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NORTH KOREA AND THE QUEST FOR NUCLEAR DETERRENCE: ITS IMPLICATION FOR SOUTH ASIAN SECURITY

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Abstract:
The study examined deterrence and the quest for nuclear weapons using North Korea as a case study. The study also explored the implication of nuclear armed North Korea for the security of South East Asian States. To this end, the study adopted deterrence theory as its theoretical framework. The study was anchored on a qualitative research design. Content analysis was adopted based on the nature of the phenomena under investigation. The findings proof that deterrence is the crux of North Korea's nuclear development programme. The study discovered that sanctions and military threat cannot deter North Korea from pursuing nuclear weapons. Therefore, the study recommended among other things that all sanctions imposed on North Korea in relations to its nuclear weapons development programme should be lifted and military threat should be totally discarded.

Keywords: Nuclear, Weapons, Development, Implication, Security

1.INTRODUCTION

Deterrence is a key concept in strategic studies and international relations. It became prominent during the Cold War era with the end of the United States of America's nuclear monopoly. Since the period of the Cold War (1945-1991), especially on the Cuban missiles crisis event, deterrence has been perceived and utilized as the most significant mediator to influence the decision-making of states. Just as any actor can influence behaviour by raising the stakes, so can another actor also dissuade him by threatening reprisal or inducing in him a perception of the negative consequences of his intended behaviours or action (Gahia, 2008). The primary aim is to deter behaviour or war as the case may be. According to Gahia (2008:263), the desire to escape deterrence, in turn, led to the development of defence against ballistic missiles hence, creating a spiral of insecurity (security dilemma) between or among states.

Nevertheless, deterrence is associated with the idea of nuclear retaliation and is sometimes used in contrast to defence. Deterrence can be understood as social and political relations that enhance one party's influence on the other party activities. Deterrence is a belief in strategic capability to prevent itself from being attacked by its opponent because of the international system's precarious nature. Thus, deterrence is implemented and executed to ensure the opponent abide by its will. However, when applying deterrence to the nuclear dimension, as some may argue, the whole dynamic of deterrence becomes grievous or, as nuclear optimists believe, make relations more stable, keeping nuclear exchange at bay (Aditi, 2010). Gahia (2008:264) defines deterrence as a means of "persuading your enemy that attacking you will not be worth any potential gain". According to the theory of deterrence, A can deter B by threatening to use nuclear weapons if B does not act in accordance with A. For successful implementation of deterrence, B has to consider A threat as credible, (Aditi, 2010). Due to the security advantage of a nuclear weapon, states are being forced to pursue it with all the available scarce resources, irrespective of the external pressure.

However, the most fundamentally important fact about North Korea's nuclear programme is that, it is born out of fear- fear, especially, in the United States (Zack, 2017). Historically, the Korean War began in 1950, when North

Korea invaded the south and nearly conquered all of it. The only reason it didn't was the intervention by the US coalition, which in turn nearly took entire North Korea, stopped only by Chinese counter intervention. The war ended in an armistice in 1953 the US pledged to defend South Korea against any attack and left thousands of US troops deployed there - a constant reminder to Pyongyang that the world's strangest military was it enemy. Since, then, North Korea's entire foreign policy and national identity has evolved d around the threat of war with America. As a result, they have always been trying to improve military capability in order to deter the US from invading her territory

According to Adam (2017), North Korea's initial drive to have nuclear weapons was not usual in the Cold War era. Many other nations such as South Korea, Pakistan, and India were seeking nuclear weapons around that time. Kim 2 Sung also feared the United States and South Korea were preparing to wage a war to unite the Korean peninsula (Adam 2017). According to him, the end of the Cold War presents an existential threat to North Korea. The Union of Soviet Socialist Republic (USSR), North Korea's most vital geographical ally, had, collapsed and was being substituted by a weaker state, pro-western Russia. In anticipation of this upcoming isolation, Pyongyang began investing in its nuclear programme, hiring former Soviet engineers who could teach the North Korean scientists (Adam, 2017). Thus, many political scientists see Kim's nuclear acquisition as a deterrence to direct military intervention or regime change. Concomitant with this assertion, in his long New Year message the young Supreme leader, Kim Jong-un (KJU), had warned that:

> If aggressors dare to provoke us, even to a slight degree, we will never tolerate it, and respond resolutely with a merciless sacred war of justice, a great war for national reunification. The US has persisted ignoring our just demand for replacing the Armistice Agreement separate pact to remove the danger of war, ease tension and create a powerful environment in the Korean Peninsula. Instead, it has clung to its anachronistic policy hostile towards the DPRK, escalating tension and egging its vassal's forces to stage a human rights racket against the country, (Skand 2016, p. 76).

Hence, North Korea has persistently developed its nuclear capability to counter this threat from the USA. According to Skand (2017), three days after the thermonuclear test by DPRK, in September, 3th 2017, a commentary published in official North Korean News Agency, KCNA, noted that, "History proves that powerful nuclear deterrence serves as the strongest treasured sword for frustrating outsiders from aggression". The commentary concluded that "both Saddam Hussein and Muammar Gaddafi had made a grievous mistake by yielding to western pressure led by the US which was pressure on regime change" (Skand 2016)

Nevertheless, in some ways, the young Kim has been more aggressive than his father. Kim has overseen more ballistic missiles tests, including from submarines, in his five years as a supreme leader of DPRK than his father did during his entire 18 years in office (Ben, 2017). The latest among the test is the Intercontinental Ballistic Missiles (ICBM) on November, 30th 2017. The persistent text of deadly weapons has raised tension in the peninsula with fear of miscalculation which can escalate to total war. What would be the faith of humanity if the two states engage in nuclear warfare? Something needed to be done urgently to avert this precarious scenario. To this end, this work is undertaken to examine North Korea's deterrence and the quest for nuclearisation.

North Korea's nuclear programme has become a cause of concern among its neighbours, especially South Korea and Japan. The International community has reacted with displeasure following the incessant test of nuclear and ballistic missiles by North Korea. She has been placed on a series of sanctions, by the United Nations since the commencement of its nuclear programme. Despite various approaches and efforts over decades to denuclearize the Korean peninsula, North Korea has developed a nuclear arsenal and continue to carry out nuclear test detonations, most recently on September 3rd, 2017(John, 2017). Also, it continues to improve its missiles delivery systems, with the primary aim of fielding intercontinental ballistic missiles (ICBM), able to strike targets as far away as its nuclear-armed adversary across the Pacific Ocean.

According to John (2017), its latest missiles test-over Japan once, more- came days after the adoption of the latest round of UN sanctions in response to its six nuclear tests; negating nuclear pundits' postulation that poor states cannot develop effective and efficient nuclear deterrence. This has raised fundamental questions: why did North Korea choose to develop its nuclear deterrence programme despite the backwardness of its economy and series of sanctions imposed on her by the international community. Thus, creating a Hobbesian fear of nuclear war of no-winner and no-loser.

With no end to the crisis in sight, proponents of nuclear deterrence have spun the North Korean case as proof of the pointlessness of any international effort to move away from continued reliance on nuclear weapons for deterrence. For instance, France, the United Kingdom, and the United States jointly condemned the new UN Treaty on the Prohibition of Nuclear Weapons, adopted by 122 countries, because it offers no solution to the grave threat posed by North Korea's nuclear program, nor does it address other security challenges that make nuclear deterrence necessary. Yet other approaches to tackling North Korea's WMD-related programs have not been conspicuously successful either. Nor was it anyone's intent in the ban treaty negotiations to presume to devise a solution tailored to North Korea, (John, Tim & Wilfred, 2017).

That the difficulty of dealing with North Korea is being used as a prop to support existing policies and practices of nuclear deterrence is worth studying. On the face of it, John, Tim and Wilfred (2017) assert that the" presence and readiness to use nuclear weapons in Northeast Asia would seem to be the security problem, not the solution". Yet nuclear deterrence proponents argue that nuclear weapon-based deterrence is, in effect, the only way to contain the North Korean regime, while ignoring the asymmetric security dynamics that led to this situation — and where it might

lead. Even were such a claim true, it simply does not follow that it validates continued reliance on nuclear deterrence in other regions or contexts, especially in view of our improving level of understanding of the sheer spectrum of causes of risk of an inadvertent or deliberate nuclear use, and of the "near misses" that have occurred in the nuclear age.,

The official position of the US is that North Korea's nuclear weapon is unacceptable. Pyongyang has to give up all its nuclear programmes (Zack, 2017). However, this policy has completely failed to actualize that goal. According to the US Central Intelligence Agency, cited by Zack's (2017), North Korea has built as many as 60 nuclear weapons and has developed missiles that are in theory, capable of reaching the East coast of the United States. North Korea, recently, tested its most powerful bomb yet -seven times the size of the bomb dropped at Hiroshima. Thus, underscoring an awkward truth: America's long-running campaign to eliminate North Korea's nuclear programmes, has ended in a dismal failure (Zack, 2017).

The success of North Korea in acquiring nuclear weapons has raised a lot of questions on the effectiveness of sanctions as a measure of deterring States from acquiring nuclear weapons. Thus, the UN Security Council has passed eight rounds of ineffective sanctions since 2006, when North Korea conducted its first nuclear tests without any effect in thwarting North Korea from acquiring a nuclear weapons. This has created a spiral of insecurity in the peninsula, with the US mobilizing for the total destruction of North Korea. A lot of experts have pondered over the US President's Donald Trump threat of destroying the North with a nuclear bomb, which is capable of creating a Hobbesian nuclear war with a high propensity to escalate. Be that as it may, North Korea has successfully developed nuclear weapons through brinkmanship. According to John (2017), brinkmanship involving nuclear-armed powers, as on the peninsula, reflects the inherent risk of escalation that accompanies steps taken to preserve the credibility of the threat of nuclear weapons use.

North Korean nuclear development programme has raised critical questions such as: How many nuclear weapons would be sufficient for North Korean deterrence to work? Strategists and authorities differ in their answer as to the best way to prevent an all-out nuclear war such as in the Korean peninsula. One camp contends that the world is better off with more and better nuclear weapons. Another group counters that more and better nuclear weapons increase the chance of accidental or crisis-driven nuclear war. Still, another group argues in favor of the total elimination of nuclear weapons on the basis of morality, international and humanitarian law. However, how can one prove that the nuclear deterrence of Pyongyang works? Some people may argue that the absence of large-scale conflicts in the Korean peninsula after the Second World War proves that the nuclear deterrence of DPRK works. In actuality, the efficacy of deterrence is cumbersome to measure. If deterrence works, its effects are almost invisible. Deterrence is assumed to be successful when it prevents policies and actions. In other words, the success of deterrence cannot be proven. What would be the situation of North Korea, if nuclear deterrence fails? Nuclear war remains a possibility. What kind of consequences does that have for public policy? Should Pyongyang seek a position of nuclear superiority over potential adversaries and fuel a global arms race especially in the peninsula? Should Pyongyang unilaterally disarm or even abolish all its nuclear weapons? Would a disarmed Pyongyang be subject to nuclear blackmail by the USA? Should we prepare for civil defense and protect key industries while making the idea of nuclear war publicly acceptable in the peninsula? Should we prepare at all for nuclear war? Can nuclear war be won? It appears that all world leaders agree that a nuclear war cannot be won. According to John (2017), nuclear weapons research and weapons modernization continue, and so does the proliferation and use of nuclear and ballistic technology. North Korea, Iran, India and Pakistan are good examples that military planners have not given up the quest for acquiring a nuclear deterrence. At least they appear to prepare for the case that deterrence fails. Should deterrence fail a nation might want to have additional nuclear weapons at its disposal than are needed for deterrence to succeed.

However, world figures like Vladimir Putin have made a clarion assertion that nuclear war with North Korea is unrealistic because of the presence of nuclear and hydrogen bomb in North Korea's military arsenal which serves as a leviathan in deterring external aggression against the DPRK. A nuclear weapon is like a two-edge sword which is detrimental to all parties in the conflict and the US knows this fact. Hence, this has made political scientists ponder if the nuclear armament of the DPRK can deter the USA and South Korea from invading North Korea or attempting regime change in a bid to install a pro-western government in the country. To this end, this work is structured to examine nuclear deterrence using North Korea and its implications to South Asia security.

2.STATE OF THE ART REVIEW OF RELEVANT LITERATURE

Deterrence

The concept of deterrence is not new in the field of International Relations. According to Gahia (2008:264), throughout history, rulers have tried to impress one another with their military strength with the hope of intimidating their adversaries or making them not to contemplate war. Presently, deterrence is at the core of the military strategy of all nuclear-armed states, because it serves as a means of averting a total war. Gahia (2008, p. 264) defines deterrence as a means of "persuading your enemy that attacking you will not be worth any potential gain and can only be attempted at an unacceptable cost to him". To this end, the realists believe that military force is maintained to dissuade a potential enemy from attacking by demonstrating, and convincing him of, your military capability.

According to Aditi (2010) cited in Glenn, deterrence is defined in a simple term as "the power to dissuade." Alexander George and Richard Smoke describe it as, "simply the persuasion of one's opponent that the costs and/or risks of a given course of action outweigh its benefits"(Aditi, 2010). Deterrence is defined as "the threat of force intended to convince a potential aggressor not to undertake a particular action because the cost will be unacceptable

or the probability of success extremely low" (Thea, 2014). It can also be seen as an action taken by states or an alliance of nations against an equally powerful alliance to prevent hostile action. Thomas Schelling calls deterrence "a threat .intended to keep an adversary from doing something" (Aditi, 2010). It is a policy of attempting to control the behavior of another actor by the use of threats (McLean & McMillan, 2009, p. 147). The deterrer tries to convince the deterree that the costs of undertaking the actions that the deterrer wishes to prevent will be substantially higher than any gain that the deterree might anticipate making the action. As described by Colonel Charles in 'Nuclear Deterrence in the Third Millennium', deterrence is a state of mind that prevents a deterree from acting in a way the deterrer considers harmful (Aditi, 2010).

The concept of deterrence can be defined as the use of threats by one party to convince another party to refrain from initiating some course of action (Huth, 1999*).* A threat serves as a deterrent to the extent that it convinces its target not to carry out the planned action because of the costs and losses that target would sustain. In international security, a policy of deterrence generally refers to threats of military retaliation directed by the leaders of one state to the leaders of another in an attempt to thwart the other state from resorting to the threat of use of military force in pursuit of its foreign policy goals (Huth, 1999).

As outlined by Huth (1999), a policy of deterrence can fit into two broad categories being (i) preventing an armed attack against a state's own territory (known as direct deterrence); or (ii) preventing an armed attack against another state (known as extended deterrence). Situations of direct deterrence often occur when there is a territorial dispute between the neighbouring state in which major powers like the United States do not directly intervene. On the other hand, situations of extended deterrence often occur when a great power becomes involved. It is the latter that has produced the majority of interest in academic literature. Building on these two broad categories, Huth (1999) summarises that deterrence policies may be implemented in response to a pressing short-term threat known as immediate deterrence; as a strategy to prevent a military conflict or short term threat from arising (known as general deterrence). In the word of Gilbert (2013, p. 52);

> Deterrence could be described as persuading an enemy that attacking you will not be worth any gain (a security strategy geared towards the prevention of an enemy from embarking on a certain course of action by threatening to retaliate with military force), Critics argued that arms acquisition by a state does not necessarily deter other states from attacking her. Instead, it may even provoke a preemptive strike from an enemy state as a result of a security dilemma or spiral of insecurity. The military build-up by Arab nations in 1967 created a security dilemma that propelled deter Israel to take the bull by the horn by undertaken a preemptive strike against the Arab coalition forces which led to the October war of 1967.

Deterrence is also a principle that governs human behaviour but with the deployment of nuclear weapons by states after the Second World War, it became the central theoretical idea in the sub-discipline of strategic studies. With nuclear weapons, a state can deter another state with a large level of punishment that cannot be done with conventional weapons. Nuclear weapons initially forced the adoption of deterrence as a military security policy because there was no practical way for the state to prevent some nuclear weapons from getting through if an attack was launched.

John (2017) sees nuclear deterrence as the threat to retaliate with nuclear weapons. In general, deterrence refers to creating risks that will deter an adversary from making specific policies or action. For deterrence to work the risk must be disproportionately higher than any potential gain. For nuclear deterrence to succeed certain physical and psychological preconditions have to be fulfilled: a threatening nation has to be capable and willing to use its nuclear weapons and must effectively communicate this to the nation that is to be deterred (John, 2017). First, a deterrent force must be capable to inflict unacceptable damage, or more precisely the threatening nation has to be capable of exact payments (at a cost acceptable to itself) either by denying the opponent to achieve the objectives, by charging the opponent an excessive price for achieving it, or by a combination of the two. John (2017) asserts that a nation has to guarantee the safety of its nuclear arsenal. There must be no way for the opponent to eliminate the deterrent capability of the threatening nation. Strategists call this "second-strike capability," that is the retaliatory force should be protected from destruction through a first strike. A second strike capability can be ascertained not only by technical means but also through policy means. Second, the threatening nation must have the plans and the readiness necessary to demonstrate that it can deliver on its "message." Conveying willingness to use retaliatory nuclear forces creates a dilemma: The threatening nation must show a willingness to engage in a war it tries to deter or prevent. Is there a point at which the threatening nation deters itself? Third, the threatening nation must successfully communicate to the opponent the price it will have to pay for attempting to achieve an unacceptable objective (John, 2017). For the United States conveyance of the deterrent, the message had two aspects: Deterrence had to address the opponent as well as a friend. The opponent had to believe in deterrence, and deterrence had to reassure U.S. allies in Europe. Reassurance and deterrence were two sides of the same nuclear coin. For much of the Cold War, deterrence and reassurance complemented each other. Fourth, and most importantly, the deterrent message must have some degree of credibility. Both nations must believe that there is a real probability that the threatening nation will indeed perform the promised action if required.

According to Huth (1999), a successful deterrence policy must be considered in not only in military terms but also in political terms. In military terms, deterrence success refers to preventing state leaders from issuing military threats and actions that escalate peacetime diplomatic and military cooperation into a crisis or militarized confrontation which threatens armed conflict and possibly war. The prevention of crises of wars however is not the only aim of deterrence.

In addition, defending states must be able to resist the political and military demands of a potential attacking nation (Huth 1999), If the armed conflict is avoided at the price of diplomatic concessions to the maximum demands of the prospective attacking nation under the threat of war, then it cannot be claimed that deterrence has succeeded.

Furthermore, as Jentleson and Whytock (2005), argue, two key sets of factors for successful deterrence are important being (i) a defending state strategy that firstly balances credible coercion and deft diplomacy consistent with the three criteria of proportionality, reciprocity, and coercive credibility, and secondly minimizes international and domestic constraints; and (ii) the extent of an attacking state's vulnerability as shaped by its domestic political and economic conditions. In broad terms, a state wishing to implement a strategy of deterrence is most likely to succeed if the costs of non-compliance it can impose on and the benefits of compliance it can offer to, another state are greater than the benefits of non-compliance and the costs of compliance (Jentleson & Whytock 2005).

John (2017) asserts that the components of nuclear deterrence have a physical and a psychological character. On the physical level, deterrence requires a series of military instruments, sufficient to threaten the opponent in a way that it would not even think of attacking. Successful deterrence is guaranteed, however, only if the will is there to use these weapons. Deterrence is credible only if a nation can successfully convey the first two points to its opponent, that it is capable and willing. In other words, successful deterrence depends on psychological components: communication and perception.

Conditions for Stable Deterrence

Obviously, it may be difficult to defend a country's population from an attack by a well-armed nuclear enemy; deterrence such attacks is a goal of the highest priority of military planners. According to Encyclopedia, nuclear war can be deterred only if each country understands that a nuclear first strike would be answered with retaliation forcefully enough to offset any gains achieved by the initial attack. In the simplest scenario, involving only two nuclear-armed enemies, the three most important technical and psychological conditions necessary for a stable deterrent are:

(1) Each country must have an effective nuclear force capable of mounting effective and efficient counter attack after the first strike by the enemy.
(2) Each country must believe that its adversary is technically and psychologically capable of carrying such retaliation
(3) The leader of each county must act rationally- without suicidal tendencies if under the stress of a nuclear crisis (Encyclopedia Americana Volume 20).

However, when more than two adversaries are involved, the required condition for stable deterrence for all parties is considerably demanding. For example, the number of instances where possible confrontation and miscalculation may lead to nuclear exchange increases in a geometric progression. Again, for a country to threaten credible retaliation, it has to determine which country carried out the attack. This may not be possible in a submarine launch missiles attack unless the early warning capability of the victim is very effective (Encyclopedia Americana, Volume 20). Finally, if a county responds to an attack by one adversary, it may be so weakened by the nuclear exchange that it then would be exposed to nuclear extortion by other states. The scenario may propel the attacked state to simultaneously, launch retaliatory attacked strikes against the other nuclear state and a preemptive strike against the other nuclear states which can generate to a total war.

LEVEL OF DETERRENCE

Nuclear deterrence is usually pursued at two levels. According to Gahia (2008:266), these levels are:

Subjective Level: At this level, deterrence is pursued through the use of coercion and/or other diplomatic tools to dissuade the adversary from taking action he has not yet started to do; to make him to stop what he is already doing (Iran's nuclear programme), or to reverse what he has already done (North Korea nuclear weapons)

Objective Deterrence: This level involves the manipulation of military capabilities and threats of force to dissuade the adversary.

Types of Deterrence

Deterrence can be broadly discussed in terms of the forms it assumes among these are:

(1) Graduated Deterrence of Flexible Response: This involves the use of limited nuclear options, including a limited nuclear war to impress an adversary who may be tempted to challenge the power of the deterrer. The idea is to intimidate a potential opponent without ultimately engaging it in a confrontation.
(2) Extended Deterrence: This means the nuclear umbrella and military guarantees granted by nuclear power to her allies. A good example of this is the military pacts between the USA and South Korea, the USA and Japan, etc.
(3) Minimal Deterrence, This is deterrence scenario in which limited nuclear deployment is employed to drive home the mutual perception of consequences.
(4) Mutual Assured Destruction: This deterrence system is the direct result of the existence of first and second-strike capabilities. The awareness amongst nuclear states of their capacity to obliterate one another is believed to be the reason why they have not to engage in nuclear warfare to date, thus creating a hypothetical balance of power (Gahia, 2008, p. 266-7).

NUCLEAR WEAPON

A nuclear weapon is any weapon that gets its destructive power from the transformation of matter in atoms into missiles, energy (World Book Encyclopedia 2001, pp. 596). All nuclear weapons are explosive devices. They include bombs, artillery shells and mines and torpedoes. The Most powerful nuclear weapons are far more destructive than any conventional (nonnuclear) weapon. Nuclear weapons often have been called atomic bombs and hydrogen bombs (World Book Encyclopedia, 2001, p. 596).\

Types of Nuclear Weapons

According to Encyclopedia Americana (2002, p. 522), the basic types of nuclear weapons are fission weapons, also called atoms or A-bombs, fusion-boosted weapons: and multistage thermonuclear weapons, also hydrogen bombs or H-bombs. Atom bombs derive all their explosive energy from nuclear fission; fusion-boosted bombs derived almost all their energy from fission, but they do so much more efficiently with the aid of fusion; thermonuclear bombs derive their powerful explosive energy from both fission and fusion-boosted devices of the same weight. However, each of these weapons types can be constructed to yield very different amounts of explosive energy. Thus, pure fission weapons generally have less explosive power than fusion-boosted weapons of the same weight, and hydrogen bombs have much higher yields than a fission or fusion-boosted devices of the same weight (Encyclopedia Americana, 2002:522). According to Gahia (2008, p. 225), uranium is central to the manufacture of nuclear bombs. The bombs are also made with hydrogen and plutonium materials but uranium is crucial element used in nuclear weapons development. Uranium is one of commonest elements on the earth surface. It can be combined easily with other elements to form many compounds. It can be located everywhere on land and sea, some of it is in sea water.

Gahia (2008, p. 226) asserted that, uranium comes mixed with specks of quartz, zircon and granite called quartz conglomerates by geologists. The uranium specks in these are so small that they are almost invisible. They can only be extracted through a very refined sifting process of reducing the pulverized rocks left by the explosions to stones, then pebbles, grit and powder in the crushing plant and mill next to mine. (Gahia, 2008, p. 226). According to him at the mill, the rubble is pounded by pile driver and crushing machines. The heap is mixed with water until it is turned into mud. This mud is subjected to a series of chemical treatments the end product of which is uranium sulphate, "a greenish-yellow liquid steaming fiercely, an awesome sight with an infernal …smells" (Gahia, 2008, p. 226). There is more chemical treatment and at the end, the solution is poured along a half-pipe into a layer powder known as the yellow cake or uranium oxide, U3 O8. The yellowcake in the form in which uranium is usually transported and traded (Gahia, 2008:226).

Nuclear Fission

Arising from the experiment carried out in the 1930s, it was discovered that if uranium nucleus is split by the impact of a neutron, other neutrons from this atom are sent shooting off and these may in turn split other uranium atoms (Gahia 2008, p. 229). This creates a possibility of chain reaction. When the nucleus of uranium is split, the binding energy is released. This amount of energy is very small. But if the chain reaction takes place so that a lot of atoms undergo fission (splitting), then the cumulative amount of energy released could be enormous. Thus, the process yields two distinct possibilities- the production of atomic fission (atomic energy) or the production of a fission explosive (atomic bomb), (Gahia, 2008, p. 229).

Hence, fission reactions don't require unusually high temperatures or densities all that is necessary for an explosive is to assemble a large enough amount (call a critical mass) of fissionable material rapidly enough for an uncontrolled chain reaction to develop. This is done with a chemical explosives that either compress a sphere, a subcritical mass of fissionable material into a critical mass, or else drive two subcritical sections together in a gun-barrel arrangement (Encyclopedia Americana (2002, p. 522). After the material is assembling into a critical mass, the chain reaction is started by injecting neutrons. To get an optimum yield, the neutron must be injected as the fissionable material approaches its critical configuration. This is usually done by a device called the initiator. (Encyclopedia Americana, 2002, p. 522). If too many neutrons are present as the critical configuration is approached, or if the critical configuration is approached too slowly, a premature chain reaction will cause the atrial to disassemble (predetonate) before a full explosive yield can be achieved. This problem is especially significant for plutonium, in which a small fraction of nuclei spontaneously undergo fission-resulting in the premature introduction of neutrons as the weapon is assembled (Encyclopedia Americana (2002, p. 522). Thus, the implosion technique was done to counter this tendency of plutonium bombs to predetonate.

To crown it all, fission occurs when a particle such as a neutron strikes the nucleus of uranium atom and causes it to split into two fission fragments each of which is composed of nucleus with roughly half the neutrons and protons of the original nucleus. The fission process releases a large quantity of therminal energy which is can be harnessed as nuclear energy or channeled to go off in an explosion; that is, a uranium fission chain reaction can be made to produce power explosively in a bomb or slowly in a reactor to generate electricity. In the fission process, a heavy nucleus such as that of uranium absorbs a neutron after which it splits into two fragments. A substantial amount of energy is released simultaneously as are several neutrons (Gahia, 2008, p. 230). The neutrons may then strike other heavy nuclei and cause them to fission. The continuous recurrence of this process results in a chain reaction I in which many billions of nuclei may fission within a small fraction of a second.

Nuclear Fusion

Fusion is another method of making a nuclear bomb. According to Encyclopedia American, a major topic among nuclear scientists in the early days of the arms race was the possibility of developing a thermonuclear bomb also known

as a fusion bomb or hydrogen bomb. Fusion is the process in which two or more light nuclei combine and fuse to form a heavier nucleus, giving off a large amount of energy and neutrons; that is, the combination or fusion of two or more light nuclei to form a heavier nucleus with the release of a large amount of energy plus neutrons (Gahia,2008, p. 231). According to Encyclopedia Americana Volume 20, fusion occurs only if the nuclei approach each other at speeds high enough to overcome the electrical repulsion between them. Such speed can be reached only if special accelerators are used, or if the materials are heated to temperatures comparable to those in stars (many tens of millions of degrees). This is because such high temperatures are required to ignite fusion reactions; the fusion process is often called thermonuclear. An example of this is the fusion of two hydrogen nuclei to form helium. The release of a large amount of energy (helium) in an explosion is the process for obtaining a hydrogen or thermo-nuclear bomb, (Gahia, 2008, p.231).

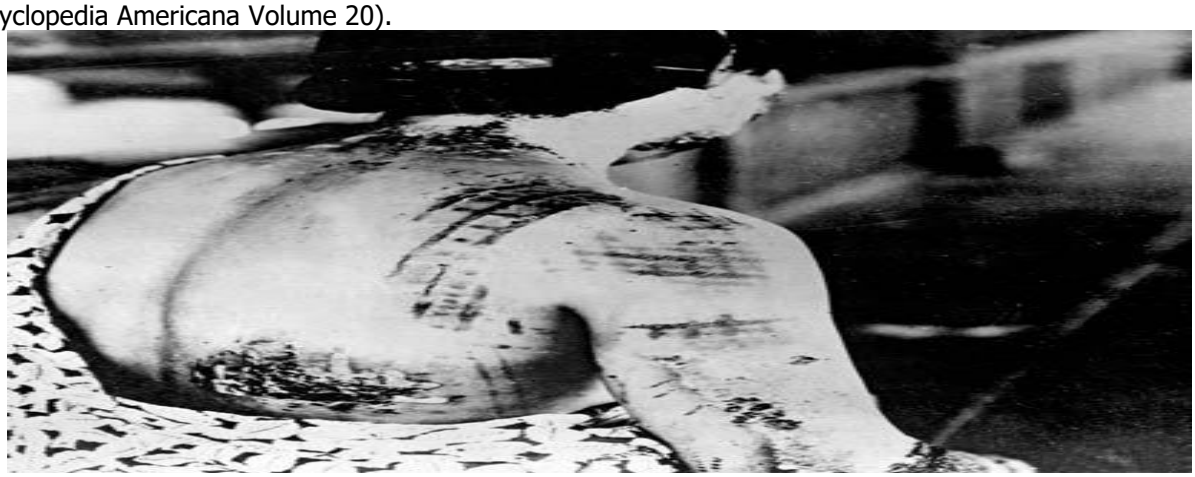
In a nutshell, nuclear fusion involves the splitting up of the nucleus of a heavy element (in this case, uranium) into two approximately equal parts leading to the release of a large amount of energy and neutrons. Where uranium is bombarded by slow-moving, neutrons several neutrons are produced as – by-products. These neutrons may cause the splitting of other uranium nuclei which in turn yield more neutrons which may further split other uranium nuclei and so on. In this process, a chain reaction is put in motion. This chain reaction is multiplying and self-sustaining. The size of the uranium exceeds a certain critical mass; there is a release of a tremendous amount of energy in a nuclear explosion. Thus, both the atomic and nuclear bombs are produced through this process (Gahia, 2008, pp. 231-2).

Effects of Nuclear Weapons

The effects of nuclear weapons is highly terrible in such a way that it makes the deployment of nuclear weapons in a war obsolete, irrational, illogically and immoral. According to America Encyclopedia, the effects of a nuclear weapon are categorized into the following groups: prompt effects and delayed effects.

Prompt Effects

Prompt effects are those that occur in the interval immediately following the detonation of a nuclear weapon. When nuclear bombs explode, an enormous amount of energy is released in an extraordinary short interval time-within hundredths of millionths of a second. In the case of a 1-megaton bomb, such energy is released into such a small volume that the temperature can rise in a geometric progression to about 100 million degrees Kelvin-about five times however than the temperature at the center of the sun. High explosive nuclear weapons derived their explosive power from chemical reactions. Almost all the power of the explosion is in the expanding gases yield by the reaction. In a nuclear explosion, however, more than 95% of the explosive power is at first in the form of intense radiation. The initial temperature near the center of the explosion is so high that this radiant energy is of a frequency many thousands of times higher than that of visible light. Since air is not transparent at these frequencies, the radiant energy is quickly absorbed by the surrounding air, creating a superheated sphere of high-pressure glowing-hot gas –a fireball (Encyclopedia Americana, 20). Because the fireball is so hot, it undergoes a violent expansion, initially, moving outward at several millions of miles per hour, while radiating a tremendous amount of light and heat. The rapidly expanding fireball, in turn, compresses the surrounding air, forming a steeply front shock wave of enormous extent and power (Encyclopedia Americana Volume 20).



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Source: https://media1.britannica.com/eb-media/39/112539-004-564055B3.jpg

The above picture portrays the destructive radioactive effects of atomic bombs denoted by the US in Hiroshima and Nagasaki, Japan, in 1945 during the Second World War.

Delayed Effects

The term delayed is applied to effects that follow the formation of the fireball and the arrival of the initial shock wave. Some such effects occur within minutes of an explosion, while others may occur or persist months or even years after the detonations. The three main delayed effects are radioactive bomb products and target debris; heat smoke, and toxic gases created by vast fires in the and around target areas: and depletion of the ozone layer by nitric and nitrous oxides created by nuclear explosions (Encyclopedia Americana Volume 20).

DPRK'S Quest for Nuclear Weapons

DPRK is often referred to as a "hermit kingdom" or a "close state" It has a central planned economy, since its inception in 1948 under a strict dictatorship. According Ji (2009) North Korean first dictator, Kim II Sung, developed the principle of self-reliance, or Juche, and strengthened the influence of the professional military in the national decision-making process. Kim Jung II DPRK's second tyrant as well as Kim II-Son further increased the dominance of the fundamental principle of extreme self-reliance and concentration of power in the military under the pressure of emerging signs of regime collapse in the 1990s (Ji, 2009). Thus, based on the principle of Juche and Songun, the development of nuclear deterrence became the only alternative for all the DPRK dictators. According to Ji (2009), the initial effort of the DPRK to build a nuclear deterrence can be traced back to the 1950s, following the nuclear bombing of Hiroshima and Nagasaki by the US and Korean War. The above scenarios propelled Kim II-sung to seek nuclear weapons as a means of deterring invasion or regime change. Thus, (Jeffrey, 2003) asserts that the International Atomic Energy Agency (IAEA) notes two distinctive phases in the DPRK nuclear development programme: assisted phase and an indigenous development phase.

The first phase commenced with an agreement between Soviet Union and DPRK for the cooperation in nuclear research in 1956 (Jeffrey 2003). During the 1950s, scientists were trained in nuclear physics in the Soviet Union and China, as well as the newly established nuclear physics department of Kim Chaek industrial college (Jeffrey 2003). According to him, DPRK consolidated its entry into the nuclear research reactor the Yongbyon Nuclear Research Complex. This was complemented by the delivery of two research reactors by the Soviet Union.

The second phase; started with the construction of an experimental 5MWnatural uranium reactor at the Yongbyon complex in January 1986 (Jeffrey 2003). This is the period where an ore processing plant and a fuel rod fabrication plant were built. The construction of two larger gas-graphite reactors also began in the same year and in 1987, this was followed by the construction of a radiochemical laboratory, with a sizeable reprocessing capacity. According to Jeffrey (2003), the report by the defectors, the rapid expansion of the DPRK nuclear programme took place between the 1970s and 1980s.

DPRK RESPONSE TO IAEA AND NPT

From the early stages of its nuclear programme, the DPRK has been reluctant to commit to IAEA standards and regulations. At the initial stage, IAEA compliance was encouraged by Soviet Union (Jeffrey 2003). As further evidence emerged on the DPRK nuclear deterrence, pressure has been increasingly applied by the international community. It was not until (0974 that DPRK officially joined the IAEA. To this effect, the first agreement on the limited monitoring of its nuclear reactor was signed in 1977. Jeffrey (2007) also asserts that the DPRK signed a 'Type 66" Safeguard Agreement under which the IAEA undertook inspections of declared nuclear facilities in 1988 and 1989. In 1985 the DPRK signed the nuclear non-proliferation treaty (NPT), (Jeffrey2003). According to Jeffrey (2009) seven years later, in

1992, DPRK submitted its initial report to the IAEA under the Safeguards Agreement. Inconsistencies were pinpointed out immediately. The IAEA findings suggested the existence of undeclared plutonium in the DPRK. A request for further information and access to the two sites related to the storage of nuclear waste was denied. This led to the nuclear crisis of 1994.

DPRK Nuclear Crisis of 1994

According to Jeffrey (2003), the 1994 nuclear crisis consisted of a steady escalation of events marked by the DPRK decision to withdraw from the NPT, the widening of non-compliant activities, and the withdrawer from the IAEA. This is the beginning of the first nuclear crisis in the Korean peninsula. The US government immediately stepped in to push DPRK to rejoin the NPT system (Tae-Hyung 2016). According to Jeffrey (2008), parallel to these events was the increasingly bellicose tone of DPRK statements most notably the March 19, statement by the DPRK delegate, Park Yung son, that DPRK will turn Seoul into a "sea of fire" and the statement by North Korea, reiterated again in 2003 that any imposition of further trade sanctions through the UN Security Council, would be regarded as an act of war. To this end, the US prepared for a pre-emptive strikes on DPRK nuclear facilities.

However, the two countries (US and DPRK) finally reached the Agreed Framework on October 21 1994, in Geneva. Under this framework, DPRK would give up any existing nuclear development programme and, in exchange, the US and its allies would supply, light water reactors for energy supplement (Tae-Hyung 2916). Jeffrey asserts that each step in the elimination of the DPRK nuclear weapons programe was to be matched by both a verification process and a corresponding inceptive. Progress in implementing the Agreed Framework was painfully slow due to domestic opposition in the US and Soul disagreement on the details among the involved parties. In 2003, George W Bush named DPRK as one of the axis of evil along with Afghanistan, Iraq, Iran, Libya and Syrian (Jeffrey 2003). According to Tae-Hyung (2016), DPRK frustrated by the slow progress of economic cooperation and by the new Bush administration's belligerent policy admitted its clandestine nuclear development programme. To this effect, in 2003, DPRK became the first country to withdrawn from NPT (Ji 2009). It was estimated that DPRK possessed enough highly enriched plutonium to produce bombs. North Korea's attempt to acquire nuclear weapons culminated at the first nuclear test conducted on October 9, 2006, which invoked the enforcement of UN Resolution 1918 on October 14, 2006, which banned the provision of conventional arms, nuclear technology and training, and luxurious goods to DPRK.

Considering the tenacious attempt of the DPRK to acquire nuclear capability despite various sanctions and criticisms at the international level, the comprehensive understanding of the fundamental cause of the development of nuclear weapons programme by DPRK is essential in the area of nuclear proliferation. To this end, these next heading will examine the motive behind the DPRK nuclear ambition.

TRUMP ADMINISTRATION ENGAGEMENT WITH SOUTHEAST ASIA ON NORTH KOREA

It is because of the previously underappreciated significance of Southeast Asia for North Korea's international presence and financial networks that it looks to be a component of the Trump administration's bigger strategy to boost pressure on Pyongyang. According to Greitens (2017), the immediate objectives of this strategy appear to be to tighten sanctions enforcement, prevent the spread of DPRK missiles and weapons to other countries of concern (against the backdrop of previous events in Syria), and persuade countries in the region to downgrade or cut off trade ties, including previously licit import and export activity.

While previous administrations have included Southeast Asia in their approaches as well—Bush administration officials warned banks in Southeast Asia, among other regions, of the dangers of doing business with North Korea in the mid-2000s, and Obama administration officials traveled to Kuala Lumpur in 2009 to discuss troubling arms-related banking activity there—the Trump administration has taken a more assertive stance toward the region. Personal phone calls to the presidents of Singapore and Thailand, as well as a contentious phone call to Philippine President Rodrigo Duterte, have been placed by President Trump (Parameswaran, 2017). The United States Secretary of State, Rex Tillerson, prioritized North Korea during his first meeting with the 10 ASEAN foreign ministers in Washington earlier this year. He also traveled to Thailand and Malaysia following the ASEAN Regional Forum in the Philippines in an effort to persuade countries in the region to downgrade diplomatic and economic ties with the North Korean regime (Greitens, 2017). In July, Special Envoy Joseph Yun visited Myanmar, presumably to follow up on the sanctions imposed in March against the country for activities related to the DPRK's weapons programs and to discuss the administration's efforts to persuade Naypyidaw to downgrade or sever its ties with Pyongyang. In March, the United States imposed sanctions against the country for activities related to the DPRK's weapons programs (Lewis, 2017)

As a result of these measures, as well as North Korea's extended period of active nuclear and missile testing from 2016 into 2017, there appears to be some response from regional and international parties (Otto,2017) Although the Association of Southeast Asian Nations (ASEAN) has not explicitly excluded North Korea from the regional forum, the organization issued a statement in August in which it strongly condemned the DPRK's missile testing and other security behavior for having a negative impact on regional peace and stability (Associated Press, 2017). Malaysia terminated its visa-free travel arrangement for citizens of the Democratic People's Republic of Korea earlier this year and banned travel by its own citizens to North Korea in late September, a significant step for the only country whose citizens were previously permitted visa-free travel to the DPRK (Parameswaran, 2017). As reported by Kottasova (2017), India, the Philippines, and Singapore have all announced that they will reduce trade with North Korea in 2017, and the

involvement of an Indonesian national in the assassination operation in Kuala Lumpur appears to have prompted some economic backlash in Indonesia against North Korea as well (Greitens, 2017).

THEORETICAL FRAMEWORK

In this research work, we adopted deterrence theory as our theoretical framework. Deterrence theory is not an invention of the nuclear age but it is a rational theory that was developed during the Cold War arms race. Its focus was the prevention of a nuclear conflict between the USSR and the United States (Thea,2014). According to the theory of nuclear deterrence, A can deter B by threatening to use nuclear weapons if B does not act in accordance with A. For successful implementation of deterrence, B has to consider A's threat as credible (Aditi, 2017). In case another country possesses nuclear weapons say C, the theory holds that A would be deterred from attacking C, resulting in a deadlock. In addition to this, if C protects B under its "umbrella", then A would be deterred from attacking B because of the fear of getting attacked by C.

If A has a monopoly on nuclear weapons, then it can threaten other states without fearing a reprisal. Nuclear deterrence theory is based primarily on the logic that the damage caused by the use of nuclear weapons is intolerable and states would favor peace to the possibility of an acute war. In August 1945, Japan became the victim of the "ultimate weapon of mass destruction" when the U.S. introduced nuclear weapons into the arena of warfare. This created a situation in which the U.S. was free to threaten other nations without deterrence, while others would be deterred from threatening or attacking the US. Proponents of this theory are Cesare Beccaria_and Jeremy Bentham (Mark & Gini, 2007).

According to Aditi, (2017) for nuclear deterrence to work effectively, some assumptions must be taken into account:

1) The actors involved are rational.
2) The risk must be excessively higher compared to the possible gain.
3) The theory usually operates in a bi-polar set up where two or more nuclear powers exist.
4) Presence of a nuclear triad i.e. the capability to considerably decrease the likelihood that the opponent could wipe out all of the country's nuclear forces in a first strike attack; subsequently guarantees a credible threat of a second strike. This is also known as survivability.
5) Nuclear power clearly addresses the adversary what is considered an unfavorable act and does not pass ambiguous messages.
6) The adversary is convinced that the coercer has the capability and the resolution to inflict unacceptable damage. This would primarily be based on enforcement cost, compliance cost, and resistance cost.

USA enjoyed a monopolistic position of nuclear possession till 1949 when USSR tested its first nuclear weapon. This marked a period of a complex game of nuclear deterrence. With two nuclear nations, the stakes involved were high. During the Cold War period, nuclear deterrence remained the hallmark of military strategies. Nuclear deterrence in this period meant that both countries, namely the USA and USSR, had the nuclear capability and could inflict "unacceptable damage". Nuclear optimists professed that this would form the basis of stable world order as no country would wish to spark a nuclear war that would result in the complete annihilation of politically significant regions.

The concepts of "assured destruction" and "mutually assured destruction" punctuated the language of military strategists and governments, taking the theory of nuclear deterrence to a new level. While the concepts of first and second strike capability became vivid, there was a rising probability of a Soviet surprise attack on the States. The term assured destruction, articulated by McNamara in mid-1960s meant to: "Deter a deliberate nuclear attack by maintaining at all times a clear and unmistakable ability to inflict an unacceptable degree of damage upon any aggressor, or combination of aggressors—even after absorbing a surprise first strike

In order to ensure this form of destruction, the superpowers developed portable land missile systems, submarine-launched missiles, and warheads measured in 'multi-megatons'. Perpetual search for superior weapons paved way for the idea of mutually assured destruction (MAD). According to the logic of nuclear deterrence, nuclear countries would not be able to attack each other owing to the fear of MAD, thus creating stability in the global arena. Ironically, reality does not hum the same tune. Since each country's weapons and arsenals are subject to continuous technological progress, the equilibrium between the nuclear nations is constantly re-establishing itself. Therefore, the idea of parity is based on a situation that is complex (if not impossible) to assess and, therefore, does not ensure stability

In the multi-polar world of today, nuclear power is not just limited to two actors (as assumed in the theory), but is possessed by numerous countries, declared and undeclared. From the foregoing, it is obvious that North Korean nuclear armament is meant to deter the US. According to Aljazeera, (2017), "as three aircraft carrier strike groups head towards the Korean Peninsula, state media denounces US 'muscle-flexing'". North Korea needs nuclear weapons as a deterrent to prevent "invasion and plunder" by the United States, Pyongyang's official media says. The online commentary on Wednesday by the Uriminzokkiri website, part of the Korean Central News Agency, also condemned the US and its allies' "crazy escalation of sanctions, pressure, and military threats" against the communist country that "will get them nowhere". To this end, "The nuclear force of the DPRK has become a strong deterrent for firmly protecting peace and security of the Korean Peninsula and the rest of Northeast Asia and creditably guaranteeing the sovereignty and the rights to existence and development of the Korean nation, (Aljazeera, 2017).

3.METHODOLOGY

Research Design: A research design is the set of methods and procedures used in collecting and analyzing measures of variables specified in the research problem. To generate data needed in this study to test and validate our hypotheses, we relied on the qualitative method. The qualitative method is used to obtain in-depth information and concept - amplifications so as to facilitate instrument designs. To this end, it is well suited for contextual analysis (Biereenu, 2006:372 in Aneke 2012). The qualitative method is particularly useful when the task is to extract, illuminate, and interpret valuable information, as to draw inference from the available evidence, to reach a conclusion. The advantages of the qualitative method lies in the fact that it is, able to gain access to organizational structure, bureaucratic processes… it can more readily lead to the discovery of the unexpected phenomenon, (Obikeze in Aneke 2012).

Nature of Data: This was based on secondary data and library materials. This was essential because of the nature of this study, on one hand, and the types of data required testing and validating our hypotheses, on the other. Secondary sources of data refer to a set of data, gathered or authored by another person, usually data from the available data archives, either in the form of documents or survey results and codebooks, (Ikeagwu, 1998; Asika, 2006 in Aneke 2012). The advantages of secondary sources of data were articulated in Selltiz et al (1977), to include that of economy. Again was the fact that information of this sort was collected periodically, thereby making the establishment of trends over time possible. More important was the obvious fact that the gathering of data from secondary sources did not require the cooperation of the individual(s), about whom information was being sought. Thus we made use of such sources as textbooks, journals, newspapers, magazines, and conference papers, charter of the United Nations, Resolutions of the Organs of the United Nations, institutional and official document in addition to government publications. The afore-mentioned institutional and official documents were complemented by other sources of secondary data, such as materials from the internet which had bearing on the subject matter.

Method of Data Analysis: In justifying our analysis, we will rely on the content analysis of data, which to Asika (1991:118) "summarizes the information generated in the research verbally to further discover relationships among variables". The adoption of the foregoing analytical method becomes necessary since the study will rely principally on secondary sources of data. Therefore instead of doing a presentation of all available data on the table as the quantitative method may imply, the qualitative descriptive method tries to be concise by summarizing data into writing form. Thus, since most of the data acquired for this work were mostly in written form, the qualitative descriptive method of data analysis was then used as a method to analyze the available data for the study.

4.DATA PRESENTATION AND ANALYSIS

Reasons for DPRK Quest for Nuclear Deterrence

The acquisition of nuclear weapons by the DPRK is a subject of great concern in the international community. This has made scholars and statesmen to raise this critical question: why did DPRK made such an effort to develop its nuclear capability in spite of series of sanctions imposed on her? In finding answers to this question, we are going to focus our analysis on content analysis which will give us the basis for validating our hypothesis as well as findings answers to our stated research questions.

State is an abstract concept represented by individuals. Therefore, in exploring the reasons behind DPRK nuclear weapons, it is worthwhile to take into consideration individuals who control the decision-making apparatus within the state. Thus, individuals are key variables in explaining the nuclear weapons of DPRK, (Ji 2009). The crux of this proposition as Sagan cited in Ji (2009) is that "the possession of nuclear weapons is more likely to serve the parochial bureaucratic or political interests of particular players rather than to serve national security interest of the state". Those domestic actors with parochial interest influence the government's decision-making process either by directly asserting their political power or indirectly through the control of information. The domestic actors assume an active role in the process of making a decision (Sagan cited in (Ji, 2009). In the word of Hymans (2008, p. 263):

> *A particularly crucial basis for revolutionary foreign policy decisions is the leader's national identity conception (NIC). His or her basic sense of what the nation naturally stands for and of how high it naturally stands in comparison to others in the international arena. Relying on the NIC and its associated emotions allow the leader to clear away the complexity of the real world in favour of the clarity of the national narrative. First, fear produces a desire for makers of security. This fear for security should be interpreted not only in material but also in emotional terms. The leader who reaches for the bomb, as for any protective amulet, is doing so at least as much to control fear as to decrease actual dangers. Second, pride produces a desire for makers of autonomy and power. And these, nuclear weapons are the gold standard. The bomb is a symbol of the nation's unlimited potential, of its scientists, technical and organizational prowess, and also of its tenacity in the face of strong international condemnations.*

The above assertions portray that the national elites are the major actors in the process of making decision on nuclear programme for the state. Their personal idiosyncrasy is a major determinant of state's foreign policy.

An examination of the fundamental domestic structure of DPRK largely informs us that deterrence is the basic reason behind DPRK nuclear programme. Thus, the primary goal of developing nuclear weapons programme is to keep Kim dynasty in power (Ji 2009). Also, the survival of the regime can be seen to extend to gaining national prestige from proliferation through continuous power (Smith 2016). Kim-II/Kim Jong-un sought nuclear weapons as a means to maintaining power by keeping military leaders happy; thus keeping the regime in power in the long run. According to

Ji (2009), the domestic politics of regime survival emerges as the significant variable to explaining the underlying cause for the acquisition of nuclear weapons. The domestic philosophies such as the military-first policy, the fundamental principle of self-reliance, the subsumed role of the international trade, and nuclear weapons as a source of hard currency help to explaining DPRK's nuclear ambitions.

The military is the major decision making body in the state. The superior capacity of the military and its parallel share of country's resources provide strong incentive for military organization under the strict control of Kim Jung-II to develop the nuclear deterrence. The extensive involvement of the military in the decision making process inevitably compels the military organization to ensuring the stability and legitimacy of the regime as a priority; threat from potential rival states are considered subordinate to the overall stability of the regime. The military encourages the acquisition and control of nuclear capability as the ultimate means to assuring its dominant power at the domestic level. The military first politics under Kim Jung thus, creates the optimal condition for the development of nuclear weapons to maintain the militaristic dictatorship (Ji 2009). Also, the fundamental principle of self-reliance and sufficiency solidified the regime to possess nuclear weapons. According to US officials cited in Ji (2009), DPRK nuclear programme is a major source of hard currency. This illicit activity includes transfers of nuclear technology to client like Yemen, Egypt, Iran and Syria is vital to maintaining the power of Kim Jong-II.

To crown it all, the major goal of developing nuclear deterrence by DPRK is to keeping the regime in power. Thus, nuclear weapons serve as deterrence for actors seeking for regime change. Although, the international community has little in the fact that the US will invade the DPRK, the North Korean fear of invasion and a following regime change can be seen in relation to other states being invaded. Examples are those states that once possessed weapons of mass destruction, but later dismantled them. The invasion of Iraq in 2003 and dethronement of Muammer Gaddafi in Libya in 2011 are good example of this scenario (Thea 2014, p.40). Pyongyang has several times made it clear that it believe that Muammer Gaddafi was executed because he gave up his nuclear weapons. Saddam Hussein was also forced to give up his weapons of mass destruction and he was as well killed after the US led invasion of Iraq and regime change too place (Bar 2013 in Thea 2014). Thus, Kim dynasty believes that if they were to give up its nuclear weapons then, the DPRK would get invaded and that Kim Jung-un would be killed because that is what happened to Saddam Hussein and Muammer Gaddafi

At the state level, the quest for security propelled DPRK to seek for nuclear deterrence. Historically, the Korean War began in 1950, when North Korea invaded the south and nearly conquered all of it. The only reason it didn't was the intervention by US coalition, which in turn nearly took the entire North Korea, stopped only by Chinese counter intervention. The war ended in an armistice in 1953 the US pledged to defend South Korea against any attack and left thousands of US troops deployed there - a constant reminder to Pyongyang that the world's strangest military was it enemy. Since, then, North Korea's entire foreign policy and national identity has evolved d around the threat of war with America. As a result, they have always been trying to improve military capability in order to deter the US from invading its territory (Zack, 2017). According to him, nuclear weapons which started in 1950s, was designed to be the ultimate answer to this problem. According to Zack (2017), the thinking among three generations of Kims was if DPRK had nuclear weapons, they could inflict unacceptable costs on the US if it were to invade the North. Nuclear weapons, in order words, would be the ultimate deterrent against regime change. This gives insight why DPRK has invested so many resources and been willing to accept crushing international sanctions, in order to develop a nuclear bomb and intercontinental ballistic missiles (ICBM) that could hit the US mainland to deter n attack and to ensure survival and prevent regime change (Reif in Zack 2017). Concomitant with the above assertion, Pyongyang pursue of nuclear weapons is fundamentally rational. DPRK is not a suicidal state: there is no evidence that it wants to blow up an American city and invite regime-ending retaliation. Its goal, according to every piece of evidence is the opposite: to avoid war at all costs (Zack 2017).

One of the realist scholars, Keneth Walth in Ji (2009) argues that, the distribution of capability across the states ultimately defines the structure of international system. According to Sagan (20012:57) states exist in an anarchical international system and must therefore rely on self-help to protect their sovereignty and national security. To him, because of the enormous destructive nature of nuclear weapons, any state that seeks to maintain its national security must balance against any rival state that develops nuclear weapons by gaining access to a nuclear deterrence itself. According to Sagan (2012, p.57) this scenario produces two policies; first, strong states do what they can; they can pursue a form of internal balancing by adopting the costly, but self-sufficient policy of developing their own nuclear weapons. Secondly, weak states do what they must; they can join a balancing alliance with a nuclear power, utilizing a promise of nuclear retaliation by that ally as a means of extended deterrence. For such states, acquiring a nuclear ally maybe the only option available but the policy will raise a question in the long run, about the credibility of extended deterrence guarantees, since the nuclear power would also fear retaliation if it responded to an attack on its ally. Security dilemma becomes the order of the day. The result of this scenario is unending proliferation of nuclear weapons. George Shulte in Sagan (2012; 57) once nicely summarized the argument in the following words: "proliferation begets proliferation". Nuclear development by a state creates nuclear threat to another state in the region, which then, has to initial its own nuclear weapons programme to maintain national security (Sagan 2012:57-8). Thus, the development of nuclear deterrence is desirable road to guarantee security against rival powers boasting nuclear arms or for those states interested in altering the states-quo in their favour (Ji 2009). Sagan cited in Ji (2009) maintains that the cost of nuclear war are such even small risk of war can generate strong deterrence. Thus, leaders are unwilling to suffer the

consequence of nuclear retaliation. State as a rational actor, seeks nuclear weapon to guaranteeing its survival in the system (Ji 2009)

According to Ji (2009), DPRK search for security provides powerful explanation by examining the security concerns as a major motivator for the DPRK nuclear deterrence. First of all, Kim Il-Sung's initial decision to acquire nuclear capability in the 1950s may have been heavily influenced by the Japanese capitulation following the U.S. nuclear attacks on Hiroshima and Nagasaki in 1945 (Ji 2009). The destructive power of these atomic bombs demonstrated the superior military capabilities of the U.S. and established it as the preponderant power in the international system. North Korean leaders believed that their country had been exposed to U.S. nuclear threat since the Korean War. Consequently, this created tension to develop its own nuclear deterrent against the U.S. According to Ji (2009) the possession of nuclear capability became perceived as an effective means to avoid the Japanese experience by deterring U.S. attempts to launch an attack. The weakening military ties with the former Soviet Union and China in the 1990s provided another impetus to develop nuclear capabilities. Prior to the collapse of the Soviet Union and the Chinese economic reform era, North Korea enjoyed nuclear umbrellas from these neighboring states. The defense pact with the Soviet Union and the 1961 Sino-Korean Treaty on Friendship, Cooperation, and Mutual Assistance both stipulated that any armed attack afflicting either party would compel the other contracting party to provide extended military and other assistance by all means at its disposal (Ji, 2009). However, the collapse of the Soviet Union, the integration of China and later Russia into the global economy no longer guaranteed these security commitments. In a self-help international system, the defection of two important allies compelled North Korea to increase their own military capabilities to compensate for its former military dependency on the Soviet Union and China. The lack of a credible nuclear deterrent extended by the Soviet Union and China created a lapse in deterrent capabilities leading North Korea to develop its own. Lastly, the perception of the U.S. as the primary threat to North Korea's survival illustrates the role of competing rival states as predicted by the neorealist inspired security model. The Bush administration's classification of North Korea as part of the "axis of evil" in 2002 served to exacerbate concerns with regime survival in North Korea (Ji, 2009). In addition, the post-September 11, Bush's doctrine asserted more aggressive roles for the U.S. in curbing terrorism and unilaterally pursuing its critical national security interests through the spread of democratic values. This doctrine claims that the U.S. must be ready to wage preventive wars since other defenses may not be possible against terrorists or rogue states (Ji, 2009). The U.S. wars against Afghanistan and Iraq reflects the resolve of the U.S. to protect its vital security interests, solidifying the U.S. preemptive attack strategy in the name of maintaining peace at the international level. Consequently, North Korea, often labeled as a rogue state, has caused to fear a U.S. preemptive attack against its territory. *Nodong Sinmun*, the primary North Korean propaganda newspaper, reported on March 15, 2006 that "the Democratic People's Republic of Korea (DPRK) is the major target of the U.S. imperialists' strategy of preemptive nuclear strike" (Ji, 2009). Thus, an aggressively posed U.S. was perceived as a potential nuclear rival and the nuclear test conducted on October 9, 2006, was an essential process to demonstrate a nuclear deterrent (Ji, 2009).

In conclusion, the perceived external threats to national security, particularly from the US and its allies compel the hermit kingdom to develop its nuclear deterrence to ensure the survival and sovereignty. According to Aljazeera (2017) Kim In-ryong told the UN General Assembly's disarmament committee on that:

> North Korea is the only country in the world that has been subjected to such an extreme and direct nuclear threat from US since the 1970s - and said the country has the right to possess nuclear weapons in self-defence. He pointed to large-scale military exercises every year using nuclear assets and said what is more dangerous is what he called a US plan to stage a secret operation aimed at the removal of our supreme leadership. This year, Kim said, North Korea completed its state nuclear force and thus became the full-fledged nuclear power which possesses the delivery means of various ranges, including the atomic bomb, H-bomb and intercontinental ballistic rockets. The entire US mainland is within our firing range and if the US dares to invade our sacred territory even an inch, it will not escape our severe punishment in any part of the globe, he warned.

According Ri Jong-hyok, the Deputy of North Korea's Supreme People's Assembly cited in Rosie (2017), delivered the comments during the Asian Parliamentary Assembly in Turkey, asserts that:

> It is Korean people's resolute decision that (North Korea) should face off the US only with nuclear (weapons) to achieve the balance of power. North Korea's nuclear program is just a defense tool against the US. Our nuclear deterrence is a sword of justice aimed at fighting (U.S.) nuke and Asia and any country in the world need not worry about our threats as long as they do not join invasion and provocations toward us. He also pledged that North Korea would fight the US's "scheme of nuclear war" and increased sanctions.

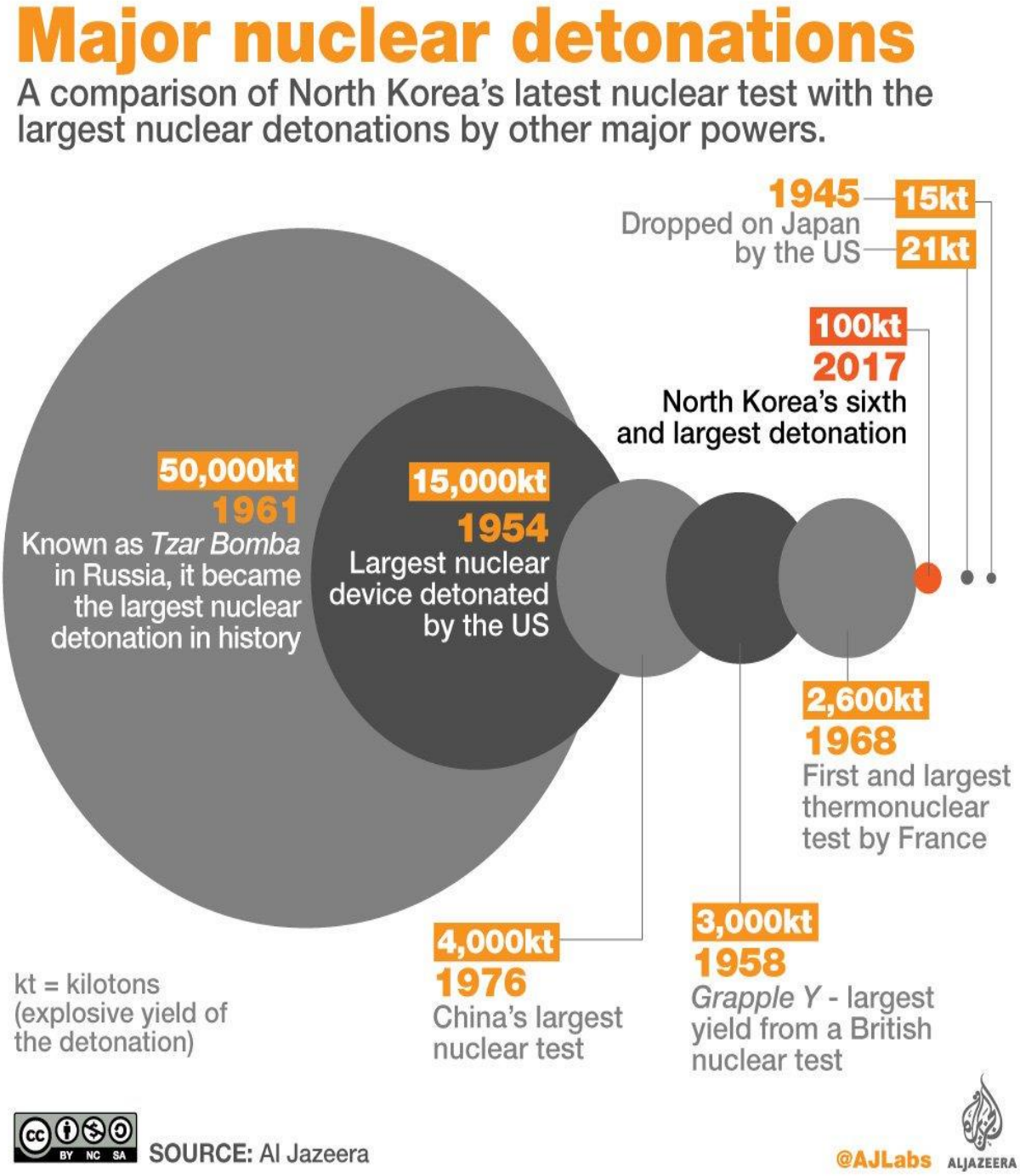
The above assertion validated our hypothesis that deterrence can be attributed to DPRK nuclear deterrence. The possession of nuclear weapons deters threatening states by raising the costs of war to an unacceptable level, which in term lower the probability of war (Ji, 2009). Thus, the security concerns of the DPRK'S regime are the primary causes of its nuclear acquisition.

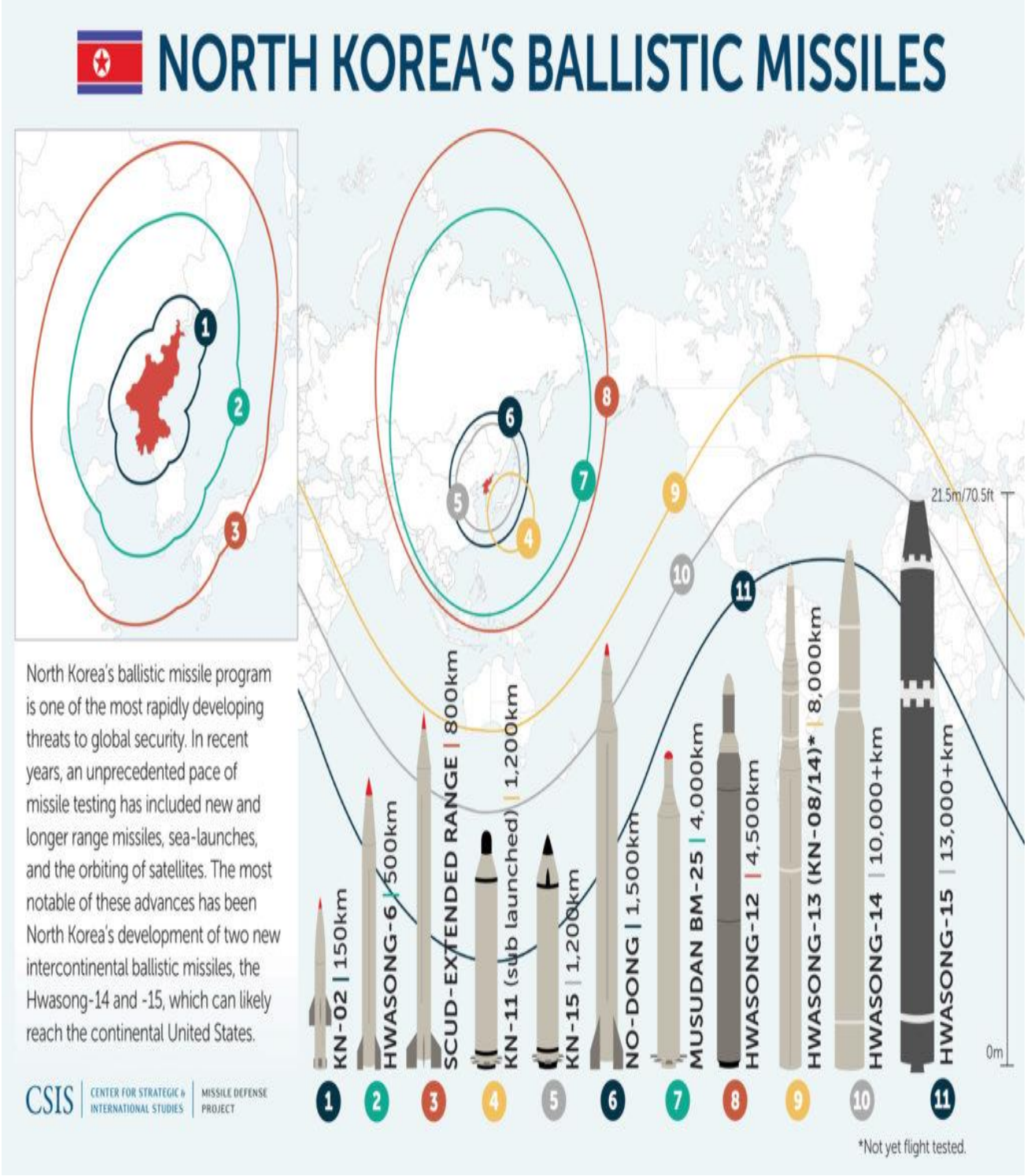
Furthermore, the parochial interest of decision makers is one of the most important factors that lead to the development of nuclear weapons by DPRK. The increase domestic pressure forced the leadership to choose nuclear development as a means of regime survival (Ji, 2009). DPRK's military first policy, self-reliance and centralized

economics system and the demand for hard currency reflect the primary goal of staying in power for the ruling class and dictator Kim Jong-un. To this end, nuclear weapons become the only alternative to Pyongyang.

NUCLEAR CAPABILITY OF DPRK

Nuclear weapons are mainly developed to deter enemy from committing blunderful aggression. It is mostly develop for regime survival, national security and national pride as we seen in the previous headings. Concomitant to this development, DPRK first admitted on February 10, 2005, to having develop nuclear weapons, and final confirmation came on October 9, 2006, when its conducted it first nuclear test (Thea, 2014). DPRK later conducted two more tests, in 2009 and 2013. According to Thea (2014, 12), it is known that Pyongyang is capable of enriching uranium and producing weapons-grade plutonium. The DPRK has developed short-rage and medium range ballistic missile along with successful launching a long-rage rocket in the year 2012, 2013, 2015,2016 and 2017 (NTI, 2013 in Aljazeera 2017). Blow is a comparison of DPRK latest nuclear test with the largest nuclear detonations by major powers.





Source: https://missilethreat.csis.org/country/dprk/

On miniaturized nuclear warheads: Pyongyang claims it can mount miniaturize warheads on its missiles, but this claims have not been independently verified (Aljazeera, 20170). To launch a nuclear attack, DPRK would need to produce nuclear devices small enough to fit on its missiles- this not known to have yet been successful developed and tested.

In Match, 2016, Korean Central News Agency (KCNA) released a photo of Kim Jung-un in front of a small ball-like object which it said was a miniaturized nuclear warheads.

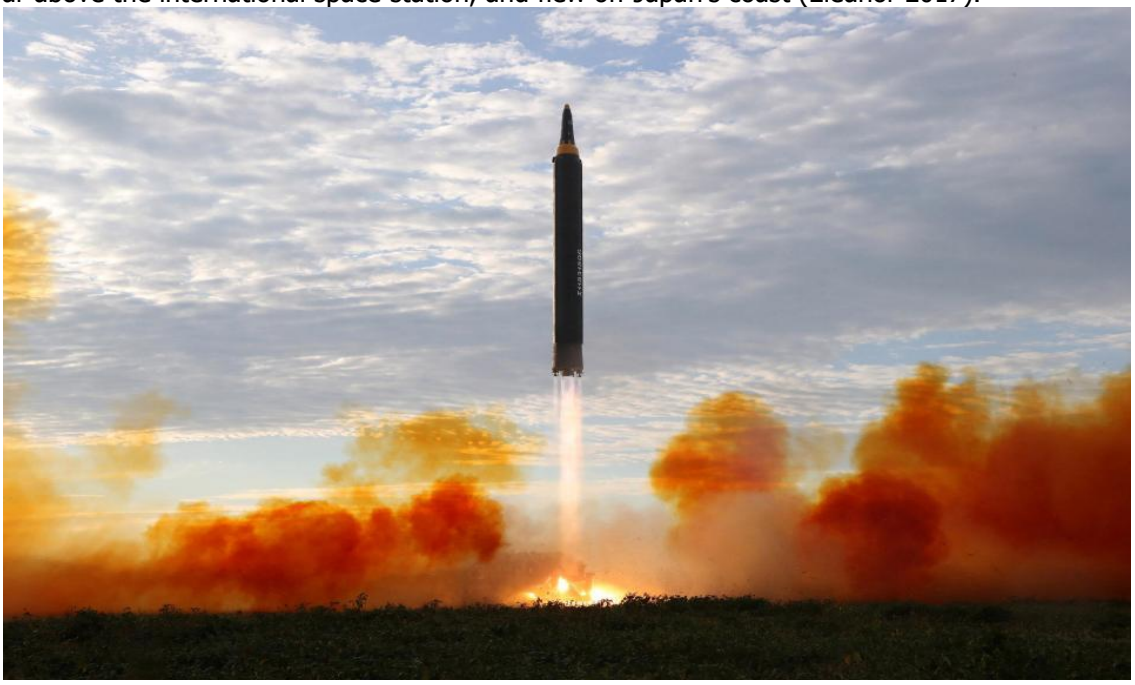
Source: Aljazeera, 2017.

Also, in September, 2017, KCNA released a photo of DPRK leader inspecting what that it said was hydrogen bomb that can be loaded on an Intercontinental Ballistic Missiles (ICBM), (Aljazeera 2017). North Korea asserts that, it will keep building it nuclear arsenal in "quality and quantity" (Aljazeera 2017). US official estimated it has 60 nuclear warheads whereas independent experts estimated that DPRK might have produces up to 20 nuclear bombs by the end of 2016, (Aljazeera 2017).

According to Aljazeera (2018), in the New Year address, Kim asserts that DPRK will continue to focus on "mass production of nuclear warheads and ballistic missiles for operational deployment in 2018. He also repeated the previous claims that the entire US is now within range of North Korea's nuclear arsenal, warning "this is a reality not a threat" (Aljazeera 2018). Base on November 29, 2017 test, experts believe that DPRK has the capability to strike anywhere on the US mainland using ICBM but they do not believe that DPRK has the technology to miniaturize a nuclear warheads and mount it on a missile that can re-enter earth's atmosphere intact (Eleanor 2017).

DPRK ranks fourth among the world's largest military with more than 1.1million personnel in the country's armed forces, accounting for nearly 5% of its national defense in supreme duty and honour of citizen (and its regime all citizens to serve in the military), (Eleanor 2017). The regime spent an average of 3.5 billion annually in military between 2000 and 2014 (Eleanor 2017). DPRK has deployed munitions near and along its border with South Korea and also has conventional missiles aimed at its neighbor and Japan in a bid to deter potential attacks (Eleanor 2017). According to US Department of Defense Report and South Korea Ministry of National Defense report cited in Eleanor (2027), the DPRK military has more than 1300 aircraft, nearly 300 helicopters, 430 combat vessels, 250 armored vehicles, and 5,500 multiple-rocket launchers. According to him, DPRK is believed to an arsenal of weapons of mass destruction: including chlorine, phosgene, serine, and VX nerve agents.

On the nuclear dimension, Eleanor (2017) asserts that the estimated of the country's nuclear stockpile vary. The regime successfully tested ICBM capable of carrying large nuclear warheads, in July and November 2017 tests. Pyongyang said that, November 29, 2017 testing of its new Hwasong 15 ICBM, the missile hit an altitude of 4,475 km (2,780 miles), far above the international space station, and flew off Japan's coast (Eleanor 2017).



Source: Patrick, Ellie, Guy and Aletha (2017)

Analysts believe that Hwasong 15, has a potential range of 13,0000 km (8,100miles) and if fired on a flatter trajectory, could reach anywhere on the US. mainland (Paul 2018, Eleanor, 2017). On the accuracy of the missiles, the report cited in Paul, (2017) asserts that the country has started to use a newer guidance system (GPS), so it is possible the missiles are getting more accurate as well. The nuclear test carried out by the regime is September, 2017, was possibly the largest yet, with the yield of the bomb put at 100 kilotons. This can also indicate the country has developed a hydrogen bomb. By comparison, the bomb dropped by the US on Hroshima had a yield of 16 kilotons (Paul, 2018).

IMPACTS OF NORTH KOREA'S NUCLEAR PROGRAMME

One of the major impacts of the North Korean nuclear test is that it has meant a severe blow to the global non-proliferation regime. If North Korea can get away with its possession of nuclear weapons, it will give a virtual green light to Iran, which is now watching closely the international response to the North Korean nuclear test. In general, Iran is considered a more significant threat to U.S. interests and allies than is North Korea. After North Korea's nuclear test, Tehran seems to have become tougher in continuing its own uranium enrichment program. According to Liu (2006), one day after the North Korean nuclear test, Iranian President Ahmadineijad affirmed that Iran will continue its nuclear program and "the Iranian nation will continue its path of dignity base d on resistance, wisdom and without fear". The head of the UN nuclear agency ElBaradei warned recently that besides Iran as many as 30 countries could soon have technology that would let them produce atomic weapons "in a very short time", joining the nine states have or are suspected to have such arms. Besides, the US is very much concerned about the possibility of nuclear proliferation by North Korea. It was just this fear of proliferation that prompted President Bush to declare in 2003 that the United States would never "tolerate" a nuclear-armed North Korea. In fact, since September 2001, the nexus of proliferation of Weapons of Mass Destructions (WMD) and terrorism has been deemed one of the greatest threats to U.S. security. And President Bush has repeatedly made it very clear that the priority concern for the United States is proliferation. That is why the Bush Administration put forward the Proliferation Security Initiative (PSI) in May 2003. The U.S. regards North Korea as one of the seven states sponsors of terrorism and many within the Bush Administration fear that North Korea will proliferate nuclear technology. By implementing the PSI, the U.S. wants to ensure that nothing related to nuclear weapons capability or proliferation could enter or leave the North.

In the same vein, DPRK nuclear weapons programme will serve as a catalyst for an Arms Race in Northeast Asia. There has long been a concern that a nuclear North Korea will unleash a regional arms race in Northeast Asia, which is an area that is already troubled by a lot of potential conflicts. And this scenario is what worries China, and possibly also the U.S. That is why, immediately following the nuclear test by North Korea, President Donald Trump emphasized the U.S.' commitment to its allies in the region, including South Korea and Japan, and stressed that the United States will meet the full range of its extended deterrent and security obligations.. Japan is very much concerned about its security after the North Korean nuclear test because it feels directly threatened. In the short term, however, Japan is still unlikely to go nuclear. On the one hand, it still has the credible "nuclear umbrella" of the U.S. Also, the public opinion in Japan is still strongly opposed to the idea of going nuclear, due to Japan's historical experience as a target of nuclear attacks (Liu 2006). The prospect of a nuclear Japan might also meet strong opposition from many other East Asian countries, where memories still linger on from Japan's wartime aggression (Liu 2006).

One of the impacts on Japan foreign policy is that, DPRK nuclear weapons will push Japan to speed up its cooperation with the United States in developing the ballistic missile defense system. Due to incessant tests of Nuclear weapons by North Korea, Japan and the United States agreed to deploy Patriot Advanced Capabilty-3 (PAC-3) interceptor missiles on American bases in Japan for the first time (Liu 2006). The PAC-3 is designed to intercept ballistic missiles, cruise missiles or aircrafts. It is an important part of the missile defense system and aimed at complementing the Standard Missile-3 installed on vessels equipped with the Aegis radar system capable of tracking missile launches.

The same can be said about the U.S.-South Korea alliance, which has seen many frictions in the past few years. But North Korea's nuclear test will serve to solidify the alliance since South Korea has to enhance its conventional military capability and strengthen the cooperation with the U.S. to ensure its safety. Since 2004, the U.S. has been making readjustments to its force posture in South Korea, with troop reductions and base relocations (Liu 2006). But the U.S. emphasized that the adjustments will not weaken the U.S.' security commitment to South Korea and it will spend 11 billion dollars by 2006 to equip its forces in South Korea with sophisticated weapons, including high-speed vessels, AH-64D attack helicopters and Stryker armored vehicles as well as two Patriot missile batteries (Liu, 2006).

IMPLICATIONS FOR THE REGION

What is the likely future trajectory and impact of North Korea's engagement with and presence in Southeast Asia? Developments in Southeast Asia are anticipated to interact with two other main factors in order to affect the course of events in the region in the foreseeable future. As a first step toward increasing pressure on North Korea, the United States has shifted its emphasis from targeting only DPRK economic activity that is clearly illicit and/or weapons-related to a broader clampdown on all DPRK economic activity worldwide—the most recent UN Resolution, Resolution 2375, included a textile export ban and changed the international community's policies toward North Korea (Greitens, 2017). Congress passed the North Korea Sanctions Policy Enhancement Act in 2016, and the Trump administration's most recent Executive Order broadened sanctions authority to allow the United States to designate any individuals, companies, or financial institutions that do business with North Korea, rather than just those involved in supporting the regime's nuclear and missile programmes. The recent designation of additional North Korean entities and individuals

(eight banks and 26 individuals in the most recent round of designations announced in September 2017) appear to be intended to force China, as well as other countries in Southeast Asia and elsewhere, to choose between supporting North Korea financially and doing business with the United States (Greitens, 2017).

Second, China's stance toward the Democratic People's Republic of Korea (DPRK) appears to be shifting. Even though some analysts have expressed reservations about the administration's threat to impose secondary sanctions on Chinese banks, given the intertwining of the American and Chinese economies, as well as the significant financial presence of some of the banks mentioned in the United States, China's posture appears to be shifting. China's commerce ministry said in late September 2017 that it had ordered North Korean enterprises operating in China (as well as Chinese-North Korean joint ventures operating in North Korea) to stop their operations within 120 days (Clover, Harris, and Lockett, 2017). There are exceptions—Chinese companies operating in the DPRK are still permitted to operate, the existing closures do not apply to all "nonprofit and noncommercial public infrastructure projects," and the order may not apply to some of the actors involved in sanction evasion—but the move represents a shift away from previous Chinese insistence that the DPRK be permitted to continue "legitimate trade" and economic activity. Acceptance of this idea by the Chinese government and/or Chinese economic and financial entities would represent a substantial shift in China's posture, even if the principle is never formally declared by the Chinese government (Greitens, 2017).

The shifting views of both the United States and China are expected to strengthen the readiness of Southeast Asian countries to terminate diplomatic and/or trade ties with North Korea in the future. Countries in the region have traditionally been hesitant to take an interventionist stance against their neighbors, particularly if there is no regional consensus in place and as long as China, which is the region's largest trade partner and a key player in the international trade system, is against it. Beijing's actions may be interpreted by others as an indication that the regional consensus is evolving, particularly if the United States and China are allied. When combined with Chinese limitations, a shift in Southeast Asia's way of thinking could have substantial ramifications. North Korea is likely to seek alternate partners—licit and illicit—and to attempt to transfer financial networks to circumvent sanctions in the event that the China connection is compromised, as it has done in the past on a number of occasions. In order for sanctions to have any substantial impact on DPRK behavior and decision-making, it will be critical that North Korea is unable to use existing links in South Asia, Southeast Asia, and the Asia-Pacific to replace what is being built by Beijing (Greitens, 2017).

The issue of enforcement will be crucial, and it will continue to be difficult. According to UN Resolutions on North Korea, as of early 2017, 116 of the 193 countries bound by the resolutions had yet to submit a single implementation report. North Koreans can travel visa-free to a number of small island nations in the Asia-Pacific, which include countries in Southeast Asia like Bangladesh, Brunei, and Cambodia, as well as countries in Asia like India, Indonesia, the Maldives, Myanmar, Sri Lanka, Thailand, Timor-Leste, Micronesia, Papua New Guinea, and a number of small island nations in the Asia-Pacific (Greitens, 2017).

Changing American and Chinese attitudes toward North Korea are likely to influence their amount of involvement in sanctions enforcement; yet, some support for strengthening their capability will almost certainly be required if enforcement is to advance beyond where it is currently at.

Nonparticipation by China and Southeast Asia, as well as lax enforcement worldwide and the North Korean regime's ability to shift the costs of economic punishment from regime elites to citizens wherever possible, are all possible explanations for why the sanctions regime appeared to have had little impact on North Korea's economy through the end of last year, according to the United Nations Development Programme. As a result of expanded participation from China and Southeast Asia in 2017, that calculus might shift, particularly if enforcement is tightened as well. As a result, North Korea could face increased pressure in the coming months. What remains to be seen is whether any rise in international pressure will be sufficient to persuade North Korea to alter its course. It is unclear what the answer will be, but the current administration appears to be increasing the stakes in an attempt to find out. Therefore, the stakes are higher than they have been in a long time in Southeast Asia and the region (Greitens, 2017).

CONCLUSION

North Korea's nuclear choice can be best understood as resulting from its security environment. In case of DPRK, high perception of security threat from US, diplomatic isolation from international community, and a feeling of abandonment from its traditional allies, especially after the Cold War era propelled DPRK to seek for nuclear deterrence. Characteristics of the leader's mindset, domestic politics and global economic position that favour a nuclearisation policy are also present but these seems to be subject to- and in most cases result from DPRK's precarious security position. Since inception, U.S and its allies have been in opposition (with aggressive foreign policies) to Pyongyang nuclear programme. According to Jong and Jong-Yun (2016), North Korea's nuclear deterrence reflects how Seoul and Washington's policy towards Pyongyang has failed. North Korea's fifth nuclear test and many intermediate and long-range missile tests exemplify a grim reality that all states — likely North Korea included — never wanted to face. Increases in North Korea's nuclear capabilities certainly complicate existing deterrence stability in the Korean Peninsula. North Korea may also attempt to use these capabilities for nuclear blackmail and to undertake more aggressive actions, which will surely aggravate hostility between Seoul and Pyongyang (Jong and Jong-Yun, 2016). However, base our stated objectives, we discovered that, the primary goal of wielding a nuclear deterrence is to ensure the security of the state, national prestige and to satisfying the domestic interest of parochial policy makers.

Also it is difficult to conceive North Korea's limited nuclear capabilities as an offensive weapon from a military perspective. Although, Pyongyang could be more provocative on how it behaves towards Seoul, which is situation-

dependent (Narang, 2015 in Jong and Jong-Yun, 2016). Nonetheless, North Korea's leadership knows the potential consequences of the grievous retaliatory damage it would face if it were to use nuclear weapons in a pre-emptive strike against South Korea. Of course, Kim Jung-un is a rational being. North Korea can militarily do little with limited nuclear capabilities as an offensive measure. Buts its nuclear weapons will certainly work as a minimal deterrent against South Korea and the United States (Jong and Jong-Yun, 2016). In short, crisis stability in the Korean Peninsula is viable, even if North Korea has nuclear weapons.

Conclusively, DPRK nuclear acquisition will also propel other actors to engage in nuclear brinkmanship as it is in the case of DPRK, which can result to nuclear proliferation in North East Asia. The above scenario call for the attention of statesmen to meaningfully engage with DPRK for this purpose of ending this impasse,

RECOMMENDATIONS

Pyongyang nuclear acquisition is propelled from the security threat from US and its allies in North East Asian region. Therefore, addressing the sources of its insecurity directly may open up opportunities to denuclearize North Korea. To this end, we make the following recommendations base on our findings:

1) Dialogue is the only solution to DPRK nuclear crisis. Therefore, Six Party Talks should be revisited without any preconditions.
2) All military exercise by US and its allies in the region should be halted in exchange of partial frozen of DPRK nuclear weapons programme.
3) Security concern of DPRK should be systematical addressed towards denuclearization of its nuclear weapons.
4) Sanctions and military threat cannot deter DPRK from pursuing nuclear weapons. Therefore, all sanctions imposed on Pyongyang in relations to its nuclear programme should be lifted. Also, military threat should be totally discarded.

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