



**UNIVERSITY OF
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**Why is North Korea pursuing nuclear weapons
rather than economic development?**

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Bachelor of Arts in Political Science and Applied Languages

Why is North Korea pursuing nuclear weapons rather than economic development?

A Final Year Project

by

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To

The Department of Politics & Public Administration in fulfilment of the requirements for the Degree of Bachelor of Arts in Political Science and Applied Languages

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Correction Sheet

Abstract

A ten-minute artillery barrage from North Korea can fire an estimated 30,000 shells on the Seoul metropolitan area; such an attack threatens over ten million people. Despite long-standing deterrence, Pyongyang maintains the need for a nuclear arsenal. This decision appears self-destructive; North Korea has been ostracized by the international community and sanctions inhibit the development of its economy. By synthesizing and evaluating prior research this paper uses a qualitative approach to resolve: Why is North Korea pursuing nuclear weapons rather than economic development? This paper finds that contradictory information challenges the prevailing explanations for North Korea's nuclear program. Two alternative motives are established to better account for North Korea's nuclear ambitions. First, unlike the DMZ, the Sino-DPRK border is largely indefensible. China's military capabilities and economic influence threaten North Korea's sovereignty. Nuclear proliferation guarantees autonomy and prevents the DPRK from deteriorating into a satellite state. Second, regime survival has required that North Korea forgo economic development, prioritize coercive military control, and isolate itself from the world. The regime legitimizes its totalitarian policies by embracing a siege mentality; state doctrine teaches that foreign imperialists intend to invade. Sanctions benefit the regime by shifting the blame for endemic poverty onto foreign powers. North Korea's military belligerence, threatening rhetoric, and nuclear program are a means of attracting sanctions, international condemnation, and perpetuating an atmosphere of war. By becoming a pariah state North Korea has been able to embrace a siege mentality to evoke ultranationalism and maintain political cohesion. These findings indicate that the DPRK's political system is incompatible with economic reform. As such, an economic approach to North Korea will not translate into political change.

Table of contents

Abstract	4
Acknowledgements	6
Declaration	7
List of Abbreviations	8
1.0 Introduction	9
1.1 Why pursue nuclear weapons?	9
1.2 project structure	9
2.0 Methodology	10
2.1 Background of the research question and selected methodology	10
2.2 Process	10
2.3 Assumptions	11
2.4 Limitations	11
3.0 Literature review	11
3.1 Aims of literature review	11
3.2 Introduction to Dove and Hawk schools of thought	12
3.3 Hawk's Case for Manipulative Diplomacy	13
3.4 The problematic nature of sanctions	15
3.5 Dove's Case for Diplomacy	16
3.6 Literature review conclusion	18
4.0 Research	19
4.1 Origin of North Korea's nuclear weapons program	21
4.2 Transition to military-first	23
4.3 North Korea's National Security	25
4.4 North Korea's economic dependency on China	26
4.5 The Sino-DPRK double bind	28
4.6 Autarky and isolationism	30
4.7 Sanctions and nationalism	32
5.0 Findings	33
5.1 Key findings	33
5.2 Economic findings	34
5.3 Geopolitical findings	35
5.4 Nuclear program findings	35
5.5 Sino-DPRK findings	37
6.0 Conclusion	37
6.1 Implications	37
6.2 Recommendations for future research	37
6.3 Policy recommendations	39
Bibliography	39

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Declaration

I hereby declare that this project is entirely my own work, in my own words, and that all sources used in researching it are fully acknowledged and all quotations properly identified. It has not been submitted, in whole or in part, by me or another person, for the purpose of obtaining any other credit / grade. I understand the ethical implications of my research, and this work meets the requirements of the Faculty of Arts, Humanities and Social Sciences Research Ethics Committee.

Signed:

A handwritten signature in blue ink that reads "Patrick Rea". The signature is written in a cursive style with a large, stylized 'P' and 'R'.

Date: 3rd of April 2021

List of Abbreviations

Acronym	Definition
CVID	Complete, verifiable, and irreversible denuclearization
DMZ	Demilitarized Zone
DPRK	Democratic People's Republic of Korea
GDP	Gross domestic product
GNI	Gross national income
HEU	Highly enriched uranium
IAEA	International Atomic Energy Agency
ICBM	Intercontinental ballistic missile
KCNA	Korean Central News Agency
KPA	Korean People's Army
KWP	Korean Workers' Party
LRA	Long range artillery
LWR	Light-water reactor
MAD	Mutually assured destruction
NGO	Non-governmental organization
PLA	People's Liberation Army
PRC	People's Republic of China
ROK	Republic of Korea
SEZ	Special economic zone
UN	United Nations
UNSC	United Nations Security Council
US	United States of America
USSR	Union of Soviet Socialist Republics
WHO	World Health Organization
WMD	Weapons of mass destruction

1.0 Introduction

1.1 Why pursue nuclear weapons?

North Korea is one of the most impoverished nations, having an estimated GDP per capita of 1,700 USD (CIA 2020). Access to electricity and heating is not available to a majority of the population; an estimated 50% of its population does not have access to adequate nutrition (Am et al. 2012, pp.17-19). Nuclear weapon and missile development have resulted in a barrage of increasingly severe economic sanctions which have devastated North Korea's entire economy (Siegfried et al. 2010, p.9). Despite widespread poverty and an ailing economy, three decades of diplomacy have failed to convince North Korea to abandon its nuclear weapons program (Avery et al. 2015, p.2).

Diplomacy has failed to offer North Korea something more valuable than its nuclear program. If diplomacy is to succeed the motivations behind the DPRK's nuclear weapons program need to be well understood. As such, it is vital to resolve the conundrum of why North Korea has forgone its economy in favour of nuclear weapons development. The research question this dissertation will address is: Why is North Korea pursuing nuclear weapons rather than economic development?

Two explanations prevail within the current scholarship regarding what is motivating North Korea's nuclear weapons program. First, that Pyongyang requires nuclear weapons "to deter the United States and by extension other parties such as South Korea and Japan." (Bluth 2017, p.53). Second, that nuclear weapons give "the regime the bargaining leverage it needs to plug holes in its economy with inputs of aid from the international community." (Habib 2011, p.52).

This dissertation challenges the validity of these hypotheses. When presented with contradictory evidence, these ideas fail to explain North Korea's fervent pursuit of nuclear weapons. This paper establishes an alternative framework to better understand the rationale motivating North Korea's seemingly self-destructive behaviour. This paper uses regime survival to explain why North Korea has forgone its economy, engages in erratic military provocations, is pursuing isolationism, has been resistant to diplomacy, and is developing nuclear weapons.

1.2 Project structure

The next chapter is a concise description and justification for this paper's methodology. Problems encountered and other limitations which may have influenced this dissertation's findings will be listed.

Chapter three is a literature review. It is a critical review of prior scholarship on North Korean nuclear diplomacy. It will assess the arguments put forwards by the two primary schools of thought regarding North Korea's nuclear program. As a middle ground, the purpose of sanctions will be brought into question by evaluating their efficacy and impacts. Finally, a judgement will be reached on the accuracy, relevance, and quality of existing literature. Identification of gaps and problems with existing research serves as the foundation for developing this dissertation.

Chapter four is the main body of this dissertation's research. This develops from and intends to resolve the problems identified by the literature review. The purpose of this chapter is to determine what events contributed to North Korea's decision to develop a nuclear weapons program rather than its economy. The research chapter covers seven topics: First, the timeline of North Korea's nuclear program is established. Changes in the speed of nuclear development are assessed to help identify shifting regime priorities. Second, the implementation of 'Songun' or military-first politics is evaluated. This identifies the factors that led North Korea to prioritize its military over its economy. Third, threats to North Korea's national security are identified, specifically its military capabilities and the defensibility of its borders. Fourth, North Korea's dependency on China for 90% of its trade. Why this dependency threatens North Korea's sovereignty. Fifth, the Sino-DPRK double bind. How a collapse of North Korea threatens China. Sixth, North Korea's increasing autarky and isolationism. Why economic stagnation is safer for the regime than economic reform. How regime survival is threatened by growing economic disparity which requires the state gradually become more isolated. Seventh, sanctions and nationalism. How the regime is using sanctions to deflect economic failure on foreign powers. How the regime uses sanctions to justify its isolationist and militaristic policies.

Chapter five highlights the most important findings of this dissertation. It concisely summarizes the economic, geopolitical, nuclear, and Sino-DPRK findings. These findings then justify the conclusion that follows.

Chapter six is the conclusion. A clear answer to the research question is provided based on the findings. The implications and importance of the findings are discussed. Finally, based upon the findings, recommendations for policy and future research are offered.

2.0 Methodology

2.1 Background of the research question and selected methodology

This thesis used a qualitative approach to resolve the research question of: Why is North Korea pursuing nuclear weapons rather than economic development? This research question arose from the observation that North Korea's political and economic behaviour appear irrational and self-destructive. This project's objective was to construct a framework that rationalizes North Korea's behaviour. Research began with no underlying hypothesis or theory with which to explain North Korea's behaviour. Grounded theory was selected as the primary methodology. Grounded theory was found ideal as its purpose is to establish an explanation for a phenomenon when little is currently known (Tie et al. 2019, pp.1-2). As many possible explanations for North Korea's nuclear program are possible, abductive reasoning was used to select the most likely explanation. This is merely one possible method of inquiry.

2.2 Process

Resolving this research question required comprehensive reading, synthesis, and evaluation of information from books, journal articles, and historical documents. A literature review was conducted to assess whether existing literature is able to satisfy the research question and to identify gaps in research. The research portion of this paper synthesized, evaluated, and connected these niche areas of research together. By focusing on relevant gaps in research and

linking previously unconnected ideas together an answer to the research question was established.

2.3 Assumptions

This dissertation is based on the minimal assumption that North Korea's actions are motivated by regime survival and maintaining state legitimacy. The DPRK's economically and socially regressive policies are assumed to be deliberate and organized rather than caused by the chaos of a failing state. It is assumed that North Korea's actions should logically reflect its goals.

2.4 Limitations

North Korea has become one of the most isolated countries in the world (Lee and Seo 2019, p.2). North Korea being a totalitarian autarky makes it extremely difficult to know in detail the true nature of its society, culture, and politics. This makes it impractical to gather relevant pieces of information about the DPRK. The most significant of these limitations being the major gaps in information on the internal workings of government, lack of intelligence on military capabilities, and a rudimentary understanding of North Korean society and the opinions of its citizens (United States Senate Select Committee on Intelligence 2006, p.6). Information almost exclusively flows outwards, primarily in the form of propaganda from state-controlled media. As information predominantly flows in one direction it is difficult to verify its accuracy. The scarcity of accurate and up-to-date information on the DPRK limits the degree of confidence behind this paper's conclusions.

Much of the scholarship on North Korea is written in Korean. This limits access to a large portion of potentially relevant information. Many papers that are written in English link to sources written in Korean which made verifying certain claims impractical.

3.0 Literature review

3.1 Aims of literature review

The purpose of this literature review is to evaluate whether existing literature is able to adequately explain why North Korea is prioritizing nuclear weapons rather than its economy. This will be done by synthesizing and critically reviewing scholarship discussing North Korean nuclear diplomacy. After thorough analysis, a conclusion will be reached as to whether the existing literature adequately explains North Korea's nuclear ambitions.

Reviewing the literature provides necessary context, reveals the importance of the selected research question, allows the addition of insight and critique into prior scholarship, and demonstrates a comprehensive understanding of North Korean political issues. The synthesis of existing research serves as the foundation which enables this paper to contribute to the discussion on North Korea.

Evaluating the debate between scholars enables the achievement of three things. Firstly, to identify both scholarly consensus and the source of disagreement regarding why North Korea is developing nuclear weapons. Secondly, the identification of shortcomings and gaps in existing research. Thirdly, assessing prior literature helps create new associations by linking

ideas from separate scholars. Ultimately, synthesizing prior work creates new ideas, identifying gaps directs focus into new areas, sourcing areas of longstanding disagreement and consensus enables the avoidance of topics that have been debated into deadlock. This approach increases the likelihood that this dissertation will be a valuable contribution to the discussion on North Korea.

3.2 Introduction to Dove and Hawk schools of thought

Assessment of the academic literature on North Korea's nuclear weapons program reveals two recurring and competing schools of thought. The first camp, commonly referred to as Optimists or Doves, argue the DPRK's seemingly erratic behaviour is motivated by economic and national insecurity, desperation, isolation, and international pressure. The second camp, usually described as pessimists, Hardliners or Hawks, understand the DPRK's nature as inherently deceptive, ideologically hostile, and manipulative. (Kang 2012, pp.143-144) For clarity and consistency, this paper will refer to these two schools of thought as Doves and Hawks. Each camp argues a different rationale for North Korea's nuclear weapons program.

Anderson (2017 pp.623-636) does well to characterize Doves and Hawks by assigning common attributes to each camp. According to Anderson, Doves are scholars whose arguments follow the general pattern that: North Korea pursues nuclear weapons because they are insecure, threatened militarily, isolated politically, and have economically fallen behind. Doves suggest that the international community can best stop nuclear development by mitigating North Korea's insecurities, primarily through economic aid and political engagement.

Anderson classifies Hawks as scholars who are skeptical of negotiating with the DPRK, interpreting North Korea as a deceptive actor which negotiates in bad faith. They argue North Korea is pursuing nuclear weapons to gain diplomatic leverage and to extort economic aid from the international community. When threatened or pressured, the DPRK disingenuously expresses interest in diplomacy and reform. However, the regime holds no genuine intention of reform or abandoning their nuclear weapons. Hawks point to the long history of failed diplomacy as evidence that the DPRK is disinterested in political reform or denuclearization.

Victor Cha (2012, p.294) outlines key differentiating traits between Doves and Hawks. Doves believe the nuclear problem is solvable through diplomacy and economic assistance. Whereas Hawks contend that diplomacy will not lead the DPRK to abandon its nuclear program as these weapons are key to regime survival.

It appears that Hawk's hardline position has arisen from concluding that Dovish diplomacy has failed. This has resulted in each camp's policy towards North Korea being the exact antithesis of each other. Doves maintain that economic development will encourage political reform and ease the North's insecurity. On the contrary, Hawks are generally in favour of sanctions. They base this on the conclusion that the North takes advantage of economic aid and is unlikely to reform.

While Anderson, Cha, and Kang's description of these two camps varies, jointly assessing their views reveals both perspectives share a common trait: both Doves and Hawks recognize that DPRK's pursuit of nuclear weapons is fundamentally an issue of power and regime survival. Disagreements stem from what motivates this pursuit of power. Doves claim the pursuit of nuclear weapons is motivated by national security concerns. Hawks on the other

hand view nuclear weapons as a tool that increases the DPRK's ability to manipulate the international community. A succinct summarization of these camps is that: Hawks view the DPRK as a Machiavellian state, while Doves see the DPRK as a distressed nation in need of guidance.

The remainder of this literature assessment will detail and evaluate the comprehensiveness of arguments put forward by both schools of thought regarding North Korea's nuclear weapons program. Eventually, a determination will be reached as to whether the existing literature adequately accounts for North Korea's fervent pursuit of nuclear weapons.

3.3 Hawk's Case for Manipulative Diplomacy

The failure of the Sunshine Policy is commonly used as evidence to argue that North Korea is disinterested in political change and uses manipulative diplomacy to extract aid. The Sunshine Policy was the period between 1998 and 2008, during which South Korea actively pursued engagement with North Korea by providing unconditional economic assistance. The goal of the Sunshine Policy was to alleviate the North's insecurity by pursuing cooperation and peaceful coexistence. It was believed that developing the North's economy would ease political tensions, leading the North to engage with the international community. (Axelblom 2017, pp.5-7) Fundamentally, the Sunshine Policy was a manifestation of the Dovish belief that North Korea's isolationism and hostility was caused by distrust of the outside world and economic distress.

Paradoxically the Sunshine period saw North Korea become more belligerent and drift farther from the international community. During this period, the North restarted its nuclear weapons program and provoked numerous military skirmishes with South Korea. (Kim and Lee 2011, p.60) Aid and economic development were accepted only on the conditions that it excluded social contact between North and South Koreans. The North's actions indicate that Isolationism is prioritized over both economic development and the normalization of relations.

Ultimately, the Sunshine Policy was abandoned in 2008 due to a loss of public support in South Korea. "If the DPRK had behaved differently in a number of ways, including not provoking battles, or by agreeing to more meetings and cooperation-talks, there could have been further progress. The ball is often in the DPRK's court, without the nation being willing to act in a cooperative and progressive way." (Axelblom 2017, p.17) North Korea's perplexingly antagonistic response to the Sunshine Policy appears consistent with a policy of maintaining an atmosphere of war and a siege mentality. This concept will be further developed in chapter 4. 2 Transition to military-first.

While Axelblom focuses on the causes of the Sunshine Policies failure, Victor (Cha 2012 p.155) assesses how this policy allowed North Korea to drift further into totalitarianism. Cha argues the Sunshine Policy helped stabilize North Korea economically and politically. Economic aid allowed the North's government to rebalance its failing centralized economy and expand its public distribution system (PDS). The government became better able to provide food to its citizens; allowing the regime the power to crack down on private markets in 2007.

With the benefit of hindsight, critics of the Sunshine Policy argue it strengthened a repressive regime. Economic assistance allowed the DPRK leverage to enact anti-reformist policies, thereby, further separating itself from the international community. “Unilateral engagement by South Korea with a hopeful thinking that North Korea would eventually reciprocate turned out to be futile.” (Park 2018, p.120)

Hawks view the DPRK’s occasional willingness to engage in diplomacy as a stalling tactic. Periods of diplomacy are argued to benefit the regime by stalling the implementation of harsher sanctions. Meaningful agreements on political reform or denuclearization are rarely reached. When commitments are made, they are usually quickly abandoned. Ultimately diplomacy with the DPRK takes time, inevitably fails, thereby pushing the resolution of the nuclear problem into the future. This idea of manipulative diplomacy is well argued by (Haggard and Noland 2009b, p.2) who state: “Hawks have long argued that North Korea’s provocations and delays were simply a means to buy time to secure a credible nuclear deterrent, including the means to deliver it.” (Park 2018, p.109) expresses a similar notion by arguing that the patience and patronage during the period of the Sunshine Policy enabled the North the liberty to further advance its nuclear program. “The idea of giving asymmetrical and preemptive assistance to North Korea... elevated its nuclear capability”

Haggard and Noland’s argument for obstructive diplomacy can be bolstered by assessing it in conjunction with the failure of the Six-Party Talks which took place between 2003 and 2009. The DPRK repeatedly expressed a willingness to reform and work towards denuclearization. In 2005, “The DPRK committed to abandoning all nuclear weapons and existing nuclear programs” (United States Department of State 2005) However, the DPRK swiftly disregarded its commitment to denuclearization outrightly. “right after the 2005 agreement, North Korea conducted its first nuclear test in 2006. North Korea conducted its second nuclear test in 2009... Thus, it can be said that North Korea has come to manipulate the Six-Party Talks with a strategic intention of developing nuclear weapons” (Hong 2012, p.120) The North’s tactic of stalling diplomacy during the Six-Party Talk matches the behaviour described by Haggard and Noland.

Hawks have made a compelling case that North Korea consistently engages in manipulative diplomacy. The DPRK’s actions have made it abundantly clear that they have little interest in reforming. Disingenuous diplomacy, tightening of societal controls, abuse of olive branch diplomacy, false promises of denuclearization, and disregard for human rights, are all convincing indications that North Korea can be characterized as a Machiavellian state.

Despite this, Hawks fail to present a convincing explanation as to why North Korea is pursuing nuclear weapons. The prevailing argument among Hawks is that the function of nuclear weapons is to bolster the North’s ability to engage in manipulative diplomacy. (Niksch 2003, p.3; Cha 2012, p.233; Eberstadt 2004, p.56; Lankov 2013, pp.189-190) Certainly, nuclear weapons are leveraged in negotiations. However, the claim that their purpose is to extort aid or otherwise profit is dubious. According to (Byman and Lind, 2010, p.65) “Since the 1990s, North Korea’s “nuclear extortion” has generated more than \$6 billion in aid from not only South Korea, but also the United States, China and Japan.”. The above estimate should make it clear that the economic devastation caused by 18 years of sanctions far outweigh the economic concessions Pyongyang have earned. Extortion cannot be explained as the primary motive behind the DPRK’s nuclear program, rather it serves an auxiliary function.

Hawks interpret the North's actions as a means to defraud. True as that may be, the conjecture that North Korea's nuclear program is driven by an intent to maximise extortion does not hold up to scrutiny. North Korea is not profiting from its nuclear program, quite the opposite, its economy is suffering needlessly as a result. The DPRK's actions have resulted in their nation being cordoned off from the international community. Despite this, the program persists. It is conceivable that Isolationism rather than extortion could be motivating the North's behaviour, this idea will be further assessed in chapter 4.7 Sanctions and nationalism.

3.4 The problematic nature of sanctions

Even if one interprets the DPRK as a Machiavellian state, the Doves present a strong case that opposes sanctions. Ideally, sanctions target political elites "while imposing minimal hardship on the mass public" (Drezner, 2011, p.96). However, those most impacted by sanctions are not the elite, rather, the most vulnerable members of society. Sanctions are akin to a form of siege, the deprivation caused is sometimes argued as necessary for change. "If the people suffer enough, they will pressure the government to alter its behaviour in order to have the sanctions lifted." (Allen and Lektzian 2013, p.122) This might be the case in more democratic societies. However, due to North Korea's political caste system, the individuals who are most harmed by sanctions are unable to pressure the government.

By centralizing its economy and restricting market activity the North has prevented the development of a traditional middle class. Economic wellbeing is determined through a political class system rather than the accumulation of wealth. Political trustworthiness as measured through the Songbun system determines one's opportunities and standard of living. (Patterson 2017, p.67)

Political loyalty determines success. This has created a political echo chamber that deters the vast majority of people from voicing any dissenting opinions or advocating for reform. Despite widespread poverty and heavy sanctions, the Songbun system makes it unwise for individuals to demand political and economic reform. liberalizing the economy would create a new market class, this would undermine the importance of the Songbun system. Members of the government are at the top of the Songbun system, introducing market reform would only undermine their prestige and social status.

Sanctions on North Korea disproportionately impact an already impoverished civilian population. Sanctions slow economic development, worsen humanitarian issues, and impede the ability of the state to meet the needs of its populace. The UN has long acknowledged that sanctions often unintentionally impact human rights. "they often cause significant disruption in the distribution of food... their unintended consequences can include reinforcement of the power of oppressive elites... and the collateral infliction of suffering upon the most vulnerable groups within the targeted country." (United Nations Committee on Economic, Social and Cultural Rights 1997, p.2) From the perspective of human rights, the Dovish argument that sanctioning the regime furthers the suffering of the North Korean people certainly bears significant credence and shouldn't be overlooked.

(Maass 2011, pp.47-48) does well to establish that sanctions are fundamentally a coercive form of diplomacy, their implementation seeks to disrupt the economic system of the target state. The creation of economic pressure intends to incentivise or force the targeted state into compliance. Absent from Maass's paper on sanctions and the DPRK is that sanctions are not solely a form of economic coercion. Sanctions have prevented the modernization of the North

Korean military. United Nations Security Council sanctions which have been in place since 2006, have banned the import and export of military arms, as well as materials related to nuclear weapons and missile production (United Nations Security Council 2016).

Becoming a nuclear power requires a functional stockpile of nuclear weapons. However, The DPRK can only produce enough plutonium for about one plutonium bomb annually. (Albright et al. 2010, p.11) detail how the mass production of highly enriched uranium (HEU) would require North Korea to manufacture thousands of specialized centrifuges. Based on the available evidence, (Hecker et al. 2016, pp.734-740) argues it is unlikely that North Korea has the technology to domestically produce grade 350 steel which is required for producing uranium centrifuges. (Albright and Brannan 2010, p.25) are confident in their assessment that North Korea is unable to domestically produce centrifuges. Having assessed both of these papers, sanctions appear to have successfully prevented the DPRK from mass-producing uranium bombs. Sanctions may be ineffective at influencing the DPRK's behaviour, but they are effective at constraining the North's military capabilities.

Over the last 50 years, North Korea has conducted 3,040 military provocations against South Korea. (Ministry of Unification 2017, p.165) By persistently engaging in military skirmishes with the South, the North has failed to demonstrate the existence of good intent necessary for the easing of sanctions. Take for instance the unprovoked and seemingly random artillery shelling of the South Korean island Yeonpyeong in 2010. (Lee 2016, pp.47-51) Even when planned, the North's military attacks do not appear to have a clear cause or goal. Looking at the consequences of these attacks might give an indication as to the motive. Fundamentally these actions perpetuate an atmosphere of war and prevent the easing of sanctions; if the North's policy is isolationism these hostilities are having the intended effect.

The North's military provocations are concerning, they warrant a genuine need for sanctions to impair the North's military development. Sanctions such as limits on oil imports directly inhibit the Korean People's Army (KPA) but do indirectly harm living standards. Sanctions are in turn propagandized by the regime as evidence that foreign powers are conspiring to destroy the DPRK. "The U.S... policy toward the DPRK is to suffocate its overall national economy and bring down its social system. This proves that the U.S. remains unchanged in its hostile policy aimed at physically eliminating the state and people of the DPRK." (KCNA 2016) The underlying causes of the North's economic problems are isolationism, militarism, and a centrally planned economy. Sanctions artfully shift the causes of endemic poverty away from local government and onto the hostile outside world, in turn, this helps the North legitimize the militarization of society and pursuit of autarky.

That sanctions might benefit the North Korean regime is not a topic that has been discussed in the existing literature. The Songbun system has created a class system that is based on political loyalty rather than wealth. This has enabled the state to maintain social cohesion despite long-standing economic failure. North Korea legitimizes itself through Songbun rather than economic prosperity. While sanctions have minimal impact on regime stability, they are effective at hindering the DPRK's military ability.

3.5 Dove's Case for Diplomacy

The debate between Hawks and Doves concerns how sanctions and economic leverage should be used in diplomacy with the DPRK. Contrary to an earlier point made by this dissertation, Eric (Ballbach 2019, pp.3-7) argues that sanctions are a major concern to the DPRK.

Ballbach's writing emphasizes the necessity of proactive economic engagement as a precursor to achieving meaningful diplomacy with North Korea. Specifically, Ballbach is critical of the US and EU's "strategy of 'active pressure', characterized by a comprehensive support of both UN sanctions and autonomous restrictive measures". Concerns are raised over the EU's suspension of dialogue with North Korea in 2015. The concern is that Pyongyang has been left fewer opportunities to resolve its issues diplomatically. Ballbach is concerned that this further incentivises North Korea to continue nuclear weapons development.

A second issue raised by Ballbach is that the EU has defined nuclear progress as Complete Verifiable and Irreversible Dismantlement (CVID). Attaining CVID is argued as being beyond the capabilities of the EU and an unrealistic precondition for diplomacy. Ballbach states that because CVID is neither a realistic precondition nor within the EU's capabilities, all negotiations between the EU and DPRK were doomed to fail. By aiming too high, the EU failed not only to make progress towards denuclearization but also in its other objectives such as the improvement of human rights within the DPRK. Ballbach's assessment is that the EU set conditions for diplomacy too high, thereby setting itself up for failure.

Ballbach's assessment overlooks a few issues. Primarily that CVID only exists as a precondition because the DPRK has refused to cooperate on human rights issues. Presumably, the EU would engage with the DPRK and drop CVID if even tiny concessions could be made, such as permitting human rights inspectors access to the country. Conceivably, the DPRK denies foreign access as this disrupts the North's isolation. This began in 2005 when NGOs tasked with providing humanitarian aid were expelled from the country. (Lee 2007, p.53) The DPRK denies the existence of political prison camps, yet foreign monitors are denied access to these sites to verify their nonexistence (United Nations Human Rights Council 2014, p.270). The government of the DPRK has demonstrated it is unwilling to negotiate even on basic humanitarian issues, let alone CVID. The North's intransigent position ensures the deadlock of virtually all diplomacy unless it is akin to patronage. The EU walking away from negotiations shouldn't constitute a failure, rather a recognition that the differences between the EU and DPRK are currently irreconcilable.

Ballbach argues that the EU has the potential to beneficially engage with the DPRK and should expediently resume diplomacy. "the EU should immediately resume dialogue with the DPRK... As a main focus: economic contributions, both for leverage and as a contribution... Without doubt, the EU can make valuable contributions in the field of economy." Ballbach's policy recommendations are made without resolving why similar economic approaches have failed in the past. Furthermore, no consideration is given to the DPRK's ideology of Juche which advocates self-reliance. Providing unilateral economic aid to an autarchic state would give little negotiating leverage to the EU. There are no indications that the DPRK's foreign policy has meaningfully changed since the Sunshine Policy. As such, it is not clear why the DPRK will not once again take advantage of unconditional economic aid.

Philipp also stresses the importance of swiftly reengaging with the DPRK diplomatically. Similar to Ballbach, Philipp argues CVID as a precondition for engaging with North Korea is unrealistic and unattainable. Interestingly, Philipp brings emphasis to the fact that the nuclear issue with North Korea is time-sensitive and that The US's policy of Strategic Patience is not a solution. "Maintaining this approach gives North Korea additional time to delay and stall on negotiations." Philip argues the US needs to abandon the policies of both CVID and Strategic Patience to reinitiate diplomacy (2016, pp.4-5). Certainly, Strategic Patience is not a solution to the time-sensitive North Korean nuclear problem. There is a strong allure to the argument

that decisive action is needed before the North solidifies itself as a nuclear power. However, that economic diplomacy can solve the nuclear problem relies on the premise that the DPRK values its economy over the benefits conferred by its nuclear program.

The DPRK's pattern of behaviour is more consistent with a nation that has disregarded its economy. North Korea's ideology of autarky is incompatible with interdependence which prevents any meaningful economic development. Brian Myers reaches a similar conclusion using different evidence. He argues that repeated military skirmishes indicate the North is not "a country that places any significant importance on economic growth." (Asia Society 2010, 00:29:53). As will be developed in chapter 4.2 Transition to military-first, the North's actions indicate the intentional pauperization of society. North Korea does not derive its legitimacy from economic growth. The DPRK stands to gain very little from diplomacy as it primarily utilizes economic tactics. It is unsurprising that decades of diplomacy have yielded no meaningful results.

Ballbach and Philipp have done well to argue that CVID is likely unattainable with the current status quo. The North has no reason to abandon their greatest bargaining chip before they reach the negotiating table. However, the diplomatic deadlock we see is not solely attributable to CVID, rather, the North's unwillingness to negotiate on human rights issues. There are no indications that the DPRK's foreign policy has changed since the Sunshine Policy. There are no indications that unconditional economic development will change the North's nuclear weapons pursuit.

Largely unchallenged in the literature is the assumption that the DPRK values the health of its economy. Failure to progress on nuclear diplomacy appears to be a consequence of North Korea's autarchic ideology and disinterest in economic affairs. If this is the case, deadlock might not be due to negotiating parties using the wrong methods or lacking determination, rather, traditional diplomacy has little to offer a North Korea which prioritizes isolationism above economic prosperity.

3.6 Literature review conclusion

Through synthesis and evaluation of prior scholarship, the following determination has been reached: The existing literature is unable to provide a convincing explanation as to why North Korea is developing nuclear weapons to the detriment of their economy.

Hawks have made a compelling case that North Korea engages in manipulative diplomacy. The prevalent explanation among Hawks is that nuclear weapons are developed to profit through extortion. This hypothesis makes little sense when assessed with the economic devastation inflicted by 18 years of sanctions. The economic concessions North Korea have earned through their nuclear program are minuscule in comparison to the economic damage sanctions have imposed. However, this determination should not exclude the possibility that North Korea might leverage its nuclear weapons for large concessions in the future.

The Dove's hypothesis that North Korea is insecure and nuclear weapons are to deter an attack from the United States and South Korea also fails to hold up. North Korea's frequent and unnecessary military skirmishes with South Korea indicates an intentional effort to maintain hostile relations. The DPRK can engage in such provocations because of very high confidence in the fact that neither the US nor South Korea are willing to go to war. As will be discussed the chapter 4.3 North Korea's national security, the KPA have massive stockpiles of

artillery and chemical weapons within range of Seoul. Pursuing nuclear weapons appears both unnecessary and economically self-destructive.

Absent from the examined literature is a rationale for North Korea's nuclear program that remains persuasive when weighed against the opportunity cost incurred from sanctions. The lack of a tenable motive that justifies the DPRK's continued development of nuclear weapons constitutes a major issue for both scholars and policymakers.

The remainder of this dissertation will focus on resolving what is motivating North Korea's nuclear weapons program despite the economic harm and isolation incurred. This will be done by assessing the timeline of North Korea's nuclear program, in particular, the circumstances preceding the program which were most likely to have motivated it. The synthesis of this information will then be used to direct further lines of inquiry.

4.0 Research

4.1 Origin of North Korea's nuclear weapons program

The most prominent perspective as to why North Korea began its nuclear weapons program is that it was a response to the restructuring of global power that followed the end of the Cold War (Hymans 2008, p.270). From its beginnings in 1948, North Korea's economic prosperity and development depended on reliable trade, military guarantees, and aid from both China and the Soviet Union. During the Cold War, both China and the Soviet Union perceived North Korea as a strategically important ally. The two Communist powers competed against each other to prevent the North from becoming a satellite state of the other power. Recognizing this, the DPRK would constantly shift its allegiance to maximise incoming economic aid and development (Cha 2012, pp.28-29). Beginning in 1990, this foreign support began a precipitous decline due to the fall of the Soviet Union and China's changing political and economic priorities (Hong 2014, pp.291-292).

Ideological isolation became problematic as China's political system and economy underwent a series of reforms. China gradually decentralized its economy and implemented political changes while the North's totalitarian cult of personality remained unchanged (Nanto and Manyin 2010, p.6). In 1992 China normalized trade relations with South Korea and established an embassy in Seoul; this was something of a betrayal for Pyongyang (Chung and Choi 2013, p.252). Torrey Froscher posits that North Korea committed itself to nuclear program development because of increasing isolation during the end of the Cold War (2019, p.27).

This point can be strengthened when considering what the collapse of the USSR meant for North Korea's national security. The abrupt loss of Soviet military assurance left China as North Korea's sole military ally. Conceivably, the uncertainty regarding whether China would commit to the Sino-DPRK mutual defence treaty during an actual war represented an unacceptable degree of risk for North Korea.

The end of the Cold War is a fitting motive for initiating a nuclear weapons program; however, this timeline does not match the date North Korea began developing nuclear weapons. In 1986 U.S. intelligence photographed the construction of a plutonium processing facility near the North's Yongbyon nuclear reactor (Avery et al. 2018, p.10). This precedes

the dissolution of the Soviet Union by 5 years and China's normalization of relations with South Korea by 6 years. Perplexingly, assessment of the DPRK's circumstances preceding 1986 does not reveal any information that indicates a motive or need for a nuclear weapons program.

Samples taken from the site in 1992 found plutonium extraction from nuclear waste had begun in 1989 (Eric Benton Rauch 2009, p.19). This facility was able to produce at most 6kg of plutonium annually (Kim 2012, p125). In accordance with the Agreed Framework and in exchange for economic assistance, the North willingly shut down its plutonium program in 1994 (International Atomic Energy Agency 1994). Before the cessation of the North's plutonium program in 1994, at most 32kg of plutonium could have been produced (Park and Hong 2020, p.7). The US government considers a minimum of 8kg of plutonium necessary for a nuclear device (United States Congress Office of Technology Assessment 1995, p.66). Assuming maximum efficiency at most North Korea could have stockpiled enough plutonium for four weapons by 1994; the DPRK likely possessed less than this. When plutonium production was paused in 1994, the DPRK had neither the technology nor stockpile of plutonium necessary for nuclear deterrence. According to Hymans (Hymans 2008, p.262), Nuclear deterrence requires both the ability to retaliate and a reliable nuclear arsenal.

The available information indicates North Korea's nuclear program between 1986 and 1994 did not represent a serious attempt to attain nuclear deterrence. The scale of this plutonium program was very small. Between 1986 and 1994, the DPRK had only rudimentary missile technology. The DPRK willingly cooperated with the IAEA. Furthermore, the program was abandoned in exchange for economic aid. These factors indicate that nuclear deterrence had not yet become a regime priority.

In January of 2003, the terms of the Agreed Framework were abandoned as the DPRK restarted its plutonium program (Pollack 2009, p.41). Data analysis shows that beginning in 2003 and continuing into 2020, there is a distinct increase in the number of missile tests conducted compared to the years preceding 2003. (Center for Strategic and International Studies 2020) Beginning in 2003, North Korea's behaviour changed and became consistent with a policy of rapidly obtaining nuclear deterrence. Since 2003, sanctions against the DPRK have compounded and become increasingly severe. Neither sanctions nor international condemnation have discouraged North Korea's pursuit of nuclear weapons. Contrast the current nuclear program to the one in 1986; the DPRK had willingly traded its plutonium program for economic benefits. The Joint Framework provided both oil deliveries and the eventual construction of two light-water reactors (LWR). This indicates a shift in the North's priorities from economic development to nuclear weapons development sometime between 1994 and 2003.

The evidence at hand indicates that the DPRK's nuclear weapons program was not valued more than the economy until 2003. Construction of the Yongbyon Radiochemical Laboratory began in 1986, this precedes the collapse of the Eastern Bloc. As such, the North's initiation of a plutonium program cannot be explained by the end of the Cold War, the loss of Soviet military assurance, and China's normalization of relations with South Korea. However, these events do well to explain the North's possible motivations for restarting and accelerating their weapons program in 2003.

The next line of inquiry needs to resolve the following: What occurred between 1994 and 2003 that caused the DPRK to forgo its economy in favour of nuclear weapons?

4.2 Transition to military-first

Songun or 'military-first politics was amended into the DPRK's constitution in 1998. This recognized the military as the centre of political affairs (Haggard and Noland 2007, p.168). The meaning behind the Juche tenant of a "strong and prosperous nation" was reinterpreted as a need for a strong military rather than economic prosperity (Haggard and Noland 2009c, p.21) Songun is now central to state doctrine which teaches that encroaching imperialist powers are the cause of the North's economic failure (Benjamin Habib 2011, p.59). Songun strongly resembles a militarized form of siege mentality. A siege mentality is a belief pervasive within a society asserting that the group's existence is threatened by the outside world (1992 Bar-Tal and Antebi, p.251) "when a society suffers from siege mentality, it will manifest itself in the education, politics and culture of the society." (Ahkhorashida 2017, p.63). The belief of an impending invasion maintains a state of constant anxiety and hypervigilance, thereby legitimizing the regime's allocation of resources away from the economy and into the military (Kim 2016, pp.239-240). Maintaining a siege mentality has allowed the DPRK to justify the militarization of society, maintain social cohesion, and pursue isolationism. Thus, Songun legitimizes the regime's pursuit of nuclear weapons over economic development.

However, Songun does not explain the pragmatic function of prioritizing the military over the economy. Examination of the period preceding 1998 provides context as to why Songun was introduced. The shift to military-first politics coincided with several compounding crises throughout the 1990s.

China's relations with the DPRK deteriorated as The Cold War ended. In 1991, Beijing suspended its deliveries of subsidized food and petroleum, demanding the North pay market prices (Harrison 2000 p14). In 1992, China established diplomatic relations with South Korea. Throughout the famine, China provided only minimal economic relief to its North Korean ally (Kim and Lee 2018, p.54). It wasn't until 1996 that China resumed food aid, likely in response to illegal North Korean migration into China (Noland et al. 2001, pp.11-12). Beijing's lack of assistance to the North throughout the 1990s likely signalled to Pyongyang that the Sino-North Korean friendship and military treaty exists only on paper.

The dissolution of the Soviet Union in 1991 meant the loss of the USSR-DPRK mutual defence treaty (Treaty of friendship, co-operation and mutual assistance 1961). Assistance from the Soviet Union acted as a counterbalance for the inefficiencies inherent to the North's command economy. In 1990, the Soviet Union accounted for 55.3% of North Korea's imports. Following its collapse, this number fell below 10% in the mid-1990s, reaching 2.5% by the year 2000 (Mah 2018, p.827). Both Moscow and Beijing abandoned Pyongyang at the worst possible time (Cho 2014, p.20). The North's inability to adapt to these economic changes and delay in seeking international help resulted in famine between 1993 and 1998 (Haggard and Noland 2009a, p.394).

The Public Distribution System was the primary source of food for people as private markets were illegal. "Control over access to food thus constituted one of the central elements of overall political and social control." (Noland et al. 2007 p.53). The PDS began failing as early as 1993 when military defectors reported malnutrition in the army (p.110). The government's inability to supply food to the military was particularly dangerous as it increased the risk of a military coup.

The collapse of the PDS forced individuals to barter for food which led to the creation of private markets. Working under the command economy could no longer guarantee survival. This forced many to abandon their workplace to earn money and food from the private market. The government was unable to crack down on all market activity, to an extent, it was forced to tolerate black-market activities (p.171). Survival forced North Korean society to rapidly change, manifesting in a breakdown of the command economy and the decline of law and order.

The simultaneous collapse of society and the economy threatened regime survival which forced reform. The North could either liberalize its economy or intensify its coercive capacity. Market liberalization would mean shifting away from socialism; this would be incompatible with the Juche ideology. Juche is a significant source of legitimacy for the DPRK, this is well expressed by Byman and Lind: “power needs to justify itself. Regimes often provide an ideology - religious legitimacy, socialism, Arabism, and so on - to justify their hold on power” (2010, p.49). Conceivably, the inability to abandon Juche and liberalize the economy is the reasoning that led North Korea to shift its focus away from a prosperous economy and into the military.

Kim Jong-il who came to power in 1994, had to legitimize his rule amidst a famine, collapsing economy, and a changing society (Noland et al. 2007, p.168). Power was consolidated by elevating the status and prestige of the military. Songun served to siphon resources away from the public and into the military (Moon 2009, p.112). The public's ability to procure food without government assistance diminished the regime's ability to use the PDS as a coercive tool for maintaining social order. While the state had lost its leverage over the public, it increased its leverage over the military. The military was provided with more food than the public which disincentivized defection. Thus, reliable access to food was a tool for maintaining order and loyalty within the military. In turn, the military coercively maintained public order. Kim Jong-il instituted “military-first politics to control the starving people... The primary purpose of military-first politics is to ensure the survival of his regime.” (Suh 2002, p.162). Beyond controlling the population, Songun can also be viewed as a pragmatic approach to compensating for the loss of the Soviet-DPRK defensive treaty and the perceived unreliability of the Sino-DPRK defensive treaty.

Military-first politics remedied the instability brought by the change in leadership, loss of Soviet military assurance, famine, collapsing command economy, social change, and the decline of law and order. Songun resolves why prioritizing the military and forgoing the economy is of benefit to regime survival. However, these political changes were primarily a response to domestic instability which does not explain the development of nuclear weapons.

The most significant change internationally during this period was the loss of the Soviet defence treaty and the deterioration of Sino-DPRK relations. These events likely cast doubt on whether China would defend the DPRK against the United States (Lee et al. 2020, p.594). Achieving nuclear deterrence might be explainable as an attempt to compensate for the uncertainty of the post-Cold War Sino-DPRK alliance. The next line of inquiry is whether national security concerns can adequately explain why North Korea restarted its nuclear weapons program.

4.3 North Korea's national security

North Korean state media have long insisted that the United States poses the greatest threat to the DPRK's sovereignty (KCNA 2002). Much of the existing scholarship agrees that deterring the United States is North Korea's primary reason for developing nuclear weapons, "the North Korean leadership... developed a nuclear strategy for deterrence... to deter an attack from the United States" (Bermudez 2015, p.7). However, no literature advocating this hypothesis has been able to convincingly resolve why the DPRK needs nuclear weapons when it already possesses a powerful deterrent.

Victor (Cha 2012, pp.11-12) points out that Seoul, which has a population of ten million, is within range of huge stockpiles of North Korean artillery, missiles, and chemical weapons. Furthermore, 777,000 KPA soldiers are stationed just outside the Demilitarized Zone (DMZ). Analysis by (Mazarr et al. 2018, pp.8-12) estimates that a single ten-minute artillery barrage by the DPRK would result in 25,000 artillery shells hitting the Seoul metropolitan area. A further 5,000 long-range artillery (LRA) shells can strike central Seoul. Many of these artillery shells are chemically armed. According to the US military, the DPRK possesses the third-largest stockpile of chemical weapons in the world (Department of the Army, 2020 pp.20-25). Using artillery alone, North Korea can inflict mass destruction on Seoul. This functions as a non-nuclear form of mutually assured destruction.

A paper by Dong Sun Lee details why a preventative war with North Korea is not possible. The location of much of this artillery remains unknown as it is concealed by terrain and spread across the length of the DMZ. Some of North Korea's LRA has been fortified into mountainsides protecting it from bombing and retaliatory artillery strikes. This makes disabling the artillery with a preemptive strike unfeasible. The DMZ which separates North and South Korea is arguably the most fortified border on earth. Lee estimates a second US-Korean war would inflict between one and three million casualties (2006, pp.6-8). The North has had this artillery deterrent in place since the late 1980s. (Ministry of Unification 2017, p.144) A white paper by the South Korean military acknowledges the DPRK's "capability for a large-scale and concentrated surprise fire targeted at the Greater Seoul Metropolitan Area." (Ministry of National Defense 2018, p.29).

North Korea's military capabilities against Seoul have served as effective deterrence long before restarting its nuclear program in 2003. There has not been a single military skirmish between the U.S. and the DPRK since 1976 (Fischer 2007). The US military is stationed throughout South Korea including directly on the DMZ. This indicates neither the US nor the DPRK are willing to engage each other. This stands in contrast to the frequent military skirmishes which occur between the North and South Korean military. This indicates the DPRK is wary of provoking the United States directly. The United States has also demonstrated restraint by not strategically bombing nuclear sites because "North Korea might use its artillery near the demilitarized zone and its medium-and-long range missiles to retaliate against South Korea" (Kwon 2018 p.13). This indicates the existence of a mutual understanding between the DPRK and the United States, neither power is willing to engage the other. Long-standing deterrence indicates that the DPRK's nuclear motivations are unlikely related to deterring the United States or South Korea.

Having evaluated the longstanding deterrence conferred by North Korea's artillery, nuclear weapons appear superfluous as a deterrent against the ROK and US. Conceivably, a few counterpoints are possible to argue. Modern counter-battery radar in South Korea can

calculate the trajectory of shells then determine the origin of artillery fire. This would enable a counter-response to disable artillery fire. The North's artillery has no redundancy, once disabled, military deterrence is lost. Depending on the propellant used for shells, it may be sensitive to moisture and unreliable in poor weather. If poorly maintained, the North's artillery may be in a state of disrepair. If pressured, the DPRK may be unwilling to shell Korean civilians in Seoul. However, given the scarcity of information available on North and South Korean military technology, verifying these counterpoints is beyond the scope of this report.

Deterrence can still serve as an explanation for the nuclear program by assessing North Korea's other neighbours. The DPRK borders China and Russia which are both nuclear powers. Unlike the DMZ, North Korea's border with China and Russia lacks defensive fortifications. The illegal smuggling of goods and people across the Sino-DPRK border is widespread (Hastings and Wang 2018). An estimated 100,000 North Koreans have crossed the border and are illegally living in China (Fahy 2015, pp.117-118). This demonstrates how porous the Sino-DPRK border is compared to the DMZ. Favourable terrain and the absence of fortifications on the Sino-DPRK border make it possible for the Chinese military to quickly advance into the DPRK. North Korea does have artillery targeting Chinese cities, without MAD deterrence against China is limited.

The DPRK does have short and medium-range missiles which can reach Chinese cities. However, the engines powering the North's missiles were manufactured in the Soviet Union and imported in the 1990s (Elleman 2017, pp.28-33). According to Markus Schiller's assessment, North Korea lacks the ability to domestically produce missiles (2012 p.114-115). While North Korea has demonstrated the ability to modify existing rocket designs, the available evidence indicates their primary components are manufactured abroad (Schiller 2019, p.57). The DPRK is unable to stockpile more missiles due to poor manufacturing industry and sanctions which prevent imports. Thus, missiles are a scarce resource for the DPRK which can only be armed with explosives and chemical weapons. Without a nuclear warhead, they are not particularly effective as a deterrent. A dwindling supply of missiles and the limited impact of conventional explosives might necessitate a nuclear program to maximise the utility of existing rockets.

Only a few scholars have highlighted that China's proximity and military capabilities might pose a threat to the DPRK. "Since China is an adjacent great power, North Korea faces an especially large risk of being subordinated to its stronger ally." (Lee et al. 2020, p.593). The DPRK does have a large military of 1.21 million armed personnel making it the fourth-largest army in the world (United States Department of State 2008). However, much of the KPA's equipment is becoming obsolete over time. It is unclear if the DPRK would be able to mobilize its military quickly enough to meaningfully defend against a sudden invasion from the northern border. The scarcity of missiles, lack of nuclear warheads, absence of artillery, and the permeable Sino-DPRK border represents a national security risk. Developing nuclear weapons is pragmatically more functional as a deterrent against China, rather than the United States.

So long as North Korea maintains functioning artillery within range of Seoul, war with the U.S. or South Korea is extremely unlikely. Lack of existing deterrence against China might be considered a more significant national security threat for the DPRK. An intercontinental ballistic missile that can reach California is also within range of every city in China. This

explanation resolves the conundrum as to why the DPRK is developing nuclear weapons despite already possessing deterrence against the United States.

To determine whether China's power might motivate the North's pursuit of nuclear weapons, the next section will investigate China's economic and military leverage over North Korea.

4.4 North Korea's economic dependency on China

Data from 2017 shows North Korea is economically dependent on China for 91.2% of its exports and 94.2% of its imports (Economist Intelligence Unit 2019, p.6). (Ministry of Unification 2017, p.192). This dependency is higher than reported as these figures do not account for the large volume of illegal and sanction violating trade with China. There is little differentiation between the legal and illegal economy in North Korea (Hastings and Wang 2018, p.186). Trade balance data from (Clément 2020 pp.30-31) shows Pyongyang has been maintaining a trade deficit with China from as far back as 2001, this increased substantially from 2003 onwards. This indicates China is still trading with the DPRK using friendship prices.

This data reveals the tremendous degree of economic leverage that China holds over North Korea. This leverage is compounded by the fact that International sanctions prevent the DPRK from diversifying its trading partners. If China were to commit to meaningful sanctions or halt trade, the DPRK would be unable to fill the resulting economic void. Losing access to the Chinese market would result in a breakdown of the North's command economy, analogous to the economic crisis caused by the collapse of the Soviet Union.

Utilizing only economic tactics, China maintains the ability to destabilize the North's government. Thus, China's economic monopoly directly impedes on North Korean sovereignty. The implications of this power imbalance are detailed by Victor Cha, "the regime's livelihood is entirely in Chinese hands... any punishment could destabilize the regime." (p.302). Kenneth Waltz's framework on the motivations of states is that they take action to mitigate dependency, "states seek to control what they depend on or lessen the extent of their dependency" (1979, p.107). Given this information, we would expect the DPRK to be highly motivated in pursuing a means of equalizing this power imbalance favouring China.

Jung (2016, p.485) evaluated the impact of sanctions and found that even severe sanctions have only a minimal impact on North Korea's economy; this is due to increased trade with China mitigating the damage that sanctions would otherwise inflict. In 2003, when the DPRK restarted its plutonium program the annual volume of Sino-North Korean trade began accelerating, by 2012 trade had increased sixfold. This change appears to be a direct result of international sanctions forcing North Korea to redirect its trade through China (Gray and Lee 2016, pp.297-311). Prior to 2003, China did not hold significant economic leverage over the DPRK. This rules out the possibility that North Korea restarted its nuclear program in 2003 to counterbalance Chinese economic leverage. China's monopoly over trade did not motivate the North to restart its nuclear weapons program, however, the DPRK's acquisition of nuclear weapons limits China's ability to exercise this leverage.

The purpose of sanctions has been to pressure regime change through economic pressure and to inhibit the development of nuclear weapons. However, North Korea has been able to circumvent much of the economic impact these sanctions would have by redirecting its trade to China. So long as China continues to facilitate trade, the DPRK can continue its nuclear

weapons program while avoiding the economic pressure of sanctions. Today, North Korea is substantially more dependent on Chinese trade at 91.2% than it was on the Soviet Union at 55.3%. North Korea would face a severe economic crisis if it were to suddenly lose access to the Chinese market. A trade embargo from China represents a significant risk to the stability of the North Korean regime.

This highlights an important issue that needs to be resolved: What is incentivising China's economic cooperation with the DPRK?

4.5 The Sino-DPRK double bind

As autarky is central to Juche ideology, the North has deliberately designed its economy to "maximally reduce dependence on foreign partners, while the population is thoroughly indoctrinated to endure various hardships stoically." (Lukin and Zakharova 2018, p.259). While a Chinese trade embargo on North Korea would devastate the North's economy, total state collapse would be a slow process, conceivably resulting in famine and a refugee crisis. If uncontrolled the destabilization or collapse of the North Korean state would force a massive wave of refugees into China (Noesselt 2014, pp.1317-1318). The heavily militarized DMZ directs the vast majority of refugees away from South Korea and into China. If the North Korean economy fails, China would be disproportionately burdened by the resulting humanitarian crisis. The North's precarious economy and militarized society disincentivises China from using its economic leverage in a manner that might destabilize the DPRK.

Victor Cha presents an interesting argument regarding the nature of North Korea's relationship with China. Cha suggests that China fears the refugee crisis associated with a North Korean collapse. Likewise, Pyongyang is aware that its potential collapse threatens China. This risk of collapse gives North Korea leverage over China, allowing aid to be extracted to fill the voids in its dysfunctional economy. "Pyongyang knows this, and deftly leverages its own vulnerability and risk-taking behaviour to get sustenance" The relationship between China and the DPRK is simultaneously mutualistic and parasitic. Thus, Cha describes China and the DPRK as "mutual hostages" (2012, p.311). This assessment of the Sino-DPRK relationship being that of mutual hostages is applicable to more than just a refugee crisis.

It could be argued that by militarizing its citizens, pauperizing society, stockpiling missiles, and nuclear weapons; that the DPRK is pursuing a policy that makes the collapse of its regime as disastrous as possible. The greater the damage a North Korean collapse can inflict, the more China and the ROK are incentivised to keep their neighbour afloat. Unlike the 1990s, The North now possesses nuclear weapons. Events that threaten the North Korean regime such as military infighting or the formation of political coalitions, indirectly threaten both China and the ROK's national security.

An issue that has been largely overlooked in the literature is how nuclear weapons disrupt the balance of power between North Korea and China. In 1998 the North's Nodong missile travelled 1,200 miles (Harrison 2000, pp.19-20). Officially this test was to show Japan was within range of the DPRK, indirectly it demonstrated that Beijing was also within range of North Korea's medium-range missiles.

South Korean national security advisor Moon Chung-in, put forward the argument that North Korea's nuclear weapons are more of a threat to China than the United States: "You think

North Koreans will not use their arms and arsenals toward China? That's not the case. They can easily change their gunpoint. Inside their minds, the one who can threaten their regime survival is not the US, it is China.” (Asia Society 2016, 00:42:41).

That the DPRK might fear China more than the United States is a reasonable proposition given China’s economic leverage, military dominance, declining relations, lack of deterrence, and the North’s inability to defend the Sino-DPRK border. Considering this, the DPRK’s investment in missile technology and procurement of nuclear weapons makes more sense as deterrence against China than the United States or South Korea.

If North Korea destabilizes, regardless of its cause, stockpiles of missiles, chemical, and nuclear weapons have the potential to change hands. Weapons previously held by the regime would be acquired by military factions competing to legitimize their power. These factions would be unpredictable and under pressure to rapidly secure power.

(Mastro 2018, p.89) convincingly argues that if North Korea were to destabilize, China would be forced to militarily intervene to protect its own interests. China’s primary objectives would be stopping the use of nuclear weapons and the prevention of a nuclear accident. Additionally, chemical weapons, missiles, and the artillery threatening Seoul would have to be ceased. From the perspective of China’s national security, an unstable DPRK represents an unacceptable degree of risk.

During the 1990s, China attempted to sever its economic support to the DPRK in favour of standard market prices. However, this decision was reversed “As the depths of the Famine began to emerge, China quickly emerged as the largest source of emergency assistance.” (Reilly 2014, pp.1163-1164). Beijing was pressured to bailout Pyongyang from its famine because of the growing refugee crisis and to avoid the collateral damage that would accompany the failure of the DPRK.

Since the 1990s, the economic disparity between the DPRK and its neighbours has increased exponentially. GDP estimates from the Bank of Korea indicate the North Korean economy has remained stagnant since the 1990s (Bank of Korea 2019). Between 1991-2015 China’s GDP increased eightfold. (Chen et al. 2018, p.143) Wolf and Akramov found the economic gap between North and South Korea as being a factor of between 22 and 50 (2005 p.10). More recent estimates put this economic difference as a factor between 30 and 40 (Lee 2019, p.113). As this disparity increases, the greater the economic liability of a collapsing DPRK becomes for China and South Korea.

Pyongyang is now dependent on China for more than 90% of its trade. China finds itself unable to cut economic ties with the North, as doing so threatens to destabilize the regime. Thus, China is trapped in a double bind. China can continue keeping the DPRK afloat by filling the holes in its dysfunctional economy. Alternatively, the North can be left to fend for itself, leaving China to deal with the fallout of a collapsing nuclear state.

Since the 1990s, The DPRK has positioned itself in a manner that maximises the damage its collapse could inflict on its neighbours. Advancements in missile technology and procurement of nuclear weapons have made domestic instability in North Korea a serious concern for both China and South Korea. This disincentives the North’s neighbours from taking actions that destabilize the Kim regime. The chaos that would accompany a North Korean collapse is a form of insurance that guarantees continued access to the Chinese market.

The DPRK's policies of isolationism, militarization, and economic privation have made integrating North Korean society into the modern world as difficult as possible. As Byman and Lind have put it "because Kim Jong-il has devastated his country so thoroughly yet developed a large military and nuclear weapons, its collapse would cause a huge mess that no outside neighbouring power would be willing or able to clean up." (2010, p.65). North Korea's strategic positioning might indicate an unorthodox survival strategy; making the collapse of its state as destructive as possible, thereby incentivising its neighbours to provide economic support in times of crisis.

Rather than develop its economy the DPRK have invested in a nuclear insurance policy. Foreign support provides subsistence necessary for regime stability but is inadequate for economic development. This raises the issue of why North Korea chose to develop nuclear weapons rather than reform its economy. The next chapter will resolve why North Korea has adopted autarky rather than economic reform.

4.6 Autarky and isolationism

Despite having a stable country, North Korea's economic policies have made it one of the world's most impoverished nations (Collins 2018, p.56). Following the collapse of the Eastern Bloc, it has increasingly emphasized isolationism and economic self-reliance. Rather than resolve its economic problems through trade and interdependence, the DPRK transitioned towards autarky. North Korea's isolationist policies have been economically disastrous, but not necessarily irrational. The principle that free trade benefits both sides applies to economies but not necessarily to systems of governance. The North is unable to open borders to the modern international system as the free flow of goods and information threatens the survival of the Kim dynasty.

Economic reform would create a middle class which would displace the existing Songbun class system. As the Songbun system is the source of political cohesion in the DPRK, decentralizing the economy would likely entail the dissolution of the existing government. Even in the absence of economic development, the Songbun system ensures a public who are loyal to the regime.

Sungmin Cho's paper on market reform in the DPRK establishes that successful economic reform requires the relaxation of totalitarian controls. The resulting flow of ideas and information would directly threaten the legitimacy of the government "because North Korea's totalitarian political system and its propaganda have been built on lies and myths... In the end, the economic reform and opening-up policies are suicidal for the Kim family" (2020, p.317). North Korea has every reason to isolate itself from the international system as the free flow of information threatens regime legitimacy. The globalization that would accompany economic reform is more threatening to the regime than economic stagnation. "Globalization diminishes the legitimacy of the state; as individuals look beyond their own borders to claim rights, freedoms, choices and opportunities otherwise unknown to them." (Westaway 2012, p.133)

Andrei Lankov independently reaches a similar determination to Cho. Lankov argues that economic reforms threaten the foundation of North Korea's political system. Without tight controls on information North Koreans "would be exposed to the much higher standard of living enjoyed by their neighbors, a kindred people who speak the same language." (2009,

p.96). Isolationist policies and controls on information prevent the North Korean people from having a frame of reference to evaluate the failure of their government.

Byman and Lind detail how the state is omnipresent across society. “The activities of intellectuals, students, and all other social groups are tightly restricted because the government has quashed the development of an independent civil society. All organizations are created, operated, and monitored by the Korean Workers' Party.” (2010, p.49). The KWP’s monopoly over society increases the state's coercive ability and prevents groups from developing reformist ideas. Economic decentralization would allow the formation of social communities which are not under the watch of the KWP.

As a consequence of the collapse of the PDS, illegal private markets emerged. In 2002, the state informally recognized these markets. This was done to compensate for the collapse of the PDS (Haggard and Noland 2010, p.143). These markets could only be established in authorized plazas allowing the state to regulate their operations. Certain goods such as rice were banned from sale (Seliger 2020, p.5). Presumably, the sale of rice was banned because it can be stored for long periods and is a relatively liquid asset. Stockpiling rice frees individuals from dependency on the state for survival.

Beginning in 2005, the state has been attempting to eliminate the effects that markets have on society. Conscription and mandatory attendance at state-run enterprises prevent participation in markets. (Lankov and Seok-hyang 2008 p 69-70) In 2009 North Korea suddenly redenominated its currency. A maximum of around \$200 could be exchanged for the new currency. This eradicated the savings of the growing market class who were estimated to number between 150,000 - 500,000 (Abrahamian 2011, pp.70-71). The market system created a middle class who were not dependent on the state for survival. This currency reform wiped out the emerging middle class and has made it unwise for individuals to save currency. The emergence of a true market economy is actively prevented by the threat of inflation, lack of liquid assets to barter with, and mandatory participation in the command economy. Market controls over assets such as rice and the inflation of currency indicates the intentional immiseration of society. As a result, the emergence of these markets have failed to displace the Songbun class system.

Meaningful economic reform which would displace the Songbun system is being actively avoided. In December 2013, Jang Song-thaek, a high-ranking official, was purged for “Counter-revolutionary factional acts” (KCNA 2013). Jang Song-thaek was involved in establishing special economic zones (SEZ) near the Chinese border, he was “believed to be one of North Korea’s most prominent advocates of economic reform and closer ties with China.” (2020 Clément, pp.31-32). Although it is difficult to extrapolate from a single incident, this is a key indicator that advocates of economic reform are not tolerated among North Korea’s political elite.

The available evidence indicates that while the DPRK is tolerant of markets, they are actively preventing the emergence of a middle class. Chinese-style reforms would break the DPRK’s control over information and displace the existing Songbun class system. Furthermore, the DPRK risks losing its monopoly over coercive control, as private markets provide more opportunities than military service. Lee and Moon estimate the North’s military expenditure is 30% of its GNI (2009, p.82). As economic reform would greatly increase North Korean wages, it would also force the state to increase its military expenditure to unsustainable levels. A free market threatens to break the regime's control over the military. Thus, liberalizing the

economy would undermine the DPRK's source of political legitimacy through Songbun and its coercive control through Songun.

For those in government, economic stagnation is safer than economic reform. Market liberalization is incompatible with totalitarianism and North Korea's state ideology. Decades of stagnation have created a massive economic disparity between North Korea and its neighbours. The DPRK mandates a policy of isolationism to maintain its monopoly on information and to conceal the extent of foreign prosperity.

For the political elite, autarky has been safer than economic reform. Autarky for a small nation like North Korea is economically unsustainable and would typically result in state failure. A combination of nuclear armament and systemic immiseration has made the collapse of the DPRK catastrophic for its neighbours. Maintaining a stable DPRK requires China and South Korea to support the North's ailing economy. So far, nuclear weapons have been a viable alternative to economic reform.

4.7 Sanctions and nationalism

The conjecture being argued by this dissertation is that North Korea's seemingly erratic behaviour such as nuclear armament, missile development, and military engagements can be explained by its need to maintain a siege mentality.

Christoph Bluth argues North Korea's behaviour is not explainable by realism. Their behaviour of negotiating concessions, then subsequent military hostilities "sinking of naval vessels, attacks on artillery positions, interception of naval vessels", result in the loss of negotiated benefits (2017, 48-49).

Although the DPRK's hostile actions appear counterproductive, few meaningful benefits are lost. The concessions the DPRK have been able to negotiate generally involve the easing of economic sanctions. However, China has been largely unwilling to enforce sanctions. The true economic impact of sanctions are circumvented through trade with China (Choi et al. 2017, p.13). These hostilities with South Korea are similar to brinkmanship, however, the motive is not to earn concessions. The effect of these provocations is perpetuating the decades-old Korean War, while not having to engage in any large-scale conflict. These skirmishes are used by the DPRK to reaffirm an ongoing state of war which justifies military-first doctrine.

Military skirmishes initiated by the KPA are often propagandized in state media. In 2015, without prior provocation, the DPRK fired a single artillery shell at a South Korean military base. The South Korean military retaliated by firing artillery shells back (Sang-Hun 2015). Korean state media reported on the incident but made no mention of the KPA having fired LRA. The event was reported as a South Korean provocation, "The south Korean puppet forces' shelling on the KPA military posts is aimed to hinder the peaceful reunification of the nation." (KCNA 2015). Minor skirmishes will not escalate into a major conflict, but they do perpetuate the fear of war. The DPRK's hostilities are instrumental in maintaining a siege mentality which legitimizes isolationism and coercive military control.

Autarky, not sanctions, are the cause of North Korea's endemic poverty. Sanctions conveniently shift blame for economic failure away from the regime and onto foreign powers. The DPRK is willing to engage in military hostilities because most of the economic impact of sanctions is circumventable through Chinese trade. However, this is not to argue sanctions

have no economic impact. Rather, sanctions are ineffective as the Songbun system that legitimizes the regime does not require economic growth. During the Arduous March, Noland argued “there is really no reliable theory linking economic distress or deprivation to political change.” (1997, p.106). Twenty-four years later, this conjecture has held true despite the new economic pressures inflicted by sanctions. For the DPRK, economic pressure does translate into political pressure.

Kofi Annan, the former Secretary-General of the United Nations cautions against the sanctioning of authoritarian regimes. Annan argues citizens rather than leaders suffer from economic sanctions, “Those in power, perversely, often benefit from such sanctions... by exploiting them as a pretext for eliminating domestic sources of political opposition.” (2000, p.50).

Ruediger Frank develops Annan’s argument by suggesting that sanctioning North Korea might paradoxically strengthen the regime. As sanctioning North Korea will stop economic growth the emergence of the middle class will also be prevented. Without a middle class the process of democratization is delayed. North Korean leadership can attribute its economic failure to UN sanctions. Rather than blame their government for economic failure, North Korean citizens will “rally around the flag, and support the leadership in the face of foreign coercion.” (2006, pp.17-18). A similar strategy was successfully used in Iraq to influence public opinion under Saddam Hussein’s regime “to blame the West for the population’s problems, shifting blame away from the shortcomings of the Iraqi state.” (Allen and Lektzian 2013, p.123).

Frank’s 2006 premonition that sanctions will be leveraged by the North Korean government to justify economic failure and suffering was accurate. Sanctions are currently leveraged by North Korean state media to fortify the existing siege mentality. According to KCNA, sanctions are “aimed at completely obliterating the state and people of the DPRK are heinous criminal acts unprecedented in all times and places in their viciousness and brutality. The colossal amount of damage caused by these sanctions to the development of our state and the people's livelihood is beyond anyone's calculation.” (KCNA 2017). Sanctions imposed by foreign powers are propagandized by the regime to justify economic failure, isolationism, militarism; this evokes nationalism and a siege mentality within society.

North Korea’s modus operandi is the mobilization of its people in defence of evil; defined by the state as western imperialism and globalization. “Globalization is the imperialists' world domination strategy aimed to achieve the hegemonic ambition... Their objective is to make the globe a Western-style liberal world and subordinate and assimilate all the countries and nations to them.” (Rodong Sinmun 2018).

5.0 Findings

5.1 Key findings

The purpose of this paper has been to resolve: Why is North Korea pursuing nuclear weapons rather than economic development? To answer this, this paper comprehensively synthesized existing scholarship on North Korea's economy, political system, military, nuclear program, and efficacy of sanctions. Evaluation of this information resulted in three important and novel findings.

First, the leading theories put forward by prior scholarship fail to provide a convincing explanation as to how nuclear weapons benefit North Korea. Arguments that North Korea requires a nuclear deterrent against the US and ROK fail to resolve the fact that the DPRK possesses massive stockpiles of artillery and chemical weapons within range of Seoul. This has successfully deterred both the US and ROK from significant military intervention. The alternative conjecture that nuclear weapons development is motivated by extortion or increasing diplomatic leverage fails to reconcile the fact that 18 years of sanctions have devastated the North's economy; moreover, the North's persistent military hostilities result in the loss of negotiated concessions. North Korea's nuclear program persists despite its failure to produce revenue or result in meaningful changes in diplomacy.

Second, globalization and economic reforms are incompatible with the DPRK's political system. The spread of foreign information would severely damage North Korea's cult of personality. Market reforms would create an economic middle class which would displace the current Songbun political class. Free markets provide more opportunities than the state is able to; implementing them risks mass military desertion. Consequently, regime survival has required that North Korea forego economic development and adopt a policy of isolationism.

Third, Songun, or military-first politics, is a militarized form of siege mentality. North Korea perpetuates Songun doctrine through its education system and state-run media which teaches that foreign imperialists intend to invade and seek to destroy the DPRK. The belief that outgroups are hostile and intend harm has become pervasive throughout North Korean culture and society. The DPRK's military belligerence perpetuates the Korean war without the risk of escalation into a large-scale conflict. This atmosphere of war is instrumental in maintaining a siege mentality that justifies isolationism, endemic poverty, political cohesion, a nuclear program, and allocation of resources into the military rather than the economy. The true economic detriment of sanctions from military hostilities are circumventable through China. The DPRK uses sanctions to shift the blame for economic failure away from itself and onto foreign powers. The DPRK's seemingly erratic provocations serve to reinforce this siege mentality thereby justifying isolationism and the militarization of society.

5.2 Economic findings

Unlike most modern states, North Korea does not derive political legitimacy from its economy. Rather, by immiserating its population the regime maximises its citizen's dependency on the state. Economic well-being, opportunities, and even access to food are determined by the Songbun system; this is a measure of political loyalty.

Success in traditional market systems is determined by one's ability to produce value, whereas success in the DPRK is determined by political loyalty. The Songbun system ensures political

cohesion and stability despite economic privation. The regime is actively preventing the emergence of a market economy, as a middle class would displace the existing Songbun class. If the Songbun system were to unravel, so too would North Korea's political system.

Economic development in North Korea would require Chinese style economic reforms. This is not possible for three primary reasons. First, the function of the North's government is perpetuating the Songbun system which in turn legitimizes the political system. Political elites are threatened by the prospect of market liberalization as this would render the Songbun class system irrelevant.

Second, the introduction of a free-market would create economic opportunities which would render the North Korean state unable to fairly compensate and sustain its large military. Competition from a free market threatens to cause mass defection from the North's military.

Third, the Kim dynasty is a cult of personality. It has legitimized itself through state doctrine which is predicated on myths, propaganda, and falsehoods regarding the outside world. The spread of information that would accompany economic reform would undermine the state doctrine which legitimizes the Kim dynasty. Globalization threatens the regime, thus regime survival has forced North Korea to adopt a policy of isolation.

Survival of North Korea's political system requires isolating itself from the outside world and maintaining indigence. This allows the DPRK to preserve the Songbun system which ensures political cohesion, maintain a monopoly on information, and sustain a large military necessary for totalitarian control.

Chinese style reforms would result in the loss of the Songbun system and would render the state unable to compensate its military; this would effectively dissolve the authority of the state. Economic reform is not possible without dissolving the existing system of governance. Thus, for political elites, economic stagnation remains safer than economic reform.

5.3 Geopolitical findings

Assessment of the geopolitical changes during the 1990s reveals why the DPRK decided to forgo economic development in favour of coercive military control. During this period, North Korea's totalitarian control required a populace dependent on the public distribution system for food and mandatory participation in the command economy.

The collapse of the Eastern Bloc in 1991 resulted in the loss of economic support from both China and the Soviet Union. Without foreign support North Korea's centralized economy was unsustainable. A sudden drop in imports caused the DPRK's command economy to collapse. The failure of the PDS resulted in starvation and workplace abandonment, culminating in a breakdown of state authority. Unable to exercise control through the PDS and economy, state authority was restored by elevating the role of the military within society.

The constitutionalization of Songun in 1998, signifies the point at which the regime disregarded its economy in favour of coercive military control. Food and resources were redirected from the public and reallocated to the military to maintain loyalty, increase coercive control, and prevent state collapse. Currently, a combination of the Songun military system and the Songbun class system ensures political loyalty and coercive control in the absence of economic development.

The DPRK's unwillingness to adopt market reform has resulted in decades of economic stagnation. Consequently, North Korea's military has been unable to modernize. Gradually, the KPA's defensive abilities are aging into obsolescence. Acquiring the capital necessary to modernize the military is not possible without economic reform. Achieving nuclear deterrence resolves growing national security issues without needing to implement economic reform.

The DPRK's desire to obtain nuclear deterrence is motivated in part by geopolitical changes in the 1990s. The collapse of the Soviet Union meant the loss of the Soviet-DPRK mutual defence treaty. China abolished its cult of personality, liberalized its economy, and established diplomatic relations with South Korea in 1992. Furthermore, China had temporarily cut its aid to the DPRK during the famine. These circumstances brought the reliability of the Sino-DPRK mutual defence treaty into question. The DPRK had lost its military assurance from the USSR. If invaded by the United States or ROK, it is seriously doubtful whether China would come to North Korea's defence.

5.4 Nuclear program findings

North Korea's plutonium program can be divided into two phases: The first phase lasted from 1986 to 1994. The second phase began in 2003 and is ongoing. Evaluation of both programs has led to the following determination: The program beginning in 1986 does not represent an attempt at achieving nuclear deterrence. This is due to the small scale of the program, lack of development into missiles, cooperation with the IAEA, and the fact the program was traded for economic subsidies under the Agreed Framework of 1994.

The 2003 program is distinctly different from the 1986 program. A serious effort to achieve nuclear deterrence is evident through development into missile technology, six nuclear tests, diplomatic deadlock, a complete disregard for sanctions, and prioritization of the nuclear program over economic development. Recovery from the famine and commitment to military-first policies are the circumstances that allowed nuclear weapons development to be prioritized over economic development. However, this does not resolve why achieving nuclear deterrence has become a priority.

Hawks contend that the DPRK is developing nuclear weapons to increase diplomatic leverage and as a means of extorting the international community. However, a profit motive makes little sense when the economic damage inflicted by 18 years of sanctions is taken into account. Although many of these sanctions are circumventable through trade with China, the economic concessions earned through nuclear diplomacy still leave North Korea at a loss. Furthermore, the extortion hypothesis is unable to resolve the DPRK's erratic military hostilities which result in the loss of negotiated concessions. North Korea's financially self-destructive behaviour contradicts the conjecture that the nuclear program is motivated by profit.

Doves maintain that North Korea fears South Korea and the United States; thus the purpose of nuclear weapons is deterrence. However, scholars making these claims have not addressed the issue of deterrence already existing. The DPRK maintains large stockpiles of missiles, chemical weapons, and long-range artillery near the DMZ. It is estimated 30,000 conventional and chemically armed artillery shells can be fired on Seoul in a single 10-minute bombardment. The devastation that can be inflicted on Seoul adequately deters both the US

and ROK from military intervention. Developing nuclear weapons does little to add to this deterrence.

The DMZ separating North and South Korea is one of the most fortified borders on earth. North Korea has a longstanding pattern of initiating unprovoked attacks, such as artillery shelling South Korean territory or engaging in naval battles. This indicates the DPRK maintains a high degree of confidence that neither the US nor South Korea are willing to escalate provocations to war. Despite hostilities, the United States has not been involved in a skirmish with the DPRK since 1976. All available evidence indicates the DPRK's strategic positioning and ability to shell Seoul is adequate deterrence against the ROK and US.

5.5 Sino-DPRK findings

An issue that has been overlooked by existing literature is how nuclear weapons disrupt the balance of power between North Korea and China. Unlike the DMZ, the Sino-DPRK border is unfortified and largely indefensible. While the DPRK's artillery threatens Seoul, which deters the US and ROK, little meaningful deterrence exists on the Sino-DPRK border. As such, China's military poses the largest national security risk to North Korea.

North Korea is now dependent on China for over 90% of international trade. If China were to impose a total economic embargo on North Korea it is questionable whether the regime would be able to survive in the long term. This economic leverage allows China to destabilize the DPRK without using its military.

China's military dominance and economic monopoly pose an ever-present threat to the DPRK's long-term survival. It should be expected that the DPRK's priority is pursuing a means of equalizing this power imbalance. North Korea appears to be doing this in two ways. First, developing nuclear weapons resolves North Korea's lack of military deterrence against China. Nuclear proliferation is proof of sovereignty. Despite China's growing influence, nuclear proliferation guarantees self-determination; it prevents North Korea from deteriorating into a Chinese satellite state.

Second, The DPRK has positioned itself in such a manner that makes regime collapse as catastrophic as possible for its neighbours. State failure would create a refugee and humanitarian crisis which disproportionately affects China. North Korea's siege mentality has created a society that both despises and fears the outside world. The regime's policies of isolationism, militarization, indoctrination, and economic privation have made integrating North Korean society into the modern world as complex as possible. Regime instability and factional infighting should be of great concern to China. The stockpiling of nuclear weapons, missiles, and chemical weapons has created the risk that weapons of mass destruction might change hands. The North's missiles and nuclear weapons would become tools for competing political factions to secure power.

The chaos that would accompany a North Korean collapse is a form of insurance: The greater the damage a North Korean collapse can inflict, the more incentive China has to stabilize the regime; this ensures continued access to Chinese markets, and relief during times of crisis.

6.0 Conclusion

The purpose of this dissertation was to answer the research question: Why is North Korea pursuing nuclear weapons rather than economic development? While also establishing a framework that rationalizes North Korea's seemingly self-destructive behaviour.

Regime survival has required that North Korea adopt a policy of isolationism for two reasons. First, the spread of foreign information directly challenges the Kim cult of personality which is predicated on myths and lies. Second, South Korea's economy has eclipsed the DPRK's by a factor between 30 and 40. If the prosperity enjoyed by ethnically identical South Koreans were to become widespread, it would become abundantly clear that the North Korean government has failed its people.

Isolationism, widespread poverty, and the militarization of society are justified by embracing a siege mentality. North Korea's seemingly self-destructive behaviour attracts sanctions, international condemnation, and perpetuates the fear of war; these all validate the belief that the outside world intends to harm the North Korean people which legitimizes the need for a siege mentality. By becoming a pariah state North Korea has been able to evoke ultranationalism to maintain political cohesion.

Contrary to prevailing interpretations North Korea's nuclear program is unlikely to be motivated by a need for deterrence against South Korea or the United States. In a single 10-minute artillery barrage North Korea can fire 30,000 shells on Seoul's metropolitan area. MAD through artillery existed long before North Korea restarted its plutonium program in 2003.

Synthesis of prior scholarship has led to the following determination: China's military capabilities and economic influence pose the largest threat to North Korea's sovereignty. Over 90% of North Korea's trade is with China. Unlike the DMZ the Sino-DPRK border is largely indefensible. Nuclear proliferation ensures North Korea can remain autonomous despite its inability to defend the Sino-DPRK border and growing economic reliance on China.

The conjecture that North Korea's nuclear program is a means to profit through extortion is not reflected by reality. The economic damage caused by 18 years of sanctions outweighs any concessions earned through nuclear diplomacy. Moreover, negotiated benefits are quickly lost through needless acts of military aggression. The DPRK's nuclear program and military belligerence have caused their nation to be ostracized from the global economy. Despite this, the nuclear weapons program persists.

North Korea is a totalitarian state, the function of its economy is different from traditional nations; political legitimacy is not derived from economic development. The purpose of the North Korean command economy is not to create value, prosperity, or development; it is an instrument for social control. Compulsory participation in the command economy limits people's ability to participate in private markets. Restrictions on market activity prevent socioeconomic mobility, this ensures that the Songbun class system remains the primary factor that determines one's quality of life. The emergence of a middle class would displace the existing Songbun system. As success and opportunities in life are determined by political loyalty, economic reform directly undermines the foundation of North Korea's political system.

6.1 Implications

For nearly thirty years, the focus of North Korean studies and diplomacy has been its nuclear weapons program. Failure to establish a sound motive for the program constitutes a significant oversight. Misunderstanding North Korea's political system and nuclear motives has caused diplomacy to over-rely on economic policies.

Diplomacy has been predicated on the false premise that an economic approach to North Korea might translate into political change. Policy from both Hawks and Doves have shown that neither sanctions nor economic engagement result in any meaningful change to North Korea's behaviour. Resolving the nuclear problem is not an issue of building enough trust or applying the right amount of pressure. The economic stick and carrot approach to diplomacy has failed because it is based on the premise that the DPRK values its economy.

6.2 Recommendations for future research

That the DPRK's nuclear program might be motivated out of fear for China rather than the United States is not a proposition that has been assessed by existing scholarship. Future research should assess how nuclear weapons change the balance of power between China and the DPRK. Absent from the literature is an assessment of the existing military fortifications on the Sino-DPRK border and the ability of the KPA to defend against a sudden strike from the PLA.

6.3 Policy recommendations

Policymakers and diplomats should bear in mind that North Korea will allow its people to starve before reforming its political and economic system. North Korea's ability to muddle on is a result of creating a moral dilemma that exploits the goodwill of the international community for humanitarian aid. The DPRK's ailing economy is fundamentally a consequence of totalitarianism and autarky; not sanctions. Sanctions have successfully prevented the modernization of North Korea's military, prevented the further acquisition of rocket parts and centrifuge materials required for mass-producing uranium bombs. Unconditional humanitarian aid which helps sustain the regime appears necessary. However, economic development and concessions should only be offered to North Korea when they have proactively taken steps to reform.

The Sino-DPRK mutual defence and assistance treaty is resigned every twenty years (Peking Review, 1961). It is due to be resigned around July of 2021. As the North's military hostilities have few meaningful repercussions Beijing should consider revising the terms of this treaty. First, the addition of stronger stipulations regarding mutual defence terms. Second, shorten the treaty's duration to five years or less. These conditions would provide Beijing with significant leverage over its commitments to the DPRK. Moreover, the DPRK would have less leeway to engage in military provocations.

North Korea's resilience to economic pressure and diplomacy is a consequence of the state having forgone economic development and the regime's use of sanctions justifies its siege mentality. Economic pressure will not translate into political pressure. North Korea's priority is further isolating its people and preventing the spread of foreign information. Emphasis should be placed on how North Korea's policies and nuclear program disproportionately threaten China's national security. Diplomats and policymakers must cooperate with China as

they are the only nation with significant leverage over the DPRK. The road to Pyongyang passes through Beijing.

Bibliography

- Abrahamian, A. (2011). North Korea's 2009 Currency Reform in the Context of National Narrative. *North Korean Review*, 7(1), 70–71. <https://doi.org/10.3172/nkr.7.1.64>
- Akhkhorashida, H. (2017). The Impact of Siege Mentality of Israel: How it Shaped a Society, and the Nature of the Arab-Israeli Conflict. *International Journal of Humanities and Social Science*, 7(4), 63. ISSN: 2220-8488
- Albright, D., Brannan, P., & Stricker, A. S. (2010). Detecting and Disrupting Illicit Nuclear Trade after A.Q. Khan. *The Washington Quarterly*, 33(2), 11. <https://doi.org/10.1080/01636601003673857>
- Allen, S. H., & Lektzian, D. J. (2013). Economic sanctions. *Journal of Peace Research*, 50(1), 122. <https://doi.org/10.1177/0022343312456224>
- Am, K. S., Shin, K. K., Yoon, K. Y., Hee, L. S., Mee, J. E., & Ja, P. Y. (2012, December). *The Quality of Life of North Korean: Current Status and Understanding*. Korea Institute for National Unification. <https://tinyurl.com/kcjb853b>
- Anderson, N. D. (2017). Explaining North Korea's Nuclear Ambitions: Power and Position on the Korean Peninsula. *Australian Journal of International Affairs*, 71(6), 623–636. <https://doi.org/10.1080/10357718.2017.1317328>
- Annan, K. (2000). *We the Peoples - The Role of the United Nations in the 21st Century*. United Nations. <https://tinyurl.com/vtaucbrx>
- Asia Society. (2010, December 6). *Escalation on the Korean Peninsula* [Video]. YouTube. <https://www.youtube.com/watch?t=1793&v=JKgZE5wwc-I&feature=youtu.be>
- Asia Society. (2016, September 20). *North Korea: The Way Forward (Complete)* [Video]. YouTube. <https://www.youtube.com/watch?t=2560&v=ajj3h4YS3lA&feature=youtu.be>
- Avery, E. C. A., Manyin, M. E., Nikitin, M. B. D., Campbell, C. E., & Mackey, W. (2018, July). *North Korea: U.S. Relations, Nuclear Diplomacy, and Internal Situation*. Congressional Research Service. <https://tinyurl.com/vcrd8m6w>
- Avery, E. C., Rinehart, I. E., Nikitin, M. B. D., & Park, S. (2015, July). *North Korea: U.S. Relations, Nuclear Diplomacy, and Internal Situation*. Congressional Research Service. <https://tinyurl.com/vmwrudjt>
- Axelblom, A. (2017). *Republic of Korea's Sunshine Policy: The sweeping fall in support for the Sunshine Policy and the role of the Ministry of Unification during the tumultuous Sunshine years*. LUND UNIVERSITY, CENTRE FOR EAST AND SOUTH-EAST ASIAN STUDIES. <https://tinyurl.com/2ztavx6r>
- Ballbach, E.J. (2019, November). The end of Critical Engagement: on the failures of the EU's North Korea strategy Theme.

https://www.researchgate.net/publication/337533578_The_end_of_Critical_Engagemnt_on_the_failures_of_the_EU%27s_North_Korea_strategy_Theme

Bank of Korea. (2019, July). Gross Domestic Product Estimates* for North Korea in 2018. https://www.nkeconwatch.com/nk-uploads/GDP_of_North_Korea_in_2018.pdf

Bar-Tal, D., & Antebi, D. (1992). Beliefs about Negative Intentions of the World: A Study of the Israeli Siege Mentality. *Political Psychology*, 13(4), 251. <https://doi.org/10.2307/3791494>

Bermudez, J. S. (2015, February). *North Korea's Development of a Nuclear Weapons Strategy*. US-KOREA INSTITUTE AT SAIS. <https://tinyurl.com/y7hkpev3>

Bluth, C. (2017). The Paradox of North Korea's Nuclear Diplomacy: Insights from Conflict Transformation Theory. *North Korean Review*, 13(1), 53. <https://www.jstor.org/stable/26396108>

Byman, D., & Lind, J. (2010). Pyongyang's Survival Strategy: Tools of Authoritarian Control in North Korea. *International Security*, 35(1), 65. https://doi.org/10.1162/isec_a_00002

Center for Strategic and International Studies. (2020, July 30). North Korean Missile Launches & Nuclear Tests: 1984-Present. <https://missilethreat.csis.org/north-korea-missile-launches-1984-present/>

Cha, V. (2012). *The Impossible State: North Korea, Past and Future*. The Bodley Head.

Chen, M., Kwok, C. L., Shan, H., & Yip, P. S. F. (2018). Decomposing and Predicting China's GDP Growth: Past, Present, and Future. *Population and Development Review*, 44(1), 143. <https://doi.org/10.1111/padr.12129>

Cho, S. (2020). Why North Korea Could Not Implement the Chinese Style Reform and Opening? The Internal Contradiction Between Economic Reform and Political Stability. *Journal of Asian Security and International Affairs*, 7(3), 317. <https://doi.org/10.1177/2347797020962625>

Cho, Y. (2014). Method to the madness of Chairman Kim: The instrumental rationality of North Korea's pursuit of nuclear weapons. *International Journal: Canada's Journal of Global Policy Analysis*, 69(1), 20. <https://doi.org/10.1177/0020702013518489>

Choi, J., Kim, H., & Oh, J. (2017). Effectiveness of Economic Sanctions against North Korea and Role of China: Empirical Approach. *GLOBAL BUSINESS FINANCE REVIEW*, 22(2), 13. <https://doi.org/10.17549/gbfr.2017.22.2.8>

Chun Tie, Y., Birks, M., & Francis, K. (2019). Grounded theory research: A design framework for novice researchers. *SAGE Open Medicine*, 7, 1–2. <https://doi.org/10.1177/2050312118822927>

Chung, J. H., & Choi, M. H. (2013). Uncertain allies or uncomfortable neighbors? Making sense of China–North Korea Relations, 1949–2010. *The Pacific Review*, 26(3), 252. <https://doi.org/10.1080/09512748.2012.759262>

- CIA. (2020, September). *The World Factbook North Korea*. <https://tinyurl.com/mxxscac8>
- Clément, T. (2020). Between Economic Reform and Support of an “Independent National Economy”: Special Economic Zones in North Korea. *North Korean Review*, 16(1), 30–31. ISSN: 1551-2789
- Collins, R. (2018). *Denied From the Start Human Right at the local Level in North Korea*. Committee for Human Rights in North Korea. <https://tinyurl.com/yf368xtz>
- Department of the Army*. (2020, June). NORTH KOREAN TACTICS. <https://tinyurl.com/v76pa4t6>
- Drezner, D. W. (2011). Sanctions Sometimes Smart: Targeted Sanctions in Theory and Practice. *International Studies Review*, 13(1), 96. <https://doi.org/10.1111/j.1468-2486.2010.01001.x>
- Eberstadt, N. (2004). The North Korean Nuclear Drama: Another “Twenty Years’ Crisis”? *East Asia: An International Quarterly*, 21(2), 56. <https://doi.org/10.1007/s12140-004-0017-8>
- Economist Intelligence Unit*. (2019, November). Country Report North Korea 4th Quarter 2019. ISSN: 2047-5470
- Elleman, M. (2017). The Secret to North Korea’s ICBM Success. *Survival*, 59(5), 28–33. <https://doi.org/10.1080/00396338.2017.1375218>
- Fahy, S. (2015). Internal Migration in North Korea: Preparation for Governmental Disruption. *Asia Policy*, 20(1), 117–118. <https://doi.org/10.1353/asp.2015.0022>
- Fischer, H. (2007, April). *Congressional Research Service*. North Korean Provocative Actions, 1950 - 2007. <https://tinyurl.com/8hx5rrpt>
- Frank, R. (2006). THE POLITICAL ECONOMY OF SANCTIONS AGAINST NORTH KOREA. *The Institute for Far Eastern Studies*, 30(3), 17–18. ISSN: 0258-9184
- Froscher, T. (2019). North Korea’s Nuclear Program: The Early Days, 1984–2002. *Nonproliferation Policy Education Center, Working paper*, 27. <https://www.ciaonet.org/record/61044?search=1>
- Gray, K. & Lee, J.W. (2016). Neo-Colonialism in South-South Relations? The Case of China and North Korea. *Development and Change*, 47(2), 297–311. <https://doi.org/10.1111/dech.12223>
- Habib, B. (2011). North Korea’s nuclear weapons programme and the maintenance of the Songun system. *The Pacific Review*, 24(1), 52. <https://doi.org/10.1080/09512748.2011.554992>
- Haggard, S., & Noland, M. (2007, October). *Famine in North Korea: Markets, Aid, and Reform*. Peterson Institute for International Economics. <https://mpira.ub.uni-muenchen.de/92548/>

- Haggard, S., & Noland, M. (2009a). Famine in North Korea Redux? *Journal of Asian Economics*, 20(4), 394. <https://doi.org/10.1016/j.asieco.2009.04.002>
- Haggard, S., & Noland, M. (2009b). Sanctioning North Korea: The Political Economy of Denuclearization and Proliferation. *Asian Survey*, *In Press*, 2. <https://doi.org/10.2139/ssrn.1437681>
- Haggard, S., & Noland, M. (2009c, June). *The Political Economy of North Korea: Implications for Denuclearization and Proliferation*. East-West Center. <https://www.eastwestcenter.org/publications/political-economy-north-korea-implications-denuclearization-and-proliferation>
- Haggard, S., & Noland, M. (2010). Reform from below: Behavioural and institutional change in North Korea. *Journal of Economic Behavior & Organization*, 73(2), 143. <https://doi.org/10.1016/j.jebo.2009.09.009>
- Harrison, S. S. (2000). The Missiles of North Korea. *World Policy Journal*, 17(3), 13–24. <https://doi.org/10.1215/07402775-2000-4001>
- Hastings, J. V., & Wang, Y. (2018). INFORMAL TRADE ALONG THE CHINA–NORTH KOREA BORDER. *Journal of East Asian Studies*, 18(2), 181–203. <https://doi.org/10.1017/jea.2018.4>
- Hecker, S.S., Braun, C., & Lawrence, C. (2016). North Korea’s Stockpiles of Fissile Material. *Korea Observer*, 47(4), 734–740. ISSN: 0023-3919
- Hecker, S. S. (2011). EXTRAORDINARY VISITS. *The Nonproliferation Review*, 18(2), 446. <https://doi.org/10.1080/10736700.2011.583122>
- Hong, K. (2012). The Six-Party Talks in the Post-Kim Jong-il Era: An Emergent Path toward a Northeast Asian Security Mechanism. *North Korean Review*, 8(2), 120. <https://doi.org/10.3172/nkr.8.2.111>
- Hong, S. (2014). What Does North Korea Want from China? Understanding Pyongyang’s Policy Priorities toward Beijing. *The Korean Journal of International Studies*, 291–292. <https://doi.org/10.14731/kjis.2014.06.12.1.277>
- Hymans, J. E. C. (2008). Assessing North Korean Nuclear Intentions and Capacities: A New Approach. *Journal of East Asian Studies*, 8(2), 270. <https://doi.org/10.1017/s1598240800005324>
- International Atomic Energy Agency*. (1994, November). AGREED FRAMEWORK OF 21 OCTOBER 1994 BETWEEN THE UNITED STATES OF AMERICA AND THE DEMOCRATIC PEOPLE’S REPUBLIC OF KOREA. <https://tinyurl.com/6wfvcp2p>
- Juetten, S. A. (2008, June). *NORTH KOREA’S JUCHE IDEOLOGY AND THE GERMAN RE-UNIFICATION EXPERIENCE* (Thesis). NAVAL POSTGRADUATE SCHOOL. <https://calhoun.nps.edu/handle/10945/4122>
- Jung, S. H. (2016). Effects of Economic Sanctions on North Korea–China Trade: A Dynamic Panel Analysis. *Seoul Journal of Economics*, 29(4), 485. ISSN: 1225-0279

- Kang, D. C. (2012). They Think They're Normal: Enduring Questions and New Research on North Korea—A Review Essay. *International Security*, 36(3), 143–144. https://doi.org/10.1162/isec_a_00068
- KCNA. (2002, December 6). U.S. Hostile Policy Blasted. <https://kcnawatch.org/newstream/1452003406-793346674/u-s-hostile-policy-blasted/>
- KCNA. (2013, December 13). Traitor Jang Song Thaek Executed. <https://kcnawatch.org/newstream/1451900820-902618004/traitor-jang-song-thaek-executed/>
- KCNA. (2015, August 22). DPRK People Enraged at S. Korean Forces' Provocation. <https://kcnawatch.org/newstream/1451904444-563427673/dprk-people-enraged-at-s-korean-forces-provocation/>
- KCNA. (2016, February 20). U.S. Anti-DPRK Sanctions Denounced. <https://kcnawatch.org/newstream/251520/u-s-anti-dprk-sanctions-denounced/>
- KCNA. (2017, September 29). U.S. Will Be Made to Pay for Its “Unilateral Sanctions” on DPRK. <https://kcnawatch.org/newstream/1506697461-836997597/u-s-will-be-made-to-pay-for-its-unilateral-sanctions-on-dprk/>
- Kim, B. (2016). North Korea's Siege Mentality: A Sociopolitical Analysis of the Kim Jong-un Regime's Foreign Policies. *Asian Perspective*, 40(2), 293–240. <https://doi.org/10.1353/apr.2016.0010>
- Kim, D., & Lee, S. H. (2018). Historical Perspective on China's “Tipping Point” with North Korea. *Asian Perspective*, 42(1), 54. <https://doi.org/10.1353/apr.2018.0001>
- Kim, I., & Lee, M. (2011). Has South Korea's Engagement Policy Reduced North Korea's Provocations? *North Korean Review*, 7(2), 60. <https://doi.org/10.3172/nkr.7.2.57>
- Kim, R. D. (2012). Social Origins of Nuclear Policy: A Niebuhrian Dilemma of the U.S. Policies toward North Korea. *North Korean Review*, 8(1), 125. <https://doi.org/10.3172/nkr.8.1.117>
- Kwon, E. (2018). POLICIES OF LAST RESORT FOR DEALING WITH NORTH KOREA'S NUCLEAR WEAPONS PROGRAMME. *Asian Affairs*, 49(3), 13. <https://doi.org/10.1080/03068374.2018.1492673>
- Lankov, A. (2009). Changing North Korea: An Information Campaign Can Beat the Regime. *Foreign Affairs*, 88(6), 96. ISSN: 0015-7120
- Lankov, A. (2013). *The Real North Korea: Life and Politics in the Failed Stalinist Utopia*. Oxford University Press. <https://tinyurl.com/2huynx4x>
- Lee, A. R., Lee, H. C., Lee, J. Y., & Kim, I. G. (2009). The Paradox of North Korea's Ideological Radicalism: Shaky Social Basis of Strengthening Ideological Campaigns. *North Korean Review*, 5(1), 52–53. <https://www.jstor.org/stable/43910261>

- Lee, D. S., Alexandrova, I., & Zhao, Y. (2020). The Chinese failure to disarm North Korea: Geographical proximity, U.S. unipolarity, and alliance restraint. *Contemporary Security Policy*, 41(4), 594. <https://doi.org/10.1080/13523260.2020.1755121>
- Lee, D., & Seo, Y. (2019). Alternative futures for North Korea economy: From the North Korean perspectives. *Futures*, 114, 2. <https://doi.org/10.1016/j.futures.2019.102455>
- Lee, G. (2003). The Political Philosophy of Juche. *Stanford Journal of East Asian Affairs*, 3(1), 105. <https://www.time.com/wp-content/uploads/2014/12/korea1.pdf>
- Lee, H. K. (2007). North Korea's Desired Strategy and Approach toward the European Union. *North Korean Review*, 3(1), 53. <https://doi.org/10.3172/nkr.3.1.45>
- Lee, I. (2019). Can North Korea Follow China's Path? A Comparative Study of the Nexus Between National Security and Economic Reforms. *Pacific Focus*, 34(1), 113. <https://doi.org/10.1111/pafo.12135>
- Lee, J. K. (2016, December). *A study on the failure of conventional deterrence: the case study of the bombardment of Yeonpyeong in 2010* (Master's dissertation). Naval Postgraduate School Monterey United States. <https://tinyurl.com/yjxhyfj>
- Liu, J., Li, L., Zahradník, J., Sokos, E., Liu, C., & Tian, X. (2018). North Korea's 2017 Test and its Nontectonic Aftershock. *Geophysical Research Letters*, 45(7), 3017. <https://doi.org/10.1002/2018gl077095>
- Lee, S., & Moon, C.I. (2009). Military Spending and the Arms Race on the Korean Peninsula. *Asian Perspective*, 33(4), 69. <https://doi.org/10.1353/apr.2009.0003>
- Lukin, A., & Zakharova, L. (2018). Russia-North Korea Economic Ties: Is There More Than Meets the Eye? *Orbis*, 62(2), 259. <https://doi.org/10.1016/j.orbis.2018.02.005>
- Maass, M. (2011). Beyond Economic Sanctions: Rethinking the North Korean Sanctions Regime. *North Korean Review*, 7(2), 47–48. <https://doi.org/10.3172/nkr.7.2.45>
- Mah, J. S. (2018). Patterns of international trade and the industrial-led economic development of North Korea. *Post-Communist Economies*, 30(6), 827. <https://doi.org/10.1080/14631377.2018.1461484>
- Mastro, S. (2018). Why China Won't Rescue North Korea: What to Expect If Things Fall Apart. *Foreign Affairs*, 97(1), 89. ISSN: 0015-7120
- Mazarr, M., Gentile, G., Madden, D., Pettyjohn, S., & Crane, Y. (2018). The Korean Peninsula: Three Dangerous Scenarios. *RAND Corporation*, 8–12. <https://doi.org/10.7249/pe262>
- Ministry of National Defense. (2018, December). 2018 DEFENSE WHITE PAPER. https://www.mnd.go.kr/cop/pblicitn/selectPublicationUser.do?siteId=mndEN&componentId=51&categoryId=0&publicationSeq=846&pageIndex=1&id=mndEN_031300000000

- Ministry of Unification*. (2017). Understanding North Korea 2017. https://www.unikorea.go.kr/eng_unikorea/news/Publications/understandingNK/
- Moon, W. J. (2009). The Origins of the Great North Korean Famine: Its Dynamics and Normative Implications. *North Korean Review*, 5(1), 112. <https://doi.org/10.3172/nkr.5.1.105>
- Nanto, D. K., & Manyin, M. E. (2010, December). *China-North Korea Relations*. Congressional Research Service. <https://tinyurl.com/4bzryf8k>
- Niksich, L. A. (2003, June). *North Korea's Nuclear Weapons Program*. Congressional Research Service. <https://tinyurl.com/hf4e798w>
- Noesselt, N. (2014). China's contradictory role(s) in world politics: decrypting China's North Korea strategy. *Third World Quarterly*, 35(7), 1317–1318. <https://doi.org/10.1080/01436597.2014.926120>
- Noland, M., Robinson, S., & Wang, T. (2001). Famine in North Korea: Causes and Cures. *Economic Development and Cultural Change*, 49(4), 11–12. <https://doi.org/10.1086/452523>
- Park, C. H. (2018). Beyond Optimism and Skepticism about North Korean Denuclearization: A Case for Conditional Engagement. *JOURNAL OF INTERNATIONAL AND RELATIONAL STUDIES*, 25(2), 120. <https://www.jstor.org/stable/26909946>
- Park, G. H., & Hong, S. G. (2020). An estimation of weapon-grade plutonium production from 5 MWe YongByon reactor through MCNP6 core depletion analysis. *Progress in Nuclear Energy*, 130, 7. <https://doi.org/10.1016/j.pnucene.2020.103533>
- Patterson, Z. (2017). Political, Social and Economic Inequality in North Korea. *North Korean Review*, 50(1), 67. <https://www.jstor.org/stable/23441161>
- Peking Review. (1961). New Milestone in Sino-Korean Friendship. *Peking Review*, 4(28), 5–7. <https://massline.org/PekingReview/PR1961/PR1961-28.pdf>
- Philipp, E. (2016, June). *Resuming Negotiations with North Korea*. Resuming Negotiations with North Korea. <https://www.armscontrol.org/policy-white-papers/2016-06/resuming-negotiations-north-korea>
- Pollack, J. D. (2003). THE UNITED STATES, NORTH KOREA, AND THE END OF THE AGREED FRAMEWORK. *NAVAL WAR COLLEGE PRESS*, 56(3), 41. ISSN: 0028-1484
- RAUCH, E. B. (2009, May). *DEVELOPMENT OF A SAFEGUARDS APPROACH FOR A SMALL GRAPHITE MODERATED REACTOR AND ASSOCIATED FUEL CYCLE FACILITIES* (Master's dissertation). Texas A&M University. <https://tinyurl.com/3msdjv9f>
- Reilly, J. (2014). The Curious Case of China's Aid to North Korea. *Asian Survey*, 54(6), 1163–1164. <https://doi.org/10.1525/as.2014.54.6.1158>

- Rodong Sinmun*. (2018, March 26). “Globalization” Is Imperialists’ World Hegemony Strategy. <https://kcnawatch.org/newstream/1544880349-692008459/globalization-is-imperialists-world-hegemony-strategy-rodong-sinmun/>
- Sang-Hun, C. (2015, August 20). *North Korea and South Korea Trade Fire Across Border, Seoul Says*. The New York Times. <https://www.nytimes.com/2015/08/21/world/asia/north-korea-and-south-korea-exchange-rocket-and-artillery-fire.html>
- Schiller, M. (2019). The Scope of Foreign Assistance to North Korea’s Missile Program. *Science & Global Security*, 27(1), 57. <https://doi.org/10.1080/08929882.2019.1613805>
- Seliger, B. (Discourses in Social Market Economy). (2020). North Korea’s political economy: Hybrid economic institutions and the contributions of German order policy. <https://tinyurl.com/26vk8cb4>
- Siegfried, S. H., Sean, C. L., & Chaim, B. (2010). North Korea’s Choice: Bombs Over Electricity. *North Korea’s Choice: Bombs Over Electricity*, 40, 9. https://cisac.fsi.stanford.edu/publications/north_koreas_choice_bombs_over_electricity
- Suh, D. S. (2002). MILITARY-FIRST POLITICS OF KIM JONG IL. *The Institute for Far Eastern Studies*, 26(3), 162. ISSN: 0258-9184
- Suh, J.-J. (2007). Introduction: Making Sense of North Korea: Institutionalizing *Juche* at the Nexus of Self and Other. *Journal of Korean Studies*, 12(1), 9. <https://doi.org/10.1353/jks.2007.0001>
- Sun Lee, D. (2006). US Preventive War against North Korea. *Asian Security*, 2(1), 6–8. <https://doi.org/10.1080/14799850600575181>
- Treaty of friendship, co-operation and mutual assistance*. (1961, July). <https://www.documentcloud.org/documents/3005971-1961-Treaty-of-Friendship-Cooperation-and-Mutual.html>
- United Nations Committee on Economic, Social and Cultural Rights. (1997, December). *Committee on Economic, Social and Cultural Rights : report on the 16th and 17th session, 28 April-16 May 1997, 17 November-5 December 1997*. United Nations. <https://digitallibrary.un.org/record/261663?ln=en>
- United Nations Human Rights Council*. (2014, February). Report of the detailed findings of the commission of inquiry on human rights in the Democratic People’s Republic of Korea. <https://www.ohchr.org/EN/HRBodies/HRC/CoIDPRK/Pages/ReportoftheCommissionofInquiryDPRK.aspx>
- United Nations Security Council*. (2016, March). United Nations Security Council Resolution 2270. [https://www.undocs.org/S/RES/2270\(2016\)](https://www.undocs.org/S/RES/2270(2016))
- United States Congress Office of Technology Assessment*. (1995, April). Nuclear Safeguards and the International Atomic Energy Agency. <https://tinyurl.com/fnmkvwad>

United States Department of State. (2005, September 19). *Joint Statement of the Fourth Round of the Six-Party Talks Beijing, September 19, 2005*. State.Gov. <https://2001-2009.state.gov/r/pa/prs/ps/2005/53490.htm>

United States Department of State. (2008, August). Background Note: North Korea. <https://2001-2009.state.gov/r/pa/ei/bgn/2792.htm>

United States Senate Select Committee on Intelligence. (2006, September). *Recognizing North Korea as a Strategic Threat An Intelligence Challenge for the United States*. U.S House of Representatives. <https://tinyurl.com/wpa9furn>

Waltz, K. N. (1979). *Theory of International Politics* (1st ed.). Waveland Press.

Westaway, J. (2012). Globalization, Sovereignty and Social Unrest. *Journal of Politics and Law*, 5(2), 133. <https://doi.org/10.5539/jpl.v5n2p132>

Wolf, C., & Akramov, K. (2005). North Korean Paradoxes: Circumstances, Costs, and Consequences of Korean Unification. *Defence Technical Information Reports*, 10. <https://doi.org/10.7249/mg333>