." Imagery Brief. Institute for Science and International Security, June 14.
- Blanchard, Jean-Marc F., and Norrin M. Ripsman. 1999. "Asking the Right Question: *When Do Economic Sanctions Work Best?*" *Security Studies* 9, no. 1–2 (September): 219–53.
- Bueno de Mesquita, Bruce, ed. 2005. *The Logic of Political Survival*. Cambridge, Mass.: MIT Press.
- Bueno de Mesquita, Bruce, and Alastair Smith. 2011. *The Dictator's Handbook: Why Bad Behavior Is Almost Always Good Politics*. New York: PublicAffairs.
- Byman, Daniel, and Jennifer Lind. 2010. "Pyongyang's Survival Strategy: Tools of Authoritarian Control in North Korea." *International Security* 35, no. 1 (July): 44–74.
- Choi, Jiyoung. 2012. "Recent Changes in North Korean Foreign Economic Policy." Issue Paper Series. Bank of Korea, August 30.
- CNN. 2005. "Iranian Leader: Wipe out Israel," October 27.
<http://edition.cnn.com/2005/WORLD/meast/10/26/ahmadinejad/index.html>.
- Downs, Erica, and Suzanne Maloney. 2011. "Getting China to Sanction Iran The Chinese-Iranian Oil Connection." *Foreign Affairs*, April.
- Drezner, Daniel W. 2011. "Sanctions Sometimes Smart: Targeted Sanctions in Theory and Practice: Sanctions Sometimes Smart." *International Studies Review* 13, no. 1 (March): 96–108.
- , Daniel W. 2003. "The Hidden Hand of Economic Coercion," *International Organization* 57, no. 3: 643–659.
- Energy Information Agency (EIA). 2015. "Iran." Country Analysis, June 19.
<http://www.eia.gov/beta/international/analysis.cfm?iso=IRN>.
- Erdbrink, Thomas. 2016. "In Iran, New Battle Brews Over Contracts With Foreign Oil Giants." *The New York Times*, January 31.
https://www.nytimes.com/2016/02/01/world/middleeast/iran-sanctions-oil-investment.html?_r=1.
- Farzanegan, Mohammad Reza. 2011. "Oil Revenue Shocks and Government Spending Behavior in Iran." *Energy Economics* 33, no. 6 (November): 1055–69.
- Haggard, Stephan, and Marcus Noland. 2007. *Famine in North Korea: Markets, Aid, and Reform*. New York: Columbia University Press.
- . 2010. "Sanctioning North Korea: The Political Economy of Denuclearization and Proliferation." *Asian Survey* 50, no. 3 (May): 539–68. \
- Hufbauer, Gary Clyde et al. 2007. *Economic Sanctions Reconsidered.*, Washington, DC: Peterson Institute for International Economics.
- Kang, David C. 2012. "They Think They're Normal: Enduring Questions and New Research on North Korea—A Review Essay." *International Security* 36, no. 3 (January): 142–71.

- Katzman, Kenneth. 2016. "Iran Sanctions." *Congressional Research Service*, May 18.
- Khalaji, Mehdi. 2015. "Great Expectations: Iran after the Deal." *The Washington Quarterly* 38, no. 3 (July 3): 61–77.
- Khong, Yuen Foong. 1992. *Analogies at War: Korea, Munich, Dien Bien Phu, and the Vietnam Decisions of 1965*. Princeton, N.J.: Princeton University Press.
- Kim, Byongyeon. 2014. "Crisis in DPRK, Opportunity for DPRK." *Joongang Daily*, October 9. <http://news.joins.com/article/16062340>.
- Kirshner, Jonathan. 1997. "The Microfoundations of Economic Sanctions." *Security Studies* 6, no. 3 (March): 32–64.
- KOTRA. 2016. "Summary of DPRK Trade Trends in 2015." Press Release. Korea Trade-Investment Promotion Agency (KOTRA), June 15.
- Kwon, Bo Ram. 2016. "The Conditions for Sanction Success: A Comparison of the Iranian and North Korean Cases." *The Korean Journal of Defense Analysis* 28, no. 1 (March): 139–161.
- Lee, Jung-Chul, and Kim, Inwook. 2015. "Making Sense of North Korea: How to Respond to Pyongyang's Charm Offensive." *Foreign Affairs*, January 21. <https://www.foreignaffairs.com/articles/east-asia/2015-01-21/making-sense-north-korea>.
- Maloney, Suzanne. 2014. "Three Reasons Why Russia Won't Wreck the Iran Nuclear Negotiations." *Brookings*, March 25. <https://www.brookings.edu/blog/markaz/2014/03/25/three-reasons-why-russia-wont-wreck-the-iran-nuclear-negotiations/>.
- Moore, Gregory J., ed. 2014. *North Korean Nuclear Operationality: Regional Security & Nonproliferation*. Baltimore: John Hopkins University Press.
- Morello, Carol, and Steven Mufson. 2016. "U.N. Adopts Sweeping New Sanctions on North Korea." *The Washington Post*, March 2. https://www.washingtonpost.com/world/national-security/un-adopts-sweeping-new-sanctions-on-north-korea/2016/03/02/309f0514-dfc8-11e5-846c-10191d1fc4ec_story.html?utm_term=.335d1bebcce7.
- Morgan, T. Clifton, and Valerie L. Schwebach. 1997. "Fools Suffer Gladly: The Use of Economic Sanctions in International Crises." *International Studies Quarterly* 41, no. 1 (March): 27–50.
- Nader, Alireza. 2014. "Why Iran Can't Walk Away from Nuclear Talks so Easily." *The National Interest*, September 26. <http://nationalinterest.org/feature/why-iran-can%E2%80%99t-walk-away-nuclear-talks-so-easily-11355?page=2>.
- Pape, Robert A., 1997. "Why Economic Sanctions Do Not Work," *International Security* 22, no. 2: 90-136.
- Park, John S. 2014. "The Key to the North Korean Targeted Sanctions Puzzle." *The Washington Quarterly* 37, no. 3 (July 3): 199–214.
- Perlez, Jane. 2016. "A Hole in North Korean Sanction Big Enough for Coal, Oil, and Used Pianos." *The New York Times*, March 31. http://www.nytimes.com/2016/04/01/world/asia/north-korea-china-sanctions-trade.html?_r=0.
- Philips, Matthew. 2013. "There Would Be No Iranian Nuclear Talks If Not for Fracking." *Bloomberg*, November 9. <http://www.bloomberg.com/news/articles/2013-11-08/there-would-be-no-iranian-nuclear->

- talks-if-not-for-fracking.
- Plattner, Marc F., and Larry Jay Diamond. 2000. "Is Iran Democratizing?" *Journal of Democracy* 11, no. 4: 107–107.
- Renwick, Robin. 1981. *Economic Sanctions*. Harvard Studies in International Affairs 45. Cambridge, Mass: Center for International Affairs Harvard Univ.
- Rivers, Matt. 2016. "North Korea Sanctions: Is China Enforcing Them?" *CNN*, March 31. <http://edition.cnn.com/2016/03/31/asia/china-north-korea-border-dandong/>.
- RT. 2013. "Sanctions against Iran 'Unacceptable'—Russia, China, Other SCO Nations." *RT*, September 13. <https://www.rt.com/news/nuclear-iran-sco-summit-833/>.
- Sadjadpour, Karim. 2006. Sadjadpour: On Iranian Public Support for Tehran's Nuclear Ambitions. Interview by Bernard Gwertzman. Council on Foreign Relations, March 13. <http://www.cfr.org/iran/sadjadpour-iranian-public-support-tehrans-nuclear-ambitions/p10100>.
- . 2009. "Setting the Scene: Iran's Presidential (S)elections." Carnegie Endowment for International Peace, June 2. <http://carnegieendowment.org/2009/06/02/setting-scene-iran-s-presidential-s-elections>.
- Sherman, Wendy. 2015. Inside the Iran nuclear deal. Interview by Christina Pazzanese. *Harvard Gazette*, October 6. <http://news.harvard.edu/gazette/story/2015/10/inside-the-iran-nuclear-deal/>.
- Statement from Nuclear Nonproliferation Specialists. 2015. "The Comprehensive P5+1 Nuclear Agreement with Iran: A Net-plus for Non-Proliferation." August 17. https://www.armscontrol.org/files/Nonpro_Specialist_statement_on_Iran_Deal_Aug_2015.pdf.
- Takeyh, Ray, and Suzanne Maloney. 2011. "The Self-Limiting Success of Iran Sanctions." *International Affairs* 87, no. 6 (November): 1297–1312.
- The Economist. 2016. "Iran's Nuclear Deal Becomes a Reality." Graphic Detail, January. <http://www.economist.com/blogs/graphicdetail/2016/01/graphics-iran-sanctions-and-nuclear-deal>.
- . 2012. "Oil Sanctions on Iran: Cracking under Pressure?" Intelligence Unit, 2012.
- Zarif, Mohammad Javad. 2015. A conversation with University of Denver alumnus and Iranian foreign minister Mohammad Javad Zarif. Josef Korbel School of International Studies, October 5. <https://www.youtube.com/watch?v=HvrOOBlcLTM>.
- . 2014. "Iran Foreign Minister to U.S.: 'What Did You Gain from Sanctions?'" *The National Interest*, September 17. <http://162.242.234.155/feature/iran-foreign-minister-us-what-did-you-gain-sanctions-11300>.