



A New Korean Sunshine: Managing the New Nuclear Crisis Through Limited Nuclear Deterrence and Economic Prosperity on the Korean Peninsula

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A New Korean Sunshine: Managing the New Nuclear Crisis Through Limited Nuclear Deterrence
and Economic Prosperity on the Korean Peninsula

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Abstract

Negotiations for denuclearization and disarmament of the Democratic People's Republic of Korea (DPRK) have thus far failed. Economic sanctions, threats and nuclear treaties from world powers have proven to be ineffective as the DPRK's nuclear program continues to gain traction. Furthermore, few instances of "denuclearization" have succeeded under previous models.

By improving the DPRK's economy and inviting it to the trading table, the West can create strong economic and political incentives to open the country to re-negotiate disarmament when it stands to gain or lose far more. Since those incentives are currently lacking, they must be crafted to secure a place for the US in Asia.

This thesis hypothesizes that there is a hybrid approach to increasing security in the Korean Peninsula: One in which a nuclear deterrent is allowed, and an economic boon improves bargaining position for the west over the long term.

The methods used to support this hypothesis are based on classic thought on game theory, deterrence theory to explain how to stabilize the area then I propose how policies that improve economic prosperity will create strong economic and political incentives to open the country to eventually re-negotiate denuclearization and disarmament.

In this thesis, I propose economic incentives above disarmament as the basis of negotiations, encouraging economic growth in place of sanctions to mitigate long term nuclear risk and increase prosperity and stability in the Korean Peninsula.

Dedication

To my family, friends, colleagues, supervisors, mentors and professors and all of those who believed in me. You have made all the difference; thank you for who I am today.

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Chapter I.

Introduction and Overview

The field of International Relations (IR) is ubiquitous when discussing complex human systems. IR often presents issues without clear solutions in an increasingly interconnected and intricate world order. Chief among these issues is the ongoing situation of North Korea. North Korea, officially the Democratic People's Republic of Korea (DPRK) is an enigma that is often unable to feed its own citizens but manages to make headlines every few years as they perform their latest nuclear weapon test. In addition to wielding the deadliest weapons known to humanity, they are uniquely positioned to negotiate with both the US and China, the world's current superpowers.

The overarching goal of this thesis is to produce an updated review and provide a different point of view to assist in thinking about how to handle the US/DPRK Nuclear Dilemma and the security situation in the Korean Peninsula. I also seek to develop a clearer picture on a more productive way forward than what has been tried for decades without results. Many policy makers, particularly North Korean hawks in the US, believe that the only way to treat this situation is with hardlines; to coerce the DPRK into handing over their arsenal or kinetic Operations to destroy all nuclear resources. Since this belief is so deep-seated in the American Security complex, I dedicate the first part of this work to demonstrate that little results have come from previous and current methods. For all of the analytical prowess claimed in the West, theories concerning nuclear proliferation, disarmament, security rationality, and even Game Theory, show that the DPRK's leadership is not acting irrationally or without logic. Understanding the

rationality of these actions through a different lens then becomes of significant value to improve our understanding from a new, at least different, perspective. In fact, given the recent historical antecedent in Libya, we can continue to wonder why high-ranking officials remain adamant that a “Libya model” will solve the Korean peninsula situation.

In Chapter III, I explore schools of thought in nuclear deterrence, and how they apply to the ongoing situation. Deterrence is actually helpful over the short term to improve deal making. This chapter is crucial to understand how to reset policy and strategy around a problem that has stumped the US and western liberal democracies for decades. In a rapidly changing security landscape in 2020 with more nuclear capabilities and state actors increasingly interconnected global political economy we must be able to evolve our understanding to strike a balance between security and economic factors. The main effort of Part II of the thesis is to identify how to move beyond the current set of policies towards the DPRK in an effort to curb the rampant nuclearization and support stability in the Korean Peninsula and US influence in South Asia.

In Chapter IV I posit that Game Theory allows us to understand why Kim Jong Un (KJU) is not interested in abandoning the DPRKs Nuclear Program and why this is likely a rational decision under the premise they have set out for themselves. A quick analysis of the prisoner’s dilemma demonstrates that KJU’s decision making is rational and sound. In fact, it is what some would call “textbook”.

In Part II, Chapter V provides information that explains how the climate in DPRK is ripe for deal-making as the populace, hungry for improvement in living conditions has begun capitalist ventures to which the government turns a blind eye to so

long as they get their cut. This factor can be exploited as part of a deal that could see many North Koreans rise out of poverty.

In Chapter VI, I set out a three-prong strategy that focuses on using the cloak of deterrence to create economic deals with the DPRK that could pull the hermit kingdom out of obscurity and into the world order, thereby improving economic prosperity and increasing regional stability. This may contribute to restraining the small country through international institutions and prospect theory.

Chapter VII concludes by providing a policy proposal, derived from observations in earlier chapters, to encourage a peaceful and successful way forward in the Korean debacle. The overall proposal recommends that the US may approach the DPRK deal making in a way that will encourage capitalist economic growth in the country, under the shield of deterrence to then bring the DPRK into the international system. This could achieve three goals: (1) Improve US influence in the Korean peninsula, a strategically valuable location as a storm gathers with China (2) see the Korean peninsula stabilize as it the DPRK is pulled into the world order and (3) begin to craft a climate of potential denuclearization in the DPRK, driven by prosperity. In short, once international economic ties have increased, the populace has lived in prosperity it becomes more likely that Nuclear weapons are required to secure the regime.

Finally, this chapter includes a summary of the findings and final thoughts on the multifaceted, potential solutions to an intricate problem that is still ongoing as this thesis is written. A holistic view of the issue, taking into account the cultural, historical, political and theoretical background provides a more cohesive set of strategies. I remain hopeful that this body of work encourages the changing of perspectives that has

suggested the synthesis of previous ideas into an all-encompassing interpretation that may reveal a more effective solution to the nuclear question in the Korean peninsula.

Part I

Chapter II.

Context: From Fat Boy and the Korean Armistice to 2020

“We the peoples of the united nations determined to save succeeding generations from the scourge of war, which twice in our lifetime has brought untold sorrow to mankind, and to reaffirm faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women and of nations large and small...” – *Charter of the United Nations (United Nations, 1945)*

To begin Part I, this Chapter sets the groundwork for Chapters III and IV.

Understanding the overall reason behind North Korea’s Nuclear ambitions is paramount to accounting for the complete set of factors and circumstances of the Korean situation into the 21st century. For this, it is necessary to turn the clock back to before World War II to review the environment, decisions and instances that led to a complex, intertwined series of events that shaped the ROK and the DPRK of today. In the following section, I address the broad context and history that set the pieces of today: (1) the rise of Japan as a colonial power and its geopolitical influence in Asia, the Kim’s, the Korean War in the 1950s and the ongoing conflict (2) the Cold War and the Nuclear Deterrence Strategies through the decades, (3) The current situation in the Korean peninsula in context of the world today.

From the Rise and Fall of the Rising Sun to the Democratic People's Republic of Korea:
"KIS" to "KJU"

By the early 1900s Japan had conquered many parts of China and South East Asia, even annexing Korea, then still a single country (Fifield, 2019, p. 16). Since the annexation of Korea by Japanese imperial forces, the legends around the Kim family and their legendary exploits have only grown. Kim Il Sung (KIS) was the originator of the so-called Kim dynasty which has ruled the "hermit kingdom" for nearly 70 years. In the 1930s, KIS was a fierce anti-Japanese resistance fighter in Northern China (Fifield, 2019). During his time as a guerrilla in Manchuria, KIS was the heart of the resistance. Without him the movement would have surely collapsed and today Korea would possibly be a Japanese colony, or so the propaganda would have you believe in the DPRK (Fifield, 2019, p. 18). The tales surrounding the inflated role of KIS, as well as the successful Korean ousting of Japan from their land with the help of a "friendly neighbor", set the stage for two important factors that live on today. First, it created the legend of KIS and the Kim dynasty, and second, it sparked the relationship between a communist China, The Soviet Bloc and Korea. The first point is the hinge that "legitimizes" the Kim family's rule and the latter point set up a geopolitical dynamic that would not seem to be relevant until after WWII and the rise of socialist power across the planet decades later. Today, these relationships are what allowed the DPRK to continue on its path into nuclearization and the undermining of established international norms, laws and sanctions.

The Legend of Kim

KIS' legacy is rather important because it allows us to understand how the legends around this figure have allowed the Kim family to maintain power in the DPRK for over seventy years. It also provides insight in the political friendship and enmities that live on today; Japan is a lethal enemy of the DPRK, and China is a trusted friend and sponsor. Another factor to be considered is that KIS also spent time in the Soviet Union in the 1940s (Fifield, 2019, p. 17). It was during this time that his son, Kim Jong Il (KIL) was born (Fifield, 2019, p. 17). Shortly after the fighting in the pacific theater came to a conclusion, the two victors, US and USSR, split Korea in two at the 38th parallel. KIS, steered himself in the Soviet Union to take up the mantle as the soviet-backed North Korean leader eventually gaining the spot (Fifield, 2019, p. 20).

KIS was an ambitious man and after receiving the blessing from his sponsor states, the Soviet Union and China, he set off to re-unify Korea, kicking off the Korean war in 1950. As the fighting came to a close in 1953, the “temporary solution” of splitting at the 38th parallel was strengthened further by the DMZ as it became apparent that neither the Soviet and China-backed North or the US-backed South would gain significant ground to take victory (Fifield, 2019). Of course, the DPRK's “alternative” history has hailed KIS as a hero. As the story goes, during the Korean War or rather, the “Victorious Fatherland Liberation War”, KIS repelled the southern, US-backed invaders (Fifield, 2019, p. 21) strengthening and extending this “Rally-around the flag” that seems to continue empowering the notorious Kim's today. For decades, the DPRK continued its strong ties to the Soviet Union and China but KIS was beginning to emancipate himself as a “non-aligned nation” and introduced *Juche*, the idea of self-reliance, to his policy

(Fifield, 2019, p. 23). In the years that followed, KIS would continue to consolidate political control and would begin to groom his oldest son, KIL for the leadership of the DPRK.

KIL was significantly different than his guerrilla-warfighting father but would also leave a significant legacy on the country. The 1990s would prove tumultuous for the DPRK. The death of KIS, the collapse of sponsor state support from the Soviets and widespread famines challenged socialism in North Korea and the small surges in Capitalist activities began (Fifield, 2019, p. 28). Shortly after this time, KIL took *Juche* a step further and doubled down, pulling all of his resources into a secret military program that was decades in the making, setting off the cascade of events that led to today. In fact, as early as January 1994, US intelligence suspected that the DPRK had been able to produce one or two nuclear bombs (Masterson, 2020), coinciding with KIS' passing.

In 2002, the US would nominate the DPRK into the "axis of evil", in 2003 the DPRK pulled out of the NPT and in 2006 KIL finally unveiled his legacy, the dawn of DPRKs functioning Nuclear arsenal (Masterson, 2020). KIL's post-nuclear dream would be short-lived as he suffered a stroke just two years later and would never be the same until his death in 2011 (Fifield, 2019). KIL's passing gave rise to the newest member of the Kim Dynasty; KJU who would carry the DPRK into a new, uncertain and increasingly capitalist and nuclear world. *Juche* or die.

Cold War Influence on *Juche*: Kim's Nuclear Dream

Following the two bombs in Hiroshima and Nagasaki, the US showed much reluctance to share any nuclear technology, even with allies. Today, several countries have acquired this technology. Horizontal Nuclear Proliferation continued into the 1960s

but a defining time in Nuclear strategy occurred later on, during a time that came to be known as the Cold War (CW). During the CW, the proliferation changed. Instead, Vertical Proliferation led the two giants of the bipolar world to increase their nuclear stockpiles to incomprehensible numbers, deepening the need for comprehensive strategies. Over time, there has been a myriad of strategies used to mitigate and avoid a Nuclear exchange. One strategy credited for the avoidance of Nuclear war in those trying times is known Nuclear Deterrence.

Nuclear Deterrence is a strategy whereby a state deters other states from attacking it by possessing the ability and willingness to retaliate with a nuclear strike. Kenneth Waltz, a renowned scholar, credits the advent of these weapons, and by extension nuclear deterrence, for the “long-lasting peace” we are currently experiencing (Waltz & Sagan, 1995, p. 2). He believes that the spread of Nuclear Arms actually increases and guarantees our safety, in contrast, Scott Sagan believes that the spread of Nuclear Weapon technology is more like a ticking time bomb (Waltz & Sagan, 1995, p. 2). Sooner or later, someone in some organization in control of this technology will make a poor decision, or mistake in their routine. This possibility inevitably increases the risk of a nuclear “incident” (Waltz & Sagan, 1995, p. 5). After all, there are many historical precedents of near-disastrous situations that could have altered the course of history, such as the infamous Cuban Missile Crisis, in which nuclear weapons mixed with coercive diplomacy have yielded near-catastrophic results.

As it pertains to the DPRK specifically, there is a history of increasing nuclear testing leading to crises over the last quarter century, the latest in 2017 with the “Fire and Fury” incident, but these circumstances ebb and flows constantly, often making this

seems like a novel issue, surprising many every time. This problem is, however, not new at all.

Containment Has Already Failed

As early as 1994 the Kim regime signaled its intent to withdraw from the Non-Proliferation of Nuclear Weapons (NPT) (Masterson, 2020). During October of same year, however, the US and North Korea came to an agreement under the “Agreed Framework” which required Pyongyang’s freeze of infrastructure suspected of proliferation in exchange for the building of two Nuclear Reactors which were “proliferation-resistant” Light Water Reactors (LWRs) (Arms Control Association, 2018). Although the Agreed Framework signed later that year averted a crisis at the time, many challenges occurred during this period, namely KIS’s death, KJL’s ascent into power which undoubtedly changed the pace and tone of negotiations (Masterson, 2020). In 1995, the Korean Peninsula Energy Development Organization, commonly known as KEDO is formed and is the body charged with funding the LWRs in exchange for a Nuclear freeze (Arms Control Association, 2018). In the end, a DPRK missile launch in 1998 led the Clinton administration to call for a “review” of the economic incentive program, but a change in office led to further breakdowns in negotiations (Arms Control Association, 2018).

The incoming Bush administration was less flexible than the Clinton administration; it did not try to broker deals or engage the DPRK. In fact, in 2003 the DPRK left the NPT to develop Nuclear weaponry and continue their Uranium

Enrichment programs and ended funding for KEDO (Arms Control Association, 2018). Between 2004 and 2006 KEDO delays then stopped funding the LWRs citing the DPRK's failure to comply with the original framework for the freeze (Masterson, 2020). In late 2006, many more missile tests were conducted and the foreign ministry even announced that "...North Korea will refrain from the first-use of nuclear weapons..." (Masterson, 2020). Since that time, North Korea has been hard at work engineering new, improved ballistic missiles and in recent times, their nuclear capability has, unexpectedly, increased significantly. Leading to calls for renewed negotiations, which has fallen into the same cycle discussed in the pages above. This issue then, is decades old. The same "tried and true" methods have been ongoing for years with little progress and few desired outcomes being met. Yet, US policymakers and defense advisors continue to make the same policy decisions or prescribe the same policies over and over. At this time, recall the definition of insanity.

The DPRK Conundrum Today: Korean Peninsula in 20/20

Even as the world shuts its doors in 2020, Kim and his regime continue experimenting with missile technology. From the North Korean regime's perspective this is the only way to guarantee the security of its sovereignty and survival of its regime. From an IR realist theory perspective, this course of action is both rational and sound. The DPRK has pursued Nuclear arms persistently and deliberately for some time. At the end of 2016, KJU unveiled the latest developments in North Korea's arsenal, namely the new ICBM capability (Stratfor, 2016).

In 2017 several missile tests were conducted renewing the nuclear crisis that always lurked in IR. The DPRK, seemingly having attained the nuclear capabilities of striking at the US, was on a course it could not revert from. Many argue that “America's North Korea nuclear policy has been a failure, instead of achieving prevention from DPRK’s possessing and proliferating nuclear weapons, it has had the opposite effect” (Moore, 2008). As the dispute escalates, there is a security dilemma for DPRK, the US, the ROK, the PRC and the world. Nuclear weapons are not new technology. But they are a major focal point to consider around strategic decision-making in International Security. This highlights the need for reviewing deterrence theory from the CW and updating concepts and lessons learned since that time. After all, hindsight is 2020.

Opening the Window to a New Korean Sunshine

Despite the constant back-and-forth taunting and tit-for-tat rebukes, it seems unlikely that the DPRK would opt for an all-out Nuclear War against any of the hyperpowers or their allies. In recent years we have witnessed a warming and cooling of relations that seem to suggest there is still hope for a future relationship between ROK and DPRK, and also the world. In 2018, rapprochement between the North and South grew, a DPRK team was sent to participate in the Winter Olympics (*North Korea Profile - Timeline - BBC News*, 2019). Not long afterward KJU became the first leader of the DPRK to set foot in the ROK upon his meeting with President Moon Jae-In which led to agreements “to end hostile actions and work towards reducing nuclear arms on the peninsula” (*North Korea Profile - Timeline - BBC News*, 2019).

Despite advances in a direction towards less nuclear weapons in the peninsula, it is important to take pause and appreciate that this arsenal was built over several decades and will not be undone within a single (or even a second) term of a sitting US president. This is important to keep in mind as US and Western decision makers and executives have a tendency to rush policies and deals to capitalize on foreign policy triumphs in their own domestic politics. Furthermore, as time progresses, it is becoming more evident that the DPRK will not be giving up its own Nuclear Deterrent and other “opening moves” should be sought under the cover of deterrence to negotiate a way forward.

One Way Forward

One possible step in the right direction may be in exploiting the current economic climate in the DPRK. From the beginning of KJU’s rule, many hoped that he would revolutionize the system and revamp policies that would help increase the populace’s quality of life (Fifield, 2019, p. 99). Under KIS the DPRK and ROK were performing roughly the same economically (Figure1). In the 1970s, however, ROK’s GDP skyrocketed and today’s ROK is fast becoming one the most innovative and fastest growing economies in the world; it is currently the 12th largest economy in the World and 5th largest in Asia (World Bank, 2020). The DPRK struggled greatly into the mid-90s with the great famine in which an unfathomable number of North Koreans died, from which the country has not recovered nor is it keeping up with its southern neighbor in any way. Although accurate economic data is scarce, it’s clear that the DPRK is not one of the fastest growing economies on earth despite the so-called marketization from the bottom. Still, KJU’s hand was forced as the population in DPRK knows that China and

ROK are both far wealthier and has previously pressed for improved living conditions (Fifield, 2019, p. 99).

KJU is at least giving a sense that conditions are improving; in Pyongyang it appears the standard of living is rising with new high rises and cars in the streets (Fifield, 2019, p. 145). Still, according to Fifield, the people crave for more, they crave the things made popular by Western or South Korean and Chinese media, which are constantly smuggled into the country. Demand for more modern devices and ways of living are taking shape as semi-capitalist markets selling high-end fashion items, electronic devices and even foreign media smuggled in from China (Fifield, 2019, p. 118). The newfound access to luxury goods, foreign items and media, has given the common people a glimpse of the outside world. The grip around this access to commodities and information that is routinely controlled by strict laws, is loosening and that, has cracked open a window of opportunity.

The Korean Dream

Upon closer examination, there are kinks in the socialist armor of the DPRK, and the increased appetite for growth and a North Korean version of the “American dream”. These opportunities may be leveraged to open the country to cash in on expanding capitalist opportunities that could create improve the quality of life for many more North Koreans but would also tether the DPRKs economy to other countries to meet this demand. According to interdependence economic liberal theories, economic interdependence would discourage states from using force against each other because warfare would threaten each side's prosperity strengthening economic ties with the DPRK will contribute to the minimization of the security dilemma in the region. Furthermore,

from DPRKs standpoint, conducting negotiations under the cover of deterrence makes more sense, at least according to Game Theory and KJU's own strategic decision making process. In addition to his observations of recent “denuclearization” and their outcomes, e.g., Libya and the death of Muammar Qadhafi, create a clear incentive to never denuclearize before securing significant benefits and gains prior to broaching a remote possibility denuclearization.

At this time, it may be imperative for the US to reconsider its current strategy, or at minimum the hardline requirement for denuclearization to kick off serious, constructive negotiations. There are scarce incentives for DPRK to follow this track and as time passes and containment has failed. Perhaps it is time to consider a new strategy moving forward. Standing in the way of the idea behind new strategies focusing on economic interdependence are the current sanctions imposed on the DPRK by many countries, most notably the US. Sanctions on oil and other valuable exports have helped to hamper the DPRK’s fragile economy but seem to have had little effect on the capability of its nuclear program as it continues to rapidly nuclearize further. The ongoing, uninterrupted nuclearization puts into question the effectiveness of sanctions beyond affecting the already starving North Korean farmers and “low-income” population. This in fact be inducing further instability in the region as some evidence points to a correlation between conflict and nutrition, I discuss these topics further in Chapters IV and V.

In all, successful results in truly improving relations between the DPRK and the ROK, have been scarce. This is a complex case that requires a deep understanding of the history and culture of Korea in addition to Nuclear Strategy and deterrence, economic

theories, and many other factors. At the center of this debate has been its Nuclear Weapons program, which, from the mid-90s, has been the subject of international outcries and the cause of decades of punishment for the rogue nation. Patience is among the most important factors that policy makers will require if a deal towards disarmament/denuclearization is to be reached. Under KJU, DPRK's near monarchical rule continues today and, nuclear weapons are a core tenet of regime power and the national security strategy. They strengthen the KJU's claim to prestige and control of their sovereignty. Viewing these factors and analyzing them using Game Theory, as I will in the upcoming Chapter III, can demonstrate this is no different than any other Nuclear Power.

Chapter III.

Nuclear Strategy: MAD, Deterrence and the "Libya Model"

"I am become Death, the shatterer of worlds" – J. Oppenheimer as he watched the atomic cloud from the first Nuclear explosion push above Point Zero from the Bhagavad-Gita - *New York Times Company, 1967*

According to Realism, our society lives in Anarchy (Frieden et al., 2016, p.49). States are self-interested entities concerned with power in their consistent struggle for survival (Walt, 1998, p.29). This basic IR concept has helped to historically define military power as the main instrument when guaranteeing state security and sovereignty since the treaty of Westphalia. Although power meant to increase the security of states has changed over time, nothing has changed the game as much as Nuclear Weapons. Developed in the 1940s by a coalition of Western countries, Nuclear bombs are classified today as Weapons of Mass Destruction (WMDs) (United Nations, n.d.). Currently, many known Nuclear powers exist around the world and in recent decades, the DPRK developed its own nuclear armament to ensure their security according to the aforementioned theory (Stratfor, 2016). Despite declaring this weaponry, a necessity for national security, it is also a symbolic show of force for the Kim regime as a way to cement their place as a quasi-monarchy. In late 2017, when the Kim regime unveiled an important Intercontinental Ballistic Missile (ICBM) capable of carrying a Nuclear Warhead to the continental US, it exacerbated the international Security Dilemma with no evident solution. Today's nuclear arms are thousands of times more powerful than

those used on Japan to end WWII (Bennett, 2016). With the growing rift between the West and the East, the importance of a diplomatic resolution to the nuclear security dilemma in the Korean peninsula has global implications.

In order to understand how Nuclear Strategy is being used by the DPRK as a means of both international security policy, as well as, domestic policy we must explore the brief history of nuclear strategy and how it has changed over the last few decades. Also, quite relevant, we must revisit some prominent and relevant cases in nuclear proliferation and disarmament. In the following section, I address: (1) A brief overview of Nuclear Weapon history and strategies (2) The rationale behind ongoing Nuclear Deterrence in DPRK (3) The so-called “Libya model” and its shortcomings and (4) A previous case of the successful denuclearization and disarmament in South Africa.

Big Boy; MAD; Today

Since the inception of Nuclear Weapons, there has been a need to understand how these weapons can yield the biggest effect in International conflict. Although their use in the 1940s against 2 Japanese cities were a significant tactical success that yielded massive strategic victories for the allies, the use of “nukes” has changed dramatically since then. Over time, strategic thinking of the most effective use led to a variety of strategies in which detonation of these bombs was no longer needed to achieve the desired effect. In fact, simply possessing nuclear weapons is not only a tremendous tactical advantage from a military perspective, but it is also a rather important strategic bargaining tool at the political levels. The most well-known example of this is the Cold

War (CW). The CW was a conflict that was “fought” by the 2 superpowers of the time, the Soviet Union and the US. The strategies used to wage this war were mostly political in nature and came to define the way nuclear arsenals are thought of today.

There have been 3 overarching strategies: (1) Massive Retaliation, (2) Flexible Response and lastly (3) Mutually Assured Destruction (MAD). In the paragraphs below, I describe these three for the sake of understanding the evolution of Nuclear Strategy as it evolved to meet the changes in public appetite, technological advances and Law of Armed Conflict.

(1) Massive retaliation (1954-1961) Post WWII, the Soviet Union developed both Nuclear and Missile technologies faster than the US had originally anticipated. As the USSR became, from a US perspective, an increasing threat through the spread of communism, the US felt outgunned. Although the two oceans kept the US isolated, and to some extent granted protection from kinetic operations from the Soviets, an increasing part of the world seemed controlled by Moscow as communism spread far and wide across the globe. In response to this pressure, John Dulles and President Eisenhower, came up with a strategy called “Massive Retaliation”. Dulles famously coined a phrase that explained that the US will retaliate, with Nuclear Strikes, at a time and place of their choosing to respond to any Soviet threat (Speech of Secretary of State John Foster Dulles before the Council on Foreign Relations January 12, 1954). This disproportionate response was meant to address the asymmetrical threat that seemed to be creeping up on the Americans. The problem was further exacerbated by the launch of Sputnik into space in 1957, which frenzied the US into thinking that Soviet technology was outdoing them in terms of means of delivery of nuclear payloads. The pressure here was the

asymmetrical soviet threat and the need for deterrence through an overwhelming response. One drawback, however, was that this was more a statement of desperation and not a detailed strategy. Eventually, a new more credible strategy was needed that seemed more logical.

(2) Flexible Response (1961-1968) The answer to increase credibility was flexible response. Herman Khan, an American strategist came up with "Khan's escalation ladder" in his book *On Escalation* (1965) which was meant to increase the US' options in response to different soviet actions. This strategy set out a logical, well-thought out use of force escalation sequence that was well communicated to ensure the Soviet Union understood that any type of force could or would eventually lead to escalation into a Nuclear War. This idea was to demonstrate that the US had developed a more flexible, detailed strategy to react with a myriad of response types allowing for the best result at the lowest cost (Morgan et al., 2008, p.15).

(3) Mutually Assured Destruction. Eventually, both the Soviet and American arsenals increased to a point where it was evident that that a nuclear war could have no victory. As the massive Soviet arsenal and second-strike capabilities were obtained, the US saw the necessity of showing the Soviet Union that any type of Nuclear War would lead to the destruction of both states. With the advent of Secure second-strike capability, and the nuclear triads, it became clear that both parties will always have the capability to destroy each other in a sort of mutual suicide pact. The US knew that it would lead to planetary destruction due to the sheers size and power of their combined arsenal and meant to show that to the soviets. It attempted to do so even further by initiative such as PD-59, under President Jimmy Carter, which called for pre-planned options for nuclear

strike and capabilities for rapid target development that would discourage the soviet use of Nuclear weapons (Georgetown University, 2012).

In summary, the three strategies described here responded to the strategic and political pressures of each period. As the world dove deeper into the stability-instability paradox, the need for strategies adapted through time. Varying pressures such as an expanding soviet movement, the need for credibility as well as the large power and sheer size of the nuclear arsenal created new strategies and policies being created that led to the eventual collapse of the Soviet Union and the rise of the new world order.

The Case for Deterrence Theory in DPRK

Over the last several decades, there were many instances where Nuclear weapons were nearly launched putting billions of lives at risk. One major event, all too familiar to Americans, is the Cuban missile crisis. This unfortunate occurrence is yet again reintroduced with increased tensions between the two Korea's and by proxy, today's superpowers. The scope of this threat is among the biggest in international security today as it is a deadly existential threat that extends beyond military and security policy delving into economic aspects of trade with Asia, and China, ROK and Japan in particular. Despite decades of hawkish policies and threats, particularly from Washington, the reality is that kinetic operations are beyond risky and unlikely to produce positive results in the short or long-term. This is where theories and efforts have fallen short thus far. This is a complex problem requiring a multi-disciplinary mixture of economic, security, legal, nuclear armaments and human rights policies making this one of the most

challenging tasks to solve in IR to date. The way forward toward a solution requires a study of current IR theories and finding the correct element from each to address the situation as it stands today. Never before has the Korean Peninsula been in a more complex and precarious position but the answer for the time being may be right under the proverbial nose.

As recently as 2018, Experts in South Asia relations like Victor Cha and Kang argue in their update book, *Nuclear North Korea: A Debate on Engagement Strategies*, that deterrence has been working, and will continue to work unless the US or another large nuclear power adopts aggressive policies towards the DPRK (Cha & Kang, 2018, Ch.2). They are not alone in believing that continued Nuclear deterrence is a good strategy to cope with the current situation, another renowned scholar, Scott Sagan, also believes that deterrence is the best option for this debacle (Sagan, 2019). Sagan also believes that regime change is not an option that would yield positive results. Hawkish policies against DPRK could bring the world to the brink of Nuclear exchanges in densely populated areas, like Seoul or allow low-level conflict to take place, dragging the West into yet another war in Asia. Historically, the results of these conflicts in the far east have been less than ideal for Western powers. After prolonged conflicts in Iraq and Afghanistan the US, NATO and the West have little appetite for more war in far off lands. In this case, a debate could be had for continued deterrence. Nuclear Deterrence allows the DPRK to feel secure and have “guarantees”. Recall that by definition, Nuclear deterrence is “that “each nuclear power maintains a high level of instant and overwhelming destructive capability against any aggression—i.e., the ability, visible and credible to a would-be attacker, to inflict unacceptable damage upon the attacker with

forces that survive a surprise attack” (The Editors of Encyclopaedia Britannica, 2017)”. Yet verifying the known details of the DPRK’s nuclear capability, their true ability to strike, or even strike back (at the US), appears dubious. Despite having active warheads, the actual capability of its delivery systems are disputed (Stratfor, 2016). According to a core tenet of Nuclear deterrence, the state seeking to achieve deterrence, must have secure second-strike capability (SSC) (Frieden et al., 2016). The most up to date intelligence suggests that the DPRK has obtained some forms of delivery and rocket launches confirm that some of its rocket can fly significant distances coming in at a range of 8500-13000 Km according to Center for Strategic and International Studies (CSIS) (CSIS, 2020).

Still, it remains doubtful that the DPRK has a true nuclear deterrent that can be accurately aimed against the US mainland, as of 2020, considering the issues with the Hwasong-12 ICBM, like accuracy (Van Dieppen, 2019), and other means of delivering and detonating a nuclear warhead in the western hemisphere. In this case, DPRKs long range SSC is in question and the danger may be overstated. Then again, perhaps it is not as the short and medium range missiles are aimed at US installations and ROK and Japan allies, which would continue to act as a deterrent whether or not the ICBM capability exists (Revere, 2019).

It is important, however, to keep in mind that over time the world has stepped away from overt deterrence since the strategy is not without its shortcomings. Also, to be noted, is that there have been a couple of cases in recent times bearing some similar traits to this situation that may allow us to consider how the puzzle comes together.

Comparative Case Studies

In the following sections I will discuss the two most relevant cases and explain how we can use the lessons learned to steer decision-makers toward eventually denuclearizing and disarming but not before the environment allows for it. A more permissive environment will allow the key actors more time and space to negotiate other aspects of this crisis, ripe to exploit at this time.

The Libya Case Study as it Pertains to DPRK

As recently as 2018, several senior officials in Washington have touted the so-called “Libya model” as the blueprint for the effective “de-nuclearization” of the DPRK (Specia & Sanger, 2018). Yet, the DPRK have already loudly expressed their opinion about the “shortcomings” in the undesirable results yielded by Libya’s “voluntary” de-nuclearization. Diving deeper into the Libya case study is relevant in the discussion of the DPRK because many parallels that can be made (King, 2018). In this section I analyze three aspects. (1) The history and consequences of the Libyan Denuclearization model, (2) Differences between DPRK and Libya and (3) an alternative into the more “successful” South African de-nuclearization model.

In 2003, shortly after the capture of Saddam Hussein, Colonel Muammar Qadhafi saw the writing on wall for his regime in Libya and entered negotiations to give up his Nuclear equipment (Specia & Sanger, 2018). His equipment, purchased from Pakistan, was flown out of Libya and to a remote location to the US (Specia & Sanger, 2018). Then in 2011, in response to Muammar Qadhafi's threats towards his population, the US began

kinetic operations against the regime and Qadhafi was eventually found and mysteriously killed (Fahim et. al., 2011). In response, North Korean officials renewed their criticism of the US “bait-and-switch” tactics (McDonald, 2011). Evaluating the undesirable second and third order effects reveals a far more grim outlook on de-nuclearization given that (1) post de-nuclearization the leader of the dictatorship met a violent end (strikingly similar to Saddam Hussein years earlier) (2) Libya is today in the midst of yet another civil war, stalling democratic elections (3) has lost its economic stability compared to earlier decades under the regime. These are all factors that must be considered and carefully appreciated when making strategic decisions about the Korean Peninsula’s future and stability.

Furthermore, to say that the Libya “denuclearized” (the term is often used by officials interchangeably with disarmament) is not accurate. Libya is not like the DPRK because it never actually possessed a nuclear arsenal. When the Libyan dictator handed over the nuclear materials, Libya only had the means to create Highly Enriched Uranium (HEU). Thus, Libya did not, in fact, “de-nuclearize” in the sense that it gave up any actual nuclear weapons, only nuclear technology with the *potential* to make weapons (Mueller, 2018). Despite having a fair size of valuable oil reserves, the geopolitics of Libya were and continue to be very different than those of North Korea. One major factor is that Libya did not have a *de facto* sponsor state with near-peer status to the US such as the DPRK enjoys with China, the rising world Hyperpower. While China is not a formal US/Western adversary, relations have been increasingly troubled over the last few years for a variety of reasons and the US and China continue to spar in international arena with no end in sight. Moreover, key western allies in Asia are in close proximity to DPRK,

making the situation far more precarious for US influence in that area. Therefore, comparing the two instances or using “Libya Model” as a “precedent”, plan or blueprint towards a successful disarmament of the DPRK is neither accurate nor useful. It is actually far more dangerous, and the US would do well to avoid such a strategy to address this conundrum.

The South Africa Case Study as it Pertains to DPRK

To find a more accurate parallel, that is to say, a country that rid itself of their nuclear weaponry, there was a state in Africa who gave up its active and fully working nuclear arsenal (Mueller, 2018). In 1989, South Africa (SA) was at a crossroads. Instead of continuing the Apartheid’s dictatorial ways, De Klerk, the political leader of the country at the time, made the decision to dismantle its own Nuclear Arsenal in an effort to enable political reform in South Africa and gain Western Approval (McNamee, 2018). After joining the NPT in 1991 after complete disarmament De Klerk was recognized for his efforts as a Nobel Prize Laureate and changed the country’s reputation for the better. This historical precedent shows that peaceful disarmament and denuclearization, without regime change or the breakout of a drawn-out civil war is possible. There are however key differences in the political and security climate of the DPRK and SA. One example is SA’s open economy. Hence, arguments can be made that the climate to denuclearize must be made and maintained *before*, not after denuclearization and disarmament (Hughes, 2013)

Don't Go MAD

Returning to nuclear strategy it's worth reviewing exactly what strategy the Kim regime is attempting to utilize. He is opting for classical Nuclear Deterrence by punishment. IT cannot be MAD because DPRK does not have the arsenal size and power to "destroy" the US as a whole. Furthermore, increased debates on de-nuclearization, specifically regarding the so-called "Libya model" as a blueprint to "denuclearization" are inaccurate at best and ignorant at worst. More recently, the Trump administration has adopted a rapprochement strategy which has opened the DPRK to more dialogue than ever before. Although the Kim-Trump summits have been unsuccessful in achieving tangible results thus far, engaging the Kim regime may be a way to provide options to move past this security dilemma and challenge the status quo in addressing a growing problem.

Both sides of this debate yield valid points, so to strike a middle ground may be ideal and maybe the only way forward. The world does not yet have an answer to these strategic problems, and it may become precedent setting. This is only scratching at the surface of the problem, nor does it answer all concerns like should the west be legitimizing a "rogue" state being allowed to maintain a nuclear arsenal. Regardless, it appears to be increasingly evident that strategies like Brinksmanship which leave something to chance in an effort to increase credibility (Frieden et al., 2016, p. 113), are more akin to playing a game of Russian roulette than the coherent, long-term security strategy that is required today. Instead, credibility should be used to build trust so that future iterations of interactions can be predictable and more importantly, safe.

Nuclear Weapons have been fiercely debated in the sphere of international security since the Japanese were bombed into defeat at the end of WWII. One interesting aspect touted by scholars like Stephen Waltz and supported by Korean relations experts like Victor Cha is that, so far, nuclear deterrence has been working thus far. And indeed, since Nuclear Deterrence has existed, there have been no Nuclear exchanges. That is not to say that it is a fail-safe long term-strategy. Perhaps there is a different approach that may yield some results if instead of addressing the “Nuclear question”. Perhaps we are playing the wrong “game” instead of playing a game of Chicken or Prisoners’ Dilemma, it is time we played a Stag Hunt. Perhaps we should create a new positive-sum game to play, one in which we all win collectively.

Chapter IV.

Game Theory and Its Discontents: Nuclear Deterrence as a Cornerstone of Long-Term Strategy

Since the start of Nuclear strategy there was a need for a framework to understand decision making. Ever since the days of Massive Retaliation, an effort has been made by analytic thinkers like T. Schelling and J. Nash to analyze and advise decision-makers on different Courses of Action (CoAs) and their expected outcomes and countermoves. Strategic thinking and Game Theory and bargain analysis became tools to evaluate moves and countermoves. In IR, it is to our benefit to think analytically when interacting with other actors (Frieden et al., 2016, pp. 82–87). Game Theory has been developed for decades as a way to apply quantitative methods to Social Sciences, and is a tool to induce strategic thinking when dealing with other actors and their interests (Frieden et al., 2016, p. 51, p. 82–87). Although often associated with the Cold War, it is the author's belief that these models will make a return to relevance by blending with "modern" analytics to increase decision making power for executives in both the public and private spheres. In Game Theory, interests rule the system of strategic thinking; actors align their decisions with their interests (Frieden et al., 2016, p. 51). In this case, the obvious interests are power and security. The outcomes defined by the Interactions and based on the Interest, are estimated and anticipated in order to create the "best" strategy. In other words, rational actors are more likely to choose the option that yields the highest benefits. In order to understand how states and heads of state and staff make decisions in Nuclear

Strategy there is value in analyzing this case by “playing” simple games and studying the results. Of note, Game Theory is commonly applied to generic models, but in this writing, it will be specific to this ongoing nuclear dilemma.

North Korea is Playing Games

The following sections analyze simple games to portray aspects of how the stakeholders involved in the DPRK Nuclear Dilemma may be strategizing their moves. First I address (1) What the simple game of Prisoner’s Dilemma say about the current case then, (2) I argue KJU is unlikely to ever agree to give up DPRK’s arsenal, (3) I argue that increasing the benefits, by the economic inclusion and stimulus of the DPRK, can set the stage for successful negotiations in the future and change the Status Quo, yielding beneficial results for both US and DPRK.

Let the Game Begin

This study analyzes the actors (players), interests, strategies and interactions (i.e., bargaining and coercion), Incomplete Information, and how these factors can be entered into a game model to understand a rational bargaining strategy that can lead to a deeper understanding of strategic decision making to resolve this crisis. In combination with the Game Model, information and decision making will be rationalized using IR Realist and Liberalist theories to understand motives, interests and explain how these perspectives affect rationale, and can affect decision making. In this thesis the games that will be used to display the rationale are finite, simultaneous, zero-sum and non-zero-sum games. An additional layer if we use incomplete information when making decisions in accordance

with the Game Model, how will states behave and which CoA will they choose? Could incomplete information, or rather complete information be the key?

Game Theory was developed for economics. As such, some of the rational findings and values placed in Game models, may not always reflect real life rationale especially when they pertain to matters of the security of states. Like many other tools and techniques, it is meant to be used as a tool to analyze a situation rather than a sure-fire way of determining a CoA. Game theory, however, remains a valuable tool that has often been applied in the past and is usually considered to be a core tenet of CW nuclear strategy.

Before the game is played and analyzed, one more issue needs to be addressed. When playing the games, the assumption is that the players or actors are rational and that they understand that decisions are interdependent. Most sources agree that KJU is not irrational. As the North Korean executive, KJU makes rational decisions that keep him in power and are consistently in line with his interests, although these interests are not necessarily in line with positive outcomes for the average North Korean. Furthermore, a reminder that the game model is a tool to help forecast outcomes of prospective decisions but is not the decision maker. If modelling shows that, in the case of war, the US will be victorious (however, this victory actually looks in practice), it does not mean that the US should automatically declare war since it is not necessarily the overall best policy option. To be clear, (1) Nuclear fallout will have serious long-term repercussions worldwide and (2) human deaths should not, and will not, be viewed as lost monies to the international community. The games are made to serve as an aid to decision making and comparing policy options, not to make decisions on our behalf.

Echoes of the Cold War

In a nutshell, the Cold War (CW) characterized a long and grueling game of “Chicken” that ended in the bankruptcy of the Soviet Union and the shifting of the world order to solidify the American hegemon. The game of chicken relies on a concept known as brinksmanship to force other players to abandon their strategy given the recklessness of the opposing player. This Game characterizes Nuclear Deterrence and Brinksmanship as a whole and is the game we currently play with signaling, credibility, audience costs and more but is of less interest into how the DPRK makes strategic decisions on its arsenal. For that we have another popular game, The Prisoner's Dilemma.

Prisoners of Our Own Design

Realist theories continue to be highly relevant in IR as we continue to see states searching for more power in an attempt to increase their security and bargaining power. This is where realist theories contrast with Liberal economic theories greatly. A state's search for power creates an imbalance in the system with many effects including security dilemmas. As Jervis describes it, a security dilemma occurs when the “many means by which a state tries to increase its security decrease the security of others” (Jervis, 1978, p. 169). Thus, the Realist mindset leaves little room for any cooperation, as is the case with a simple, but well-known game model depicted below, the “Prisoner's Dilemma”, we can see (When C=Cooperation and D=Defection) that both countries (A1 and A2), unable to communicate with each other while picking the strategy simultaneously, should choose to defect because they cannot trust each other to cooperate.

		A2	
		C	D
A1	C	Both prisoners get out and split the loot.	A1 goes to jail; A2 goes free and keeps all the loot.
	D	A1 goes free and keeps all the loot; A2 goes to jail.	Both go to jail and split the loot later.

		A2	
		C	D
A1	C	3, 3	1, 4
	D	4, 1	2, 2*

Figure 1. Prisoner's Dilemma Game Matrix Tab

Table depicting the Prisoner's Dilemma in a Game Matrix. Although CC yields the highest value, it is in player's interest to Defect (D) making DD the Nash Equilibrium but not the most effective solution as players fail to cooperate. Source: (Frieden et al., 2016, pp. 83–84)

This game model is similar to many aspects of this crisis. From Nuclear Deterrence to Sanctions. [KF15] Looking at the payoff matrix above, it can be deduced that there is an objective preferred order for both players to win the game: CC, DD, DC, CD. Of course, in this particular game, it is understood that the most secure choice for either player to make is to defect or "D", given the inability to communicate, this becomes the Nash Equilibrium. Thus, the preferred outcomes for an individual actor differs significantly; $DC > CC > DD > CD$ (Frieden et al., 2016, p. 84). Instead of the overall better option, actors have incentives to gain advantages over the other actor based on the benefits they gain, in this case a massive strategic weapon and clear military/security advantage.

As can be seen by the most logical result of the game, when it comes to Nuclear programs, why should either country get rid of theirs when it will put them at a clear disadvantage? Why would DPRK abide by sanctions that do not allow it to benefit from its current situation? From Kim's point of view, the rational, logical decision when playing this zero-sum game is clear: Defect, i.e., do not give up the arsenal. Oddly then, the narrative Western policy makers chart is a rhetoric, beyond reasonable deduction, claiming that Kim's choices are erratic, counter-intuitive and senseless. This simple game clearly demonstrates otherwise, in fact, KJU is doing exactly what the game model shows is the best CoA to follow, given the inability to communicate or coordinate. In practical terms, the odds that the other party will not give up the weapons and gain an unsurmountable advantage, forever, is too high to choose otherwise. No rational decision-maker would simply comply with this set of rules without significant gain or benefit; foreign aid and rice are not a significant gain or benefit to the DPRK's regime.

Fortunately, all is not lost; this game is based on the inability to communicate. The perceived American inability to communicate with the DPRK's regime is mostly self-imposed and modifiable. Perhaps by changing the rules of the game to have the ability to communicate, a better result can be obtained. Thus, it seems apparent now that isolationist policies will not alleviate this shortcoming and there is a need for *rapprochement*. Undoubtedly, communication can lead to the game being played differently to achieve better overall results. Communication allows actors to achieve a Pareto improvement, for the overall gain of all parties involved. Therefore, to communicate, is then to open the door to cooperation and to cooperate is to increase the marginal benefits of both parties. In this instance, engagement, communication and

liberal economic theories (i.e., benefits) could be the missing link to address the issue of moving beyond the status quo.

Vei Victus... Or not?

Another classic game could yield beneficial results for both the US and DPRK. In fact, correctly playing Rousseau's Stag Hunt could yield significant improvements in the long run. Jervis explains in detail how the Stag Hunt Game parallels cooperation and disarmament in his article. The premise of which game we choose to play is important, as Jervis points out, the prisoner dilemma is different from the stag hunt because there is no solution in the game that plays in a positive sum result for all participants where we all win and no one loses (Jervis, 1978).

Creating a Pareto Improvement at this time would require much needed trust-building to increase credibility. At this point in time, the current US strategy has been unsuccessful at that as well since DPRK has publicly announced that it sees no benefit in maintaining Kim's relationships with the US administration (S. Cha & Smith, 2020). North Korea's Foreign Minister, Ri Son Gwon, has announced that he views US policy as a long-term threat to the DPRK and that "The U.S. professes to be an advocate for improved relations with the DPRK, but in fact, it is hell-bent on only exacerbating the situation" (S. Cha & Smith, 2020).

North Korea's signaling demonstrates that there is not enough trust in the relationship to continue negotiations and its perception of US mixed messaging, ranging from rapprochement to pre-emptive strike and regime change, has soured progress yet again. Furthermore, the previous instances of the US negotiating a so-called de-

nuclearization in countries like Libya, Iraq and Iran have proven time after time that the regimes of those countries post-deal with the US, have received less-than-ideal results in terms of longevity.

In this game then, the issue is not with the available choices. Logically and mathematically, there is a clear-cut, unambiguous, overall better decision that can lead to a positive sum result for all actors involved. The issue then, is how can actors be enabled to make the right choices and cooperate to maximize the benefits for all with so much at stake? What are the variables and how can they be manipulated to improve the impacts of the status quo in this security dilemma? In the next segment, I will argue that benefits/time are the key variables that require attention to create an opportunity to break the Status Quo. To expand on this argument, the main variable that should be prioritized, keeping along with the theme of realism and interests, but tying in benefits of economic nature, there are likely benefits the DPRK is willing to accept. In this case, the key variable to be manipulated will be Benefits. Despite the views of western policy makers continued narrative that the North Korean regime is being unreasonable in their strategic decision making, as demonstrated before with game theory, their decisions according to simple game models are sound. There is currently no country belonging to the “Nuclear club” who would be willing to give up Nuclear Weapons on the whims of another member. To refute this premise is counterproductive to strategizing solutions to this security dilemma. Simply put, these negotiations are about 2 specific factors (1) benefits and (2) time, and should not, or rather cannot hinge on denuclearization and disarmament.

Bargaining the Right Benefits at the Right Time

In a recent presentation at John Hopkins University, Prof. William Spaniel explained that although lack of trust is normally cited, (I argue this continues to be true), he mentions DPRK's lack of technical proficiency and patience as a proliferator are the key drivers of unsuccessful negotiations between the US and DPRK. The basic premise of his argument is that when a proliferator has more patience than a non-proliferator and development times of nuclear weapons are long, the most a non-proliferator is willing to give is often less than the minimum then the proliferator must receive in order to stop proliferating, causing no deal to be made (Ice et al., 2019, p.63). He makes two interesting claims. (1) if the non-proliferator is more patient than the proliferator, non-proliferation agreements exist regardless of the time variable (t) and, (2) if the proliferator is more patient than the non-proliferator then the existence of non-proliferation agreements can be nonmonotonic in " t " with deals impossible for middling development times, in other words deals are possible when the two curves intercept.

Deal or No Deal

Keeping with Spaniel's simple model for the demonstration, actors negotiate benefits (Y) over elapsed time (X) and considers two actors P (DPRK) and N (US) (Ice et al., 2019, p. 64). Since this theoretical argument is meant to explain a concept, rather than predict a time estimate or a benefit "amount" both variables will simply be measured in "Units" of time and benefit. Consider the situation with DPRK and US to follow Claim 2

closely and you can see figure 1 below in which it would appear we are at a “middling moment” in terms of DPRKs proliferation. Figure 1 shows the starting point where Spaniel left off and in the following text, 5 additional figures were created based on this idea to dissect the situation and explore the analysis.

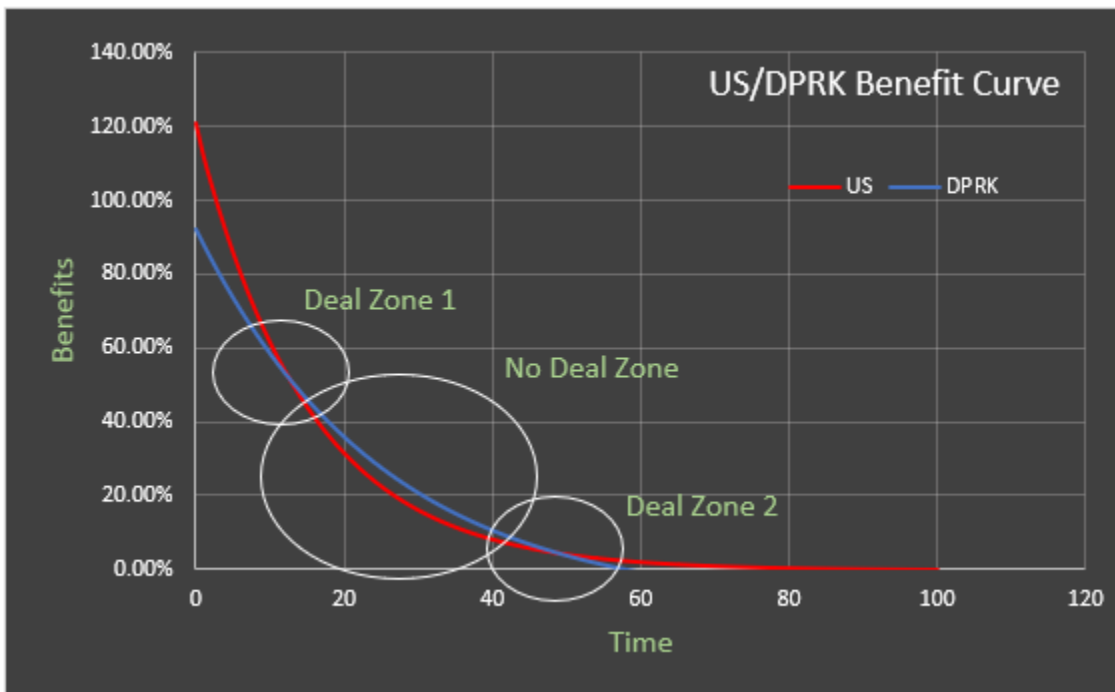


Figure 1. US/DPRK Benefit Curve – Deal Zones.

Figure 2 shows the timeline of deal zones that exist between the US and DPRK. When the curves meet deals are possible. Where the curves are furthest apart there are gaps that make deals implausible. Source: Author, 2020 based on William Spaniel’s idea (Ice et al., 2019)

To begin, in Figure 2 we consider the important aspects of and implication of Spaniel’s presentation as they pertain to future negotiations. Consider then the three highlighted zones: Deal Zone 1, No Deal Zone, Deal Zone 2. The curves move forward in

time from left to right and allow us to see that there are two instances over the timeline in which deals can be made, more or less at the intercepts. The precise moment in time at the intercept is part of the model as a guide but the actual time to make a deal is in a zone rather than a split moment, thus the reason the 3 zones in figure 2 overlap slightly.

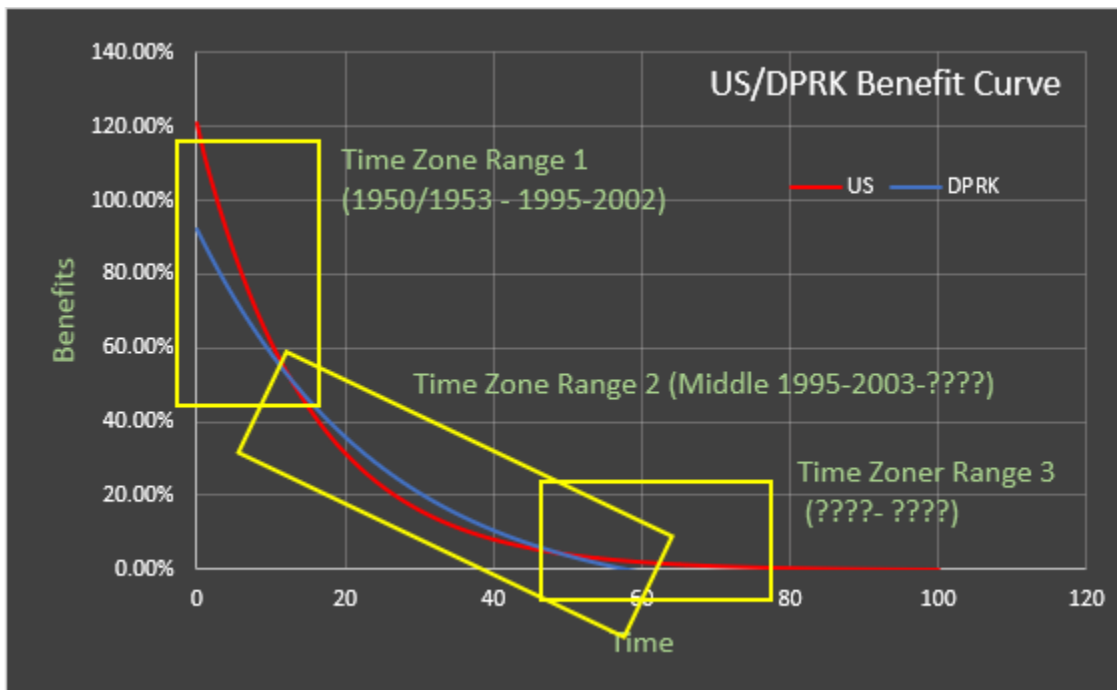


Figure 2. Timeline of negotiation in the US/DPRK benefit curve.

Timeline of negotiation in the US/DPRK benefit curve showing estimated time ranges based on the model. The current situation puts the US/DPRK in Time Zone 2, likely approaching Time Zone 3, in other words Deal Zone 2 is upcoming. Source: Author, 2020 based on William Spaniel’s idea (Ice et al., 2019)

From studying the context, my analysis is that Time zone 1, which includes Deal Zone 1 is past and may have occurred sometime between 1950 and 2002, ending sometime between 1995 and 2002. There are 2 reasons for my estimate of the conclusion

of this period, (1) it was the time of the Kim Dae Jung's Sunshine policy in which ROK and DPRK had the closest relations in years, and (2) the Clinton administration was supporting negotiations and appeared most positive up to that point in time (Cha, 2002, p.80). All that would crumble with the Bush administration dubbing DPRK one of the countries in the so-called "axis of evil" (Glass, 2002), followed by the pull out of NPT effectively ending a short period of warming relations (Masterson, 2020). Thus, my analysis of Figure 3 determines that Time Zone Range 1 is past, and with it, the opportunities in Deal Zone 1.

Moving onto Time Zone 2; I agree with and support Spaniel's analysis that we are currently seeing what he called the "middling development times" (Ice et al., 2019, p. 66), in Figure 3, under which DPRK is actually in middling times of building an arsenal, not a single Nuclear Device, which increases the urgency of the situation. Consider that neither curve meets during this time zone, suggesting no deals can be made and the gap between the two actors is too wide to bridge without significant concessions from either, or, both sides. Consider also that this timeline is not iterative, to reflect the reality and the limitations of trust building, credibility and decision making under such a situation has a finite time horizon (Fearon, 1994, p. 579). Based on this idea as a starting point, instead of attempting to explain why we have not closed the gap, since Spaniel has already done that elegantly, I re-interpret and analyze the "how" of closing the gap.

Before moving on, we will begin with the premise that the DPRK will not be giving up their Nuclear Arsenal. Consider that *Juche* and the safety of the regime are the state's top priority. Furthermore, the accomplishment of a technically non-proficient country to be part of the nuclear club is the crown jewel of the DPRKs regime. Consider

now North Korea is unlikely to move in their position especially now that a generous benefactor in the north has arisen to rival the American hegemony. Under the current circumstances, I argue that the West finds that the onus is on the US to meet the acceptable “benefits” of the proliferator in order to: come up with a better deal, in a shorter timeline, and maximize benefits as much as possible under the circumstances. In short, the DPRK will not, at least in the near future, voluntarily give up its arsenal because previous deals between US and other autocrats have not been favorable to the regimes or the countries involved. In this case, the DPRKs curve in the model is considered to be constant.

The Benefit of Waiting

Considering the benefit of being a part of the Nuclear club undoubtedly comes with its privileges, there is no logical reason to give up the weapons when the benefits of nuclear “membership”, including using them as leverage to deal with the countries, outweigh the benefits of a bad deal. In this case the DPRK is unlike other near-nuclear countries, such as Libya and South Africa, not only because it actually has nuclear weapons, but also because it finds itself in the most favorable position at this time, sharing its northern border with the growing world hyper power. In order to explain the concept of benefits and negotiations, Figure 4 will illustrate an additional curve and a re-interpretation of Spaniel’s work used to portray how an increase in benefits could yield first a climate in which the DPRK and the US are in an environment to make a deal, but also how the overall marginal benefits to both countries can increase based on how soon they can make a deal.

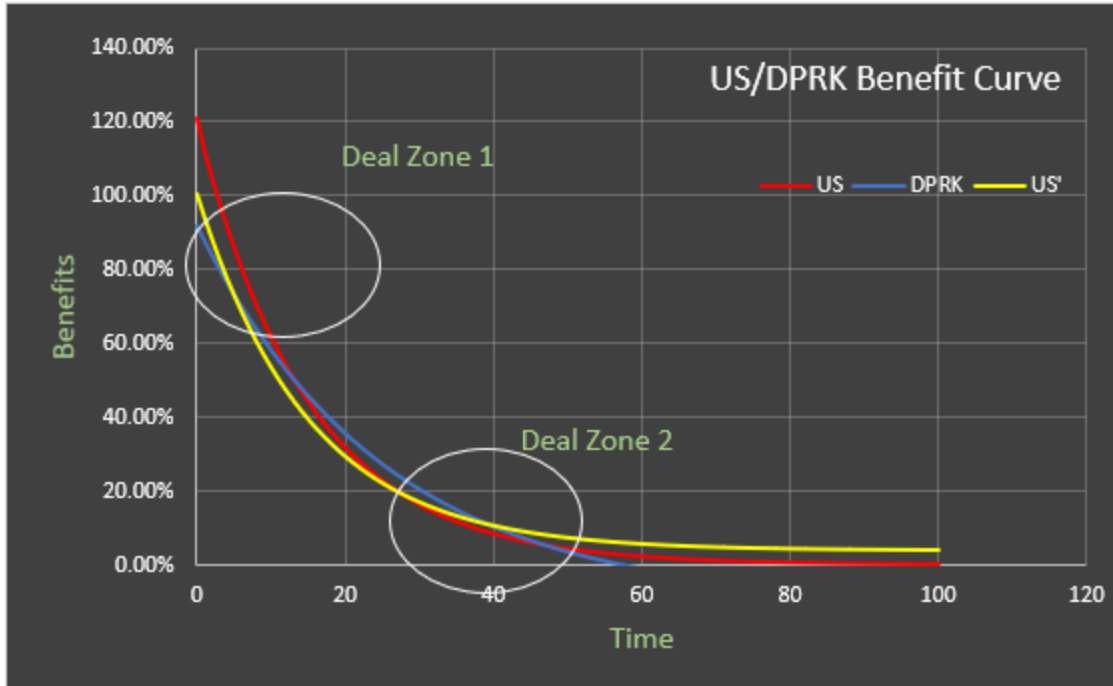


Figure 3. US' Curve

US' curve demonstrates how increasing benefits over time could lead to a DZ2 in which US' and DPRK curves intercept earlier in time and yield more benefit. Source: Author, 2020 based on William Spaniel's idea (Ice et al., 2019)

In figure 4 we see one new curve dubbed US'. To reiterate, when the curves intercept are the potential times when a deal could be made because the benefits are the same. By analyzing the curves, we can see that the benefits that North Korea (blue curve) has, since the start of Time Zone 2, been demanding larger benefits than the US (red curve) is willing to give. In addition to the security aspect of nuclear deterrence and this argument, interests lie beyond the benefit of security and economy; money alone is unlikely to be something DPRK's regime is willing to accept in its exchange for its arsenal. Regime survival, for one, is non-negotiable. A more holistic approach rooted in DPRKs biggest need, economic stimulation and modernization, is required.

Following Spaniel’s claim that the proliferator benefits most from patience, this premise that the NP, in this case the US, has it in their best interest, to have a deal come sooner rather than later. For example, if a deal is not made within 10 years and every year the DPRK can double the size of its arsenal, it would become impossible for the US to ever come up with a deal that the autocracy would be willing to accept. As seen in Figure 4, it is in the interest of time that a deal is made sooner rather than later to maximize the benefits. Curve US’ depicts an increase in benefits from the US to close the gap with the DRPKs constant gap.

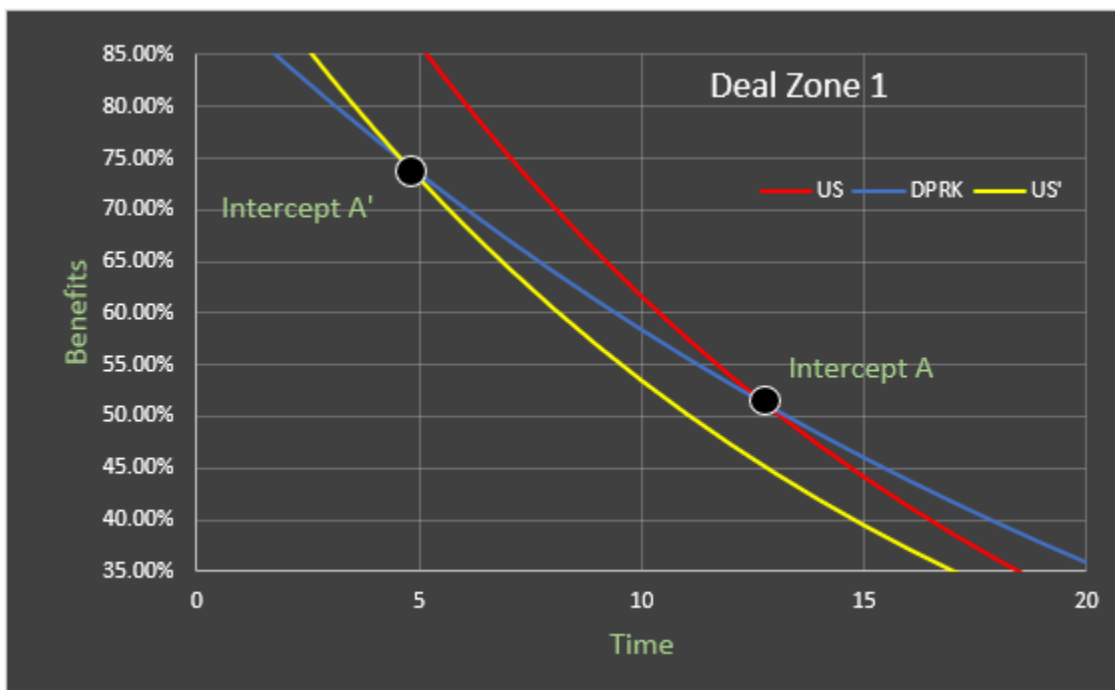


Figure 4. DZ1 intercepts.

This close up of the intercepts in DZ1 demonstrate how the A' intercept occurs sooner in time and yields more relative benefits when compared to A. Source: Author, 2020 based on William Spaniel's idea (Ice et al., 2019)

In figure 5, US' curve is one option that could be proposed that demonstrates what happens when we increase the benefits of the non-proliferator to meet those of the proliferator. US' curve demonstrates a potential upward shift by increasing the benefits to the proliferator which would have the effect of not only increasing the overall marginal benefits to both parties, but also of decreasing the time that it would take to reach an environment in which a deal is again possible.

Taking a closer look at Figure 5 we can see that in DZ1, Intercept A' comes earlier in time and yields higher marginal benefits. Alas, this time is past. However, DZ2 tells a similar story.

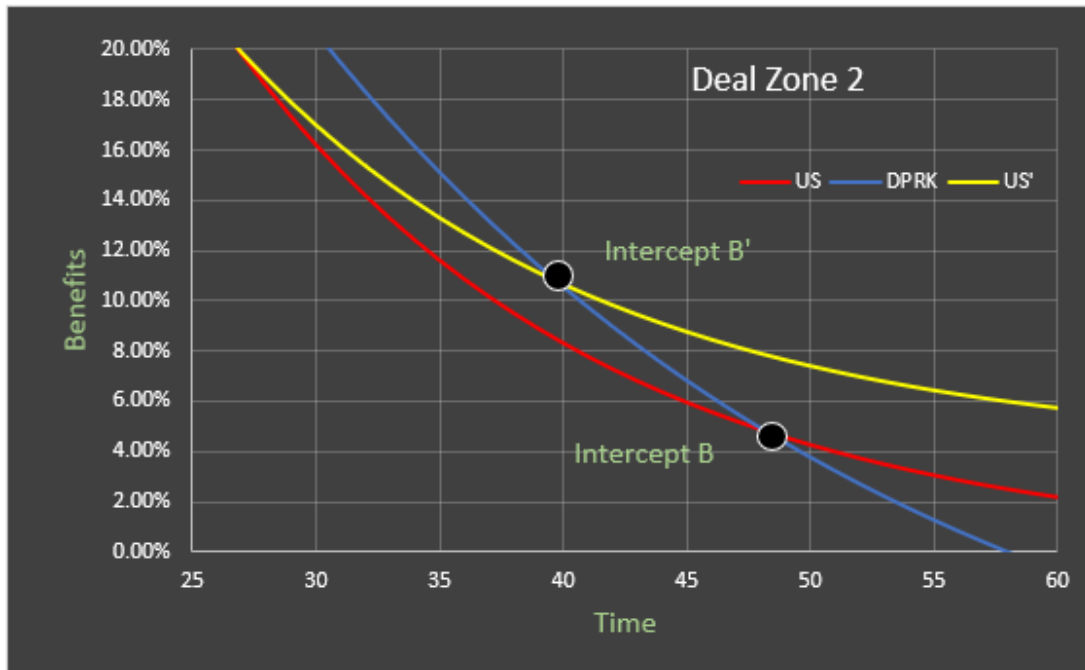


Figure 5. DZ2 intercepts.

This close up of the intercepts in DZ2 demonstrate how the B' intercept occurs sooner in time and yields more relative benefits when compared to B. Source: Author, 2020 based on William Spaniel's idea (Ice et al., 2019)

Figure 6 depicts DZ2, in which the US' curve, with its increased benefits and more attractive to the Kim Regime, enters its intercept zone, B', sooner and yields more marginal benefits than the original intercept at B. DZ2 is found somewhere in the early days of TZ3, and although it appears entirely possible that DZ2 may have occurred sometime around the Singapore or Saigon summits when a deal seemed possible and communications were still open. It is entirely possible that zone is yet to come, and with recent strong signaling coming from DPRK, a strong US response after elections in November 2020 offering some attractive incentives may yet yield positive results.

Patience is a Useful Virtue

Patience is among the most important factors that policy makers will require if a deal towards disarmament/denuclearization. As time progresses with the Status Quo the DPRK is likely to continue improving its nuclear deterrent in addition to its growing cyber capabilities and a slew of other problematic policies and abilities for the West as the eastern hegemon slowly becomes a reality in the horizon. Furthermore, we should analyze the traditional beliefs of Political scientists who believe that Democratic regimes are less patient than autocratic regimes by nature due to the election cycles. Certainly, this could provide further clues into when DZ2 could open and a deal is viable.

Endgame: Victory in Diplomacy

Game Theory can be applied in this particular instance, to analyze moves by either player. By doing a quick analysis we can see that there are some obvious options

available for both countries. From a simplified perspective, here are 3 options. They can: (1) Denuclearize, (2) Launch ICBMs at each other, or (3) do nothing. This list is not exhaustive, but it allows a glimpse into some simplified, but available strategies. Every game has a Pareto efficiency. The focus here should now be to find it and a Nash equilibrium that is not “defect”. Furthermore, although some may question or perhaps criticize the use of finite versus sequential games, it is to reflect that Nuclear War is finite, the next moves after a modern time nuclear weapon onslaught are nearly irrelevant and it was not entertained in this thesis by design. Furthermore, it shows that another opportunity to make a deal is on the horizon, and it may be the last one before the DPRK simply becomes another US foreign policy failure.

Allow me to re-iterate; a Nuclear exchange of any kind with today’s Nuclear weaponry would be beyond devastating for mankind. Since the first and only sanctioned nuclear attacks in WWII, it seems that we have forgotten the true power and consequences of detonating an atomic bomb. To believe that detonating a Thermonuclear device of modern magnitude will have only “localized” effects is inaccurate. It has been predicted that a nuclear winter could have adverse effects very far from “ground zero”. It is also significant because unlike other serious man-made concerns such as water scarcity, or climate change, which are also existential threats, Nuclear exchanges is one that we can address faster and mitigate by creating policies to discourage and restrict their use while we gradually move towards no use and increase stability not only in Asia, but the world. Despite the urgency of removing nuclear weapons, negotiations like these are complicated and perhaps we are starting off on the wrong foot. Nuclear Deterrent and

other “opening moves” should be sought under the cover of deterrence to negotiate a way forward.

After all, Nuclear War is not a game.

PART II

Chapter V.

The Capitalism in Socialism

“They say North Korea is a socialist country, but when I gave birth, I had to bring the rubber gloves and the drip and the syringe and the meals for the doctor and everyone else on staff. Everyone is working for the Kim regime.” Oh Yuna (Fifield, 2019, p. 156)

The US trade war with China during the late 2010's has de-stabilized the geopolitics in the Asia-Pacific region and has strained relations between the two superpowers. As time progresses, it may become harder and harder to stabilize it without actions in the short term that will yield results in the long term. The US alliance with ROK and Japan, are struggling to cope with an increasingly volatile and rebellious, but not irrational, DPRK. Even the PRC, traditionally a close North Korean Ally, is more ambivalent towards the rogue state and its initiatives, at least in public. The geopolitical situation is capricious and would benefit from increased stability to avoid renewed armed conflict in the peninsula which would inevitably drag in the world's current hyperpowers and cause irreversible physical and economic damages. Thus, in 2019, the Korean Peninsula remains officially at war and tensions continue to rise, as do the stakes but viable solutions to this issue continue to elude us. We are on the clock. A single nuclear payload from either side is enough to cause major damages to the global environment and economy. The significance of this problem is often undermined and misunderstood as post-pandemic global economic concerns have pushed the DPRK's security dilemma

further down the priority list and with that our chances of missing DZ2 have increased. From a liberal IR theory lens, engagement, at least economically makes a lot of sense. According to interdependence economic liberal theories, economic interdependence as well as prosperity for individuals, would discourage states from using force against each other because warfare would threaten each side's prosperity. Under this premise, an argument can be made that strengthening economic ties with the DPRK will contribute to the minimization of the security dilemma in the region as one of the primary goals. Given the up and coming entrepreneurial class and their appetite for business and profit, the climate in the DPRK appears ready for a change. I propose the nurturing of the naturally occurring Marketization of goods and services in the DPRK and the encouragement of private prosperity and increased profit to encourage rapid Economic Liberalism (Gissy, 2008.). With the growing gaps and cracks in the oversight from the Kim regime, there is an opportunity for economic liberalization after a period of trust-building.

The next section will describe, (1) the time in which a deal between ROK, DPRK and US appeared closest during the Sunshine Policy era, (2) the current economic situation in North Korea and a brief history of how it came to be that way, including the sanctions and proliferation of capitalist ventures and, (3) how the US and the west could incite the DPRK engagement in global market into capitalism via trade agreements and using the current illicit markets to further disrupt the regime's "socialist" ideals and (4) how the theory applies to increase prosperity and reduce security instability.

Economic Sunshine

As policy makers continue to be unable to solve the Nuclear North Korea debacle, we can review a time when the political and security and economic climate was closest to what was required for a successful deal, DZ1. Under ROK's president Kim Dae Jung (KDJ), and the Clinton Administration in 1999 it appeared that the climate was ripe for a deal, but events would eventually make negotiations sour and the Sunshine policy was abandoned. Yet the foundations of the policy appeared to be on track to attempt a solution that was not attempted previously. An analysis may find lessons learned that could be applied to a future Sunshine policy based on Liberal Economic Theory and economic trade and interdependence that could eventually lead to increased stability in the geopolitics of the Korean Peninsula, as well as give the US and the west more insight into the intricate details of growing Asian powers. The situation today remains mostly unchanged with this strategy showing little improvement to US/DPRK relations or encouraged any changes DPRK's compliance as they continue to rapidly nuclearize, hence a revamped strategy is needed.

Background of the Policy

In 1998, President KDJ came into power and created the so-called "Sunshine" policy. The goal of the policy was "to transform inter-Korean relations by focusing on reconciliation and cooperation" (Han, 2002, p.40). This policy was founded on three over-arching principles as guidelines:

- (1) No toleration of North Korean armed provocation;

(2) No South Korean efforts to undermine or absorb the North; and

(3) maintain active ROK attempts to promote reconciliation and cooperation between the two Koreas (Han, 2002, p. 40)

These basic tenets were then divided into 5 distinct tasks:

(1) Distrust and confrontation between the two Koreas should be replaced by a reconciliatory and cooperative relationship;

(2) the United States and Japan should improve and normalize their respective ties with the North;

(3) weapons of mass destruction should be removed from the Korean Peninsula and arms control should be realized as the most significant objective in the process of dismantling remnants of the cold war;

(4) North Korea should open up and transform itself in favor of a market economy and other countries should forge a climate conducive to facilitating DPRK's economic reforms; the existing Armistice treaty should be replaced by a peace treaty; and

(5) de-facto unification should be realized prior to *de jure* unification” (Han, 2002, p. 40)

Talk of this policy opened communications between the ROK, DPRK and USA, but other factors, such as the testing of long-range ballistic missile by the DPRK (Nikitin et al., 2017), the Bush administration’s US policy toward DPRK shortly after Clinton’s exit led the policy to never truly see the light of day, and the status quo continued. Over the next two decades, relations were marked by periods of “hot and cold” that continue today, following a short period of warming relations, in which the US President visited North Korea for a symbolic handshake (“North Korea Profile - Timeline,” 2019), the

DPRK has now signaled that it will be cutting off communications (Lee & Valero, 2020), making successful diplomacy a more difficult endeavor. One of the major programs that was made during this period was the making of what came to be known as the Kaesong Industrial complex (KIC). Sitting just beyond the DMZ, the KIC was the brainchild of KDJ as means to have South Korean firms operate on North Korean land with North Korean labor (Crisis Group, 2019). As the ROK changed over from a liberal to a conservative government, as well as new testing of Nuclear weaponry by DPRK, the KIC closed in 2016 and has remained closed since (Crisis Group, 2019). As one of the most valuable initiatives to spawn from the Sunshine policies, as it provided new opportunities it is well worth revisiting this type of initiative, at least for an initial period of trust building as it could hold many political, economic and security implications by producing mutually beneficial economic benefits.

“It's the Economy, Stupid”

While the DPRK focused on improving and maintaining its security through isolation and Nuclear Weapons research, the ROK has since become an economic powerhouse. In the 1950s the North was very similar in terms of economic power because of their large natural resource reserves. In fact, in the 1950s the North easily overpowered the newly formed South Korean forces with their Soviet Tanks. Funding from the Soviet Union appears to have inflated DPRKs GDP to the point where it is hard to determine the country's independent internal economic output. Since then, South Korean brands have become household names across the world with products like Samsung televisions and their flagship phone, the Galaxy, making millions of sales

worldwide. The ROK has grown their international market and is today exporting Cars, Ships, boats compared to North Korea's Coal, T-shirts and Mollusks (Rich et al., 2018). The disparity between the livelihood of the people in both countries which can be seen in the graphic below is stark and quite clear (Rich et al., 2018) and clearly shows ROK's economic output initiatives yielded results quickly making the ROK the fourth largest economy in Asia (He, 2020).

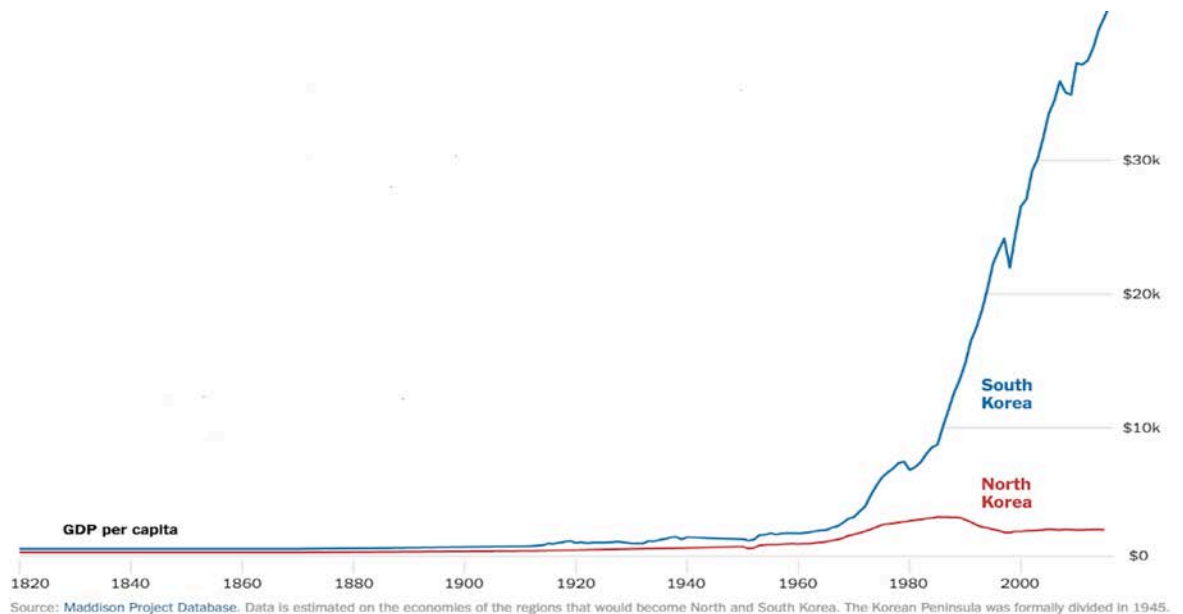


Figure 6. GDP per capita, DPRK/ROK (1820-2019).

Figure showing the stark increase of ROKs GDP per capita over time compared to the DPRK. Source: (Rich et al., 2018)

In contrast, the North Koreans have suffered through economic calamities that saw a massive famine in the 1990s (Blakemore, 2018) and a currency reform that

destroyed the populace’s personal savings in 2009 (Fifield, 2019, p. 74). North Koreans have since pressed for improved living conditions. Further complicating the situation, China’s economic and military rise in the last few decades has been meteoric and is challenging the current US hegemony, adding a new twist to the geopolitics of the region with a strong actor aligned, though not always thrilled, with the DPRK. The DPRK then finds itself in good company, as shown in Table 2: It shares land borders with the largest (China) and 5th largest (ROK) Asian economies, and shares a sea with the 2nd (Japan) and 4th largest (Russia). Furthermore, the North Korean mountains are vast mineral reserves of roughly 200 types of mineral including iron, gold, copper, graphite (Mollman, 2017). These opportunities can drastically improve the DPRKs economy and overall standing, should they choose to exploit them.

Rank	Series	Country Name	Country Code	2019 [YR2019]
1	GDP (current US\$)	China	CHN	\$ 14,342,902,842,915.90
2	GDP (current US\$)	Japan	JPN	\$ 5,081,769,542,379.77
3	GDP (current US\$)	India	IND	\$ 2,875,142,314,811.85
4	GDP (current US\$)	Russian Federation	RUS	\$ 1,699,876,578,871.35
5	GDP (current US\$)	Korea, Rep.	KOR	\$ 1,642,383,217,167.26
6	GDP (current US\$)	Indonesia	IDN	\$ 1,119,190,780,752.80
7	GDP (current US\$)	Saudi Arabia	SAU	\$ 792,966,838,161.66

Table 1. Top 7 GDPs in Asia (2019).

This table shows the GDPs of several countries with whom the DPRK may be able to develop trade agreements with to improve economic standing. North Korea conveniently shares land/maritime borders with 1. CHN, 2. JPN, 4. RUS, and 5. KOR. Source: Author adapted from World Development Indicators. (The World Bank, 2020)

Sanctions, Sanctions, Sanctions

Today, the DPRK is subjected to sanctions on many different fronts. Each time Chairman Kim makes a risky move or is especially aggressive in his signaling, especially when it concerns any and all things nuclear or ballistic, media headlines are aplenty with world leaders clamoring for tighter sanctions. As it pertains to the DPRK, the answer from the US and the International community is usually more stringent, or additional sanctions. There is an entire body of literature dedicated to determining whether sanctions have the desired effect but analyses of whether sanctions are working are unpersuasive ((Pape, 1997) (Hanke, 2018) (The Economist, 2018) So far, the Sanctions have been in place for decades and continue to “choke” the North Korean economy and it has been successful to a degree. That is to say that the commoner in North Korea is starving just a little more as the Kim regime funnels all available resources into feeding the 1% in Pyongyang and in the continued R&D of Nuclear weaponry. The Sanctions were supposed to allow the international community to sit out the North Korean problem without moving a finger. No armed conflict, no summits, little enforcement, etc. Kim and his *Juche* policy continue to pour out advances in both Nuclear weapons and ballistic missiles.

The cost of this strategy domestically is that the North Korean populace is starving. When visited by the U.N. World Food Program (WFP) in 2019, they found that roughly 40% of the population is faced with “severe food insecurity” (Stone Fish, 2019). Evidently, cutting food aid and sanctions are having some effect on the North Korean population. Even the “Elite” are suffering to some degree as their wives are forced to go

to illicit markets to “make ends meet”, as the military elite, Worker’s Party husbands, embarrassingly make similar wages to the common man (Sang-Hun, 2019). They do still maintain an edge, however, as their ties to the security services and regional political powers, allow them to enable their partner’s capitalist ventures (Sang-Hun, 2019). These factors have the potential to shake up the country’s domestic politics and loyalties to the Chairman. For this reason Kim has taken it upon himself to show some signs of progress as he turns a blind eye towards growing capitalist markets and restaurants that appeal to the elite class (Fifield, 2019, p. 166).

Despite these difficulties, however, many doubt the effects sanctions are having on the DPRK beyond localized difficulties for some. One of the biggest reasons for this the rise of the *donju* (Sang-Hun, 2019), a new class of entrepreneurs that manage a new capitalist market with corrupt government officials (Sang-Hun, 2019), along with the illegal trade along the Chinese border, “...have given rise to a culture of consumerism and scenes of prosperity: sports cars, cellphones, fancy coffee shops and high-rise apartment buildings in Pyongyang,” (Sang-Hun, 2019) which may be giving the populace at least an impression of the prosperity. In fact, according to the table below, the total number of desperate North Korean defectors seeking a different life in the ROK has dropped over the last 10 Years. The drop seen in the table does not necessarily mean that quality of life is increasing, and people are simply choosing to stay, but it could also mean that the regime is tightening its grasp on citizens. In fact, it appears to be a little bit of both as Kim attempts to stop the elites with money from leaving their privileged positions and continue to generously support the regime (Fifield, 2019, p. 157).

Number of North Korean Defectors Entering South Korea

(persons)

Category	'98	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20.06 (provisional)	Total
Male	831	565	510	474	626	424	515	573	608	662	591	795	404	369	305	251	302	188	168	202	41	9,404
Female	116	478	632	811	1,272	960	1,513	1,981	2,195	2,252	1,811	1,911	1,098	1,145	1,092	1,024	1,116	939	969	845	106	24,266
Total	947	1,043	1,142	1,285	1,898	1,384	2,028	2,554	2,803	2,914	2,402	2,706	1,502	1,514	1,397	1,275	1,418	1,127	1,137	1,047	135	33,670
Percent age of female defectors	12.2%	45.8%	55.3%	63.1%	67.0%	69.4%	74.6%	77.6%	78.3%	77.3%	75.4%	70.6%	73.1%	75.6%	78.2%	80.3%	78.7%	83.3%	85.2%	80.7%	71.1%	72.1%

Table 2. Number of North Korean Defectors entering South Korea (1998-2020).

This table shows the drastic the decreasing numbers of defectors during KJU's reign. Source: Data adapted from Unikorea. (Ministry of Unification, 2020)

From an academic lens, the effectiveness of sanctions is also questionable. As proponents of sanctions continue to say that sanctions will eventually deal a crushing economic blow to the Kim regime there are reasons to doubt. The track record in the use of sanctions suggests that not only is the success that sanctions enjoy overestimated, but they simply do not yield the much touted results that some claim (Pape, 1997). In fact, in his fundamental journal article, Robert Pape makes two relevant conclusions to this case regarding their effectiveness: (1) that economic sanctions may work for settling minor disputes that do not include aspects such as territory, the security of a state or security of the regime (Pape, 1997, p. 109). (2), that the expectation is that economic sanctions work best if the sanctioned state (DPRK) is solely dependent on the sanctioning state (USA)(Pape, 1997, p. 109). In this case, it has been documented that the DPRK managed to trade with China and fraudulently takes Maritime routes with ships bearing other country's flags to illegally trade oil (Cohen, 2019). This shows that the DPRK is not solely reliant on the US, reducing the effectiveness of the sanctions. The UN also found

that “Financial sanctions remain some of the most poorly implemented and actively evaded measures of the sanctions regime” (United Nations, 2019, p. 4). Furthermore, Steve Hanke, an economist working out of John Hopkins, has found that the most important free-market price in North Korea has been very stable since 2012, meaning the DPRK’s economy is more robust than originally thought (Hanke, 2018), yet another factor that demonstrates perhaps, a lower-than-expected-effectiveness in the sanctions. This is likely due to China’s participation in smuggling operations in near the border which enable North Korea’s illicit activities to gather money and resources, perpetuating its nuclearization further and undermining the efforts of the international community.

Land and Labor: DPRK’s Backdoors

Thus, since the DPRK is not overly dependent on US commodities to fund itself or its nuclear program, the sanctions are simply an obstacle and the North Koreans are circumventing it. As it pertains to sanctions against the DPRK, neither indicator for effectiveness is met. The effects of the sanctions beyond the dinner table of the non-corrupt commoner in North Korea remain unclear but one thing is clear, sanctions alone will not yield the desired effect, ever. With access to China and growing trade disputes between the two colossi, the incentive to obey international sanctions is inhibited, and the DPRK turns to its greatest geopolitical advantage; a land border with the soon-to-be largest economy in the world.

This is not a novel idea, for decades that the Chinese have been supporting the North Korean regime covertly. Yet in the last decade China-DPRK Trade stands more than ten times what it was in 2000, sitting around 5.2 billion USD in 2017 (Albert, 2019).

In fact, as a possible testament, to economic policy differences between KJU and KJI, a sharp increase in Trade with China occurred in 2011, when trade increased 2+ billion USD, from 3.47 in 2010 to 5.63 in 2011 (Albert, 2019), just as KJU ascended into power at the end of 2011.

This symbiotic relationship allows China to maintain a buffer between themselves and the US-allied, democratic ROK, and also allows North Korea to benefit from goods it would otherwise not have access to, in addition to the pursuit of more capitalist ideals. After coal, the textile industry is North Korea's second largest export, in 2016, it stood around 750 million USD (Wen, 2017), for clothing made in the DPRK, labeled "Made in China" then exported around the globe (Wen, 2017). As a non-restricted good from the embargo list, Chinese companies can save as much as 75% by outsourcing business to the DPRK, and due to the tightly "regulated" conditions in North Korea, some Chinese business persons believe a worker in North Korea can make up to 30% more than the average Chinese worker, and their wage can be up to ten times less (Wen, 2017). In another case, Chinese companies dealing with companies that want to keep their manufacturing more, "stringent" can hire North Koreans in China for roughly half the wages of a Chinese worker at around \$300 USD a month (Wen, 2017). Generously, the workers may keep up to a third of their wage, after the rest is sent to the great leader's coffers. According to Fifield, in her recent book "The Great Successor", many well-placed, well connected "Masters of Money" and even managers of large textile plants are pocketing many of the proceeds, in some cases up to 30%, so long as they continue to pay their tribute to Kim (Fifield, 2019, p. 149).

Textile is not the only booming industry; logistics is yet another new enterprise supported via China. The smuggling operations occurring in the border are the start of a lucrative consumer market that helps many “wealthy” North Korean meet their wants and needs (Fifield, 2019). With so much entrepreneurial appetite, the climate in the DPRK appears ripe for a change that will shift power and money within the system. And it beckons. For the US this window of opportunity may be unique in time, it may be the key

So What?

In short, there are three salient points important for analysis: (1) There is already a blueprint for a ROK and DPRK exchange that can benefit both parties, (2) Considering DPRK resources, specifically a large labor force and vast natural resources, the DPRK has comparative advantage in many aspects identifies an attractive option for economic growth (3) The entrepreneurial class in the DPRK already exists and is getting richer, giving the economic climate and platform from which the security and political situation can be influenced. In the next chapter, I discuss the theoretical framework of economic interdependence, why it can work in this case and how to implement a new Korean Sunshine.

Chapter VI.

Proposed Economic Policies A New Sunshine:

Crafting an Economic and Information Boon

In Chapter V, I discussed previous initiatives dating from the Sunshine Policy that worked and identified sectors that could work moving forward in 2020 and beyond including the KCI. The premise behind this, as I have put forth in Part I is that no deal that begins with denuclearization will ever be accepted by the Kim Regime, instead increasing economic ties and trust is the basis from which changes in the political and security climate first, may yield an improved climate for denuclearization. Sanctions have not worked, and the economic and security situation is growing increasingly volatile. Furthermore, DZ2 is, according to the estimate, moving closer and with it a last chance for the US to be a stakeholder in the Korean Peninsula. Waiting any longer may result in pushing the west out of Asia as China's economy is bound to overtake the US'.

In the previous portion of Part II, I discussed the history behind the current marketization of the DPRK. In other words, a rise of a new class in North Korea, that is, the merchant class, which is allowing the populace to catch a glimpse of the benefits of capitalism and a free (ish) market. Much like China several decades ago, the DPRK has an opportunity to improve its standing in the world. Today, North Korea may not have an SSC on the continental US but it does towards both Japan and the ROK (Stanton et al., 2019). Promises on paper from an executive who may no longer be in office after four

years is too nearsighted, and the expectation for a fast denuclearization for a President of the US to capitalize from the achievement politically or with the International community, is souring the chances for a constructive, long term strategy.

Yet, with a growing private economy, the DPRK stands to gain from integration into the global market (Broadman, 2017) and there is a window of opportunity for a deal to be made, but with a growing Chinese influence in Asia and a retrenching US, it is closing fast. I argue that a regional FTA, similar to KORUS but expanded with DPRK, could be used to improve regional economic interdependence between these states with the intent of improving relations through prosperity and enhance the competitiveness of US businesses among some of the major economies (International Trade Administration, 2020). A renewed version of the KCI, kicked off by a North Korean comparative advantage in Rare Earth Metals, could be the starting point for such a venture. Furthermore, increased prosperity could yield improved food security to the DPRK, which is correlated with increased periods of peace (van Weezel, 2017). Specifically, the study for the FAO of the UN by van Weezel found that longer durations of peace is associated with higher food supply levels, and more specifically, every additional peaceful year is associated with a “9 kcal increase in the daily per capita dietary energy supply” (van Weezel, 2017, p. 10).

Economic Interdependence: the premise for an Economic Peace

Oftentimes, Democratic Peace is touted for creating peace between democracies. But taking a deeper look into democracy’s structures and their liberal economic

ideologies it becomes suggestive that the free-market type economic ties, rather than the form of government may be one factor that make democracies more peaceful (Copeland, 2015, p. 57). In this case, the premise of a key US foreign policy goal to spread democracy to suppress conflict, i.e., a Democratic peace, should be based rather on economic prosperity, i.e. an economic peace based on Liberal Free Trade and positive trade expectations (Copeland, 2015, p. 57).

The Strategy for Achieving *some* of the Goals

The DPRK puzzle is complex, and many variables have to be taken into account. Diplomacy has been, and continues to be, Washington's preferred method of addressing the DPRK (McInnis et al., 2017, p. 2). Since these competing variables and priorities cannot be explained by a single IR framework, a blend of theories and strategies has been used to view the issues at hand. The proposed strategy takes an interdependence liberalist stance blended with the realist views of power and security as primary interests (Frieden et al., 2016, p. 45). The supported argument still maintains some forms of sanctions and nuclear deterrence; however, it does not use them as the centerpiece of the strategy to achieve a quick de-nuclearization. This is where economic interdependence comes in.

The “carrots” must balance the “stick”. Specifically, “carrots” should be in the form of economic agreements and integration into the international systems and institutions from which the DPRKs economy and population can benefit enough to apply Prospect Theory.

The Overall proposed strategy is a three-pronged approach that utilizes the following tactics: (1) deliberately cease deal-making based on denuclearization but

maintain a strong nuclear deterrent (2) Regional trade agreements with, ROK, DPRK, and the US, and (3) lastly, integration of the DPRK into International institutions. Tactic (1) was covered at length in Part I. In the section below, I will discuss an agreement and the benefits.

The Art of the Deal: When a Deal is Better than No Deal

According to interdependence liberal theory, economic interdependence would discourage states from using force against each other because warfare would threaten each side's prosperity (Walt, 1998). Under this premise, an argument can be made that strengthening economic ties with the DPRK will contribute to the minimization of the security dilemma in the region. As Jervis describes it, a security dilemma occurs when the “many means by which a state tries to increase its security, decrease the security of both” (Jervis, 1978). In this regard, as the DPRK sought to increase its own security by seeking nuclear weapons, it has brought the security of many actors into question. Yet actions against the DPRK to date have come in the form of economic sanctions and the breaking of economic ties to coerce compliance. The premise is it would force the DPRK to denuclearize, forcing them to decrease their own security without incentives.

Before moving further, it becomes important to understand why China has an interest in maintaining the North Korean regime. First, from a security perspective, the DPRK is an important geographic buffer for China from SK and its allies, especially the US and Japan (Cohen, 2019). Secondly, from an economic perspective, the DPRK and China share a common border. Bilateral trade not only supports the border regions (Cohen, 2019), but it would also become very costly to enforce the sanctions and border

security if an embargo or serious sanctions were imposed. For these reasons, amongst others, China stands to gain very little and has little incentive to support any US policy that focuses on economic sanctions or that would lead to instability in the Korean Peninsula.

On the opposite side of the spectrum, there can be potential incentives for the DPRK with a trade deal. A deal should include at least DPRK, China, ROK and USA in a Free Trade Agreement (Broadman, 2017). Taking the aforementioned Chinese interests into account, there are incentives for China, at least from a regional point of view. If this deal is to be successful, then China must be a part of it in some way. Many proponents of sanctions against DPRK have taken the stance that the sanctions will, in time, deal a crushing economic blow to the Kim regime, putting an end to the problem.

Unfortunately, the track record in the use of sanctions suggests that not only is their success overestimated, but usually fail to achieve their goal (Pape, 1997). In fact, in his well-known journal article, Robert Pape makes two relevant conclusions regarding their use. First, that economic sanctions may work for settling minor disputes that do not include aspects such as territory, the security of a state or security of the regime (Pape, 1997). This shows that the DPRK is not solely reliant on the US, reducing the effectiveness of the sanctions.

In addition, Steve Hanke's finding of economic stability in the DPRK dating back to 2012, meaning the DPRK's economy is more robust than originally thought. Thus, since the DPRK is not overly dependent on US commodities to fund itself or its nuclear program, the sanctions are more of a hurdle than an impasse for the tiny nation. Although Pyongyang would officially say otherwise, the DPRK has a growing private sector that

was previously discussed (Broadman, 2017). It is more robust and complex than the US and its allies had expected and with a burgeoning private economy, the DPRK stands to gain from integration into the global market (Broadman, 2017).

Some skeptics, including Kenneth Waltz, believe that WWI is a prime example of economic interdependence that failed and often challenges the idea that economic ties can deter conflict (Gartzke & Lupu, 2012, p. 115). After all, the European powers were each other's main trade partners and still were dragged into one of the bloodiest and most expensive wars in history (Gartzke & Lupu, 2012). Some scholars who have revisited this example, have found that the conflict only began between large economies when lesser economies with weaker disincentives to avoid conflict were at odds with each other and sought to make alliances. For example, Austria sought Germany to solve disputes against Serbia who in turn sought Russia (Gartzke & Lupu, 2012, p. 143). Conflict then, actually began among less interdependent states then the larger countries were dragged into a war that may not have occurred if Austria and Serbia had stronger economic incentives to avoid conflict. In fact an argument could be made that the Austrian-Serbian conflict that may have led to tragic event in 1914 stemmed in part during the 1906-1909 Pig War (Editors of Encyclopaedia Britannica, n.d.).

Shortly before the start of the Pig War, in 1903, the Austro-Serb commercial treaty ended and negotiations to renew it failed (Editors of Encyclopaedia Britannica, n.d.). For some context, Austria created an imbalanced trade agreement which resulted in Austria's dominating import and export figures with 80-90% and 50-60% respectively (Editors of Encyclopaedia Britannica, n.d.). This is not economic interdependence but rather economic dependence or even over dependence, whereby Austria created a trade

economy in Serbia that forced it to be subservient. When Serbia purchased goods from another country, Austria prohibited the import of Serbian Pork, hence the Pig War for this trade dispute. In the end, these negative sentiments that arose from this economic dispute turned into hostilities as despite a new deal being agreed on in 1909, Serbia stirred up trouble that eventually led to the Great War (On War, 2020). The historical lesson shows that economic interdependence can work but all stakeholders must have strong disincentives to avoid conflict, this cannot be an unfair deal as it would sour relations even further in the Korean Peninsula. It also shows that it may not be economic interdependence itself but rather the environment of prosperity it can create that drives an improvement in stability. The bottom line remains that involved actor-states must truly stand to gain something or, at minimum, feel like something is to be gained. To be clear, foreign aid shipments are not measuring of prosperity regardless of measurement, this is simply a marker of dependence on outside help for survival. For this reason, Free Trade Agreements may be a good option to consider as a “lower” up-front cost alternative.

KORUS for USKP: A deal with the Korean Peninsula

In this case, a regional FTA, similar to KORUS but expanded, could be used to improve regional economic interdependence and overall prosperity between these states with the intent of improving relations through prosperity and enhance the competitiveness of US businesses among some of the major economies (Magsamen et al., 2017). Korea is currently the US’ 6th largest goods trading partner with roughly \$130 billion in total value of goods trade during 2018. Goods exports totaled \$56.5 billion; goods imports totaled \$74.3 billion. (United States Trade Representative, 2020) As for Korea, the US was the 7th largest goods export market in 2017 (United States Trade

Representative, 2020). These numbers show that trade is largely equitable and reciprocal and should remain so if DPRK is to be a part of a Free Trade Agreement as discussed in the previous chapter. This is where the KCI idea comes in. The DPRK would stand much to gain from a trade deal that would allow them to work in low-skill or unskilled labor and provide a high profit margin for companies as they would likely find such labor pricing attractive.

Although some critics may speak to the point that some of that money could go towards funding equipment for military/defense applications, which is likely, this is happening regardless as many companies have been known to be producing goods in North Korea or by North Koreans who then send that money into the regimes hands, and whatever is left to their family. In this case, there remain incentives for investors considering the DPRK's fortunate geography being in the middle of Asia's supply chain, and the low wage labor it can provide (Shane, 2018). This is not without its inherent risks but considering the magnitude of the security, economic and political implications, it will serve the same purpose as the funds spent on enforcing a circumvented sanctions program. Some critics believe this strategy provides the DPRK with more resources to feed its nuclear program, but they are ignoring the fact that the DPRK is already trading illegally (Magsamen et al., 2017).

Consider that a fair deal for the DPRK would create incentives to avoid conflict in addition to at least some economic benefit for the involved parties. Should the sanctions continue or increase, the Kim Regime and the market will likely find a way to circumvent them, they have for years with impunity. Increasing the market size and incentivizing DPRK to enter into legitimate trade with some of the largest economies in the world may

be one of the first steps toward giving KJU the recognition he seeks on the world stage. Meanwhile, the US may benefit economically and politically, while concurrently keeping a pulse on the economy in that area to an unprecedented level. At best stability will increase, at worse the US gains significantly more access to accurate market information. Furthermore, this trade agreement could also be the vehicle to formally recognize the DPRK and lure it to integrate into the international organizations.

The Third Prong: Integration/Organizational Control

According to Ikenberry, rules and institutions are mechanisms that give states control over their environment by increasing predictability of other states' policymaking (Ikenberry, 2011, p. 80). Clear standards of behavior set out by organizational standards reduce ambiguity and enhance cooperation (Frieden et al., 2016, p. 69). The US relationship with the DPRK is ambiguous and uncooperative because the DPRK is rarely a part of international institutions. North Korea, however, is not a "hermit kingdom" (Magsamen et al., 2017). Once the DPRK is given the chance for recognition within the international community and the opportunity of entering the world market, KJU may be persuaded to abandon *Juche* (McInnis et al., 2017), the policy of self-reliance, for some more tangible benefits to exponentially increase the DPRK GDP and economic growth opportunities. If the US recognizes the DPRK regime at the global stage, other states will likely follow suit, and although some resistance is to be expected, this may be an important step into pulling KJU's country into the international institutions that could set the rules DPRK would adhere to because it could expect significant, concrete benefits in exchange.

Once the DPRK is within the institution, it may become easier to control some of its policies in exchange for the potential of prosperity and growth. The downside is that by providing this opportunity the US and other allies must be willing to give up some political autonomy and restrictions when it comes to dealing with the Kim Regime, but so does the DPRK and that is the point. This provides both parties with the chance to gain credibility and signal restraint in the eyes of all others (Ikenberry, 2011, p. 97). Still, some would also argue that international organizations constrain the US but not the rogue DPRK (Ikenberry, 2011, p. 97). However, to this I argue that the US is in the best position to enforce these institutions, leading by example and exemplifying rule through rules which puts more pressure on member states to comply. Moreover, this is an opportunity for the USA to utilize agenda setting power to influence the choices available to the DPRK (Frieden et al., 2016, p. 66).

As a superpower, the US has an advantage within International norms. America has strayed away from these institutions and norms acting unilaterally, as it did in Iraq in 2003, with little repercussion. The US, as a hyperpower, can rope in the weaker state into an agreement while credibly restraining itself (Ikenberry, 2011, pp. 93, 96). Furthermore, China has previously signaled that it would be willing to punish the DPRK when it tested nuclear weapons in 2006 backing UN Security council resolution 1718 (Albert, 2019). It is very possible that China, as part of a multilateral, would consider this stance again. In this way, integration can provide a more robust form of control, as an alternative to the threats and sanctions, while promoting an American-led liberal hegemon. By sponsoring rule through rules and international organizations, America is further justified in its actions.

An additional benefit is that increased communication can regulate crisis and conflict faster and on similar channels versus tacit bargaining focused on norms which we may not share. It can also bolster collaboration to reach a better outcome, i.e., prisoner dilemma. It also curbs China taking advantage and pushing its own agenda if the US is present during the discourse. From a constructivist perspective, international institutions enable both China and the US, who have conflicting interests in the Korean Peninsula, to also signal restraint to each other thus contributing further to increased stability. Once the integration process is well underway, then we can consider, possibly, the question of denuclearization and disarmament.

Chapter VII

Policy Prescription and Conclusions

Throughout the thesis, I have discussed a broad range of topics that pertain to historical and current affairs in the Korean Peninsula and the DPRK/US nuclear dilemma. In the previous chapter I outlined the benefits of an economic strategy and the reasons why it may be more successful than the other option that has floated around defense analysts and policy makers' desks for years. In this final chapter, I first sum up the findings in an executive summary format comparing the two distinct policy options. Lastly, I conclude the writing with a succinct summary of the thesis and final thoughts.

The Policy Prescription

The US as the current hegemon, has the power to enhance international foreign policy direction and international relations as whole. As it pertains to the DPRK nuclear problem, the US has two distinct options beyond the *Status Quo*. One: Encourage a nuclear freeze but focus on the creation of a positive-sum economic deal to bring prosperity to the DPRK, bringing North Korea into the international system. Two: Bring increased offensive hard and soft power to bear on the DPRK, including increased sanctions, embargos and intelligence operations leading up to kinetic operations that will lead to the destruction of the North Korean nuclear arsenal and the removal of the Kim regime. I support Option 1.

Background

The DPRK has pursued Nuclear arms persistently and deliberately for decades. After pulling out of the NPT and producing a small nuclear arsenal, KJU continues to develop North Korea's nuclear capabilities. Ongoing nuclear and ballistic missile testing has renewed a nuclear crisis lurking in today's IR. Despite a renewed engagement by US president Donald Trump in the form of summits, the DPRK is steadfast in keeping the nuclear option as means to secure regime survival. Many argue that the US North Korea nuclear policy approach has failed and instead of achieving prevention from DPRK's proliferation of nuclear weapons, it has had the opposite effect. As the dispute escalates, there is a security dilemma for DPRK, the US, the ROK, the PRC and the world.

Considering that Asia's GDP is expected to expand to 50% of the world's GDP (ADB) and with the PRC becoming a major political and economic influence worldwide, it is in US interest to invest in in the area to benefit economically and geopolitically. As major US allies in East Asia, namely Japan and the ROK are struggling to counterbalance China's meteoritic rise, and with US influence waning in the area, the DPRK nuclear challenge provides an opportunity. With a robust foreign policy, the US could achieve a geopolitical victory that could produce significant changes in the region. At this time, the US has an opportunity to decide how the next few decades will pan out in Asia with severe economic, political and security ramifications.

Analysis

Option 1: Create and develop multilateral economic incentives to enhance development outcomes in the DPRK benefit economically through trade under the

umbrella of nuclear deterrence and economic peace. As Asia grows into the largest economy in the world, the US should focus our efforts on strengthening ties with many Asian nations, lest we become dependent on China. Although the DPRK is a poorer country with and unskilled labor force, it is also resource-rich and ripe for lowering production costs for many industries, namely the tech sector. Considering the ongoing proliferation and the lack of motivating factors for North Korea to cease their nuclearization, incentives must be created.

With the ongoing bottom-up marketization blooming in Pyongyang and elsewhere in the DPRK, there is a window of opportunity to increase economic incentives and pull the DPRK into the international community. It is in US interest to increase cooperation and economic ties as it stands to gain economically and geopolitically against rival China. This will help to assist in counterbalancing China's explosive growth as an economic and political superpower. Economically, this policy makes sense since the DPRK likely enjoys a comparative advantage in raw minerals and rare earth metals, and manufactured goods compared to both China and the US. This policy will also increase work opportunities to support the decrease of poverty and famine in the DPRK. Food security in the DPRK can be addressed, in part through an FTA which should increase both the availability of food produce but also the income for average citizens to afford it. An FTA with the Korean Peninsula has the potential for bringing improvements in both trade and welfare for both countries and beyond. This policy is likely to receive support at both levels of two-level Games because it creates a stronger economy at home and abroad. One downside is that this policy signals to developing countries that the creation of a

nuclear arsenal could be a vector to gain generous economic incentives from a major world power.

Option 2: Bring increased offensive hard and soft power to bear on the DPRK, including increased sanctions, embargos and intelligence operations leading up to kinetic operations that will lead to the destruction of the North Korean nuclear arsenal and the removal of the Kim regime. Many hawks in Washington D.C. back this strategy as the preferred method of treating a state and regime that clearly disobeys international agreements and build nuclear weaponry. As the US wields the most advanced military targeting systems, has clear air superiority against the North Korean Air Force and is free to operate in South Korean airspace, this policy could be the fastest way of disabling Kim's nuclear deterrent, and having a successful regime change or perhaps even unification of the Korean Peninsula. This policy could encourage the growth of democracy in a country that is hampered by dictatorships and kleptocracies. By educating people, providing access to information and increasing employability, overall stability will improve. In the long term, this may nurture the growth of democracy. According to some strands of liberal theory, democratic states can be inherently more peaceful than authoritarian states.

The downside is that previous instances when this type of strategy was utilized, such as in Libya or Iraq, the security situation in those countries has degenerated into continuous strife. Furthermore, with the proximity and geopolitical interest from China we risk falling into the security insecurity paradox.

Recommendation

Addressing the DPRK's current issues will help to address more than the security/nuclear concern. By creating an economic peace, it will also tackle food security in the Korean Peninsula which appears to enhance peace. Although some argue that a military strike to neutralize the nuclear arsenal or pushing the Kim regime out of power are good options, poor intelligence, high risk of massive conflict, and credibility problems stand as major obstacles to the viability of this option. If there ever was a time for hawkish policies to strike the DPRK's nuclear program, that window has passed. Option 1 will enhance stability not only in North Korea, but in many other parts of Asia as the US can gain more influence in a market dominated by China. It will also help the local entrepreneurs grow the country out of poverty and create economic incentives to avoid armed conflict. By taking this approach versus continuing the sanctions, we not only promote cooperation, but we also encourage trade and benefit from a geopolitical advantage against a challenger to the US hegemon. The return on investment in North Korea may be far greater and will allow the US to profit politically and economically for years to come, eventually leading to a secure climate that may allow for disarmament over the long term.

For this reason, I recommend Option 1.

In Conclusion

Over the course of the thesis, a broad variety of topics as they pertain to the US/DPRK nuclear dilemma have been discussed. I hypothesized that an economic incentive approach that would create economic prosperity would increase stability in the

Korean Peninsula. First, I covered an overview of the historical and political context in the Korean Peninsula which laid the groundwork to understand the Game Theory analysis in Chapter II. My analysis in Chapter II posited that KJU is playing a non-iterative prisoner dilemma, and according to theory the most rational thing to do is the defect calling into question claims about KJU's irrationality. I found that the main criteria considered to be a success for the DPRK is regime survival. Since the perceive nuclear weapons to be the only way to safeguard the regime, and there have been recent instances in which other fascist leaders, namely Qadhafi in Libya have met an untimely end when nuclear weapons were out of the picture.

In the case of the DPRK, trust must be built to come up with a timely deal that satisfies all parties. We have observed sanctions fail time after time; coercion against the DPRK has yielded little results and new directions are needed. I proposed that one way to stabilize the peninsula was through economic incentives and a revival of the sunshine policy, adapted to the 21st century. This solution was suggested because links found that point towards economic peace and food security as factors that seem to strengthen peace and reasons to avoid armed conflict.

Using this holistic strategy, I hope that all parties can benefit from a deal that would: (1) see the US increase its influence in Asia, (2) see the Korean Peninsula's security status improve and (3) improve the economic standing of all parties involved. As one of the most pressing security issues that continues to make crisis headlines, the resolution of this situation is imperative. My hope is that this body of work contributes to a solution in the future over the long term

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