Analysis Of North Korea's Nuclear Program And The Nuclear Non-Proliferation Treaty, 2002-2017

David M. E. Nwogbaga[1] and Cynthia O.Mgboke[2]
dnwogbaga504@gmail.com; mgbokecynthia@gmail.com
[1]Department of Political Science, Ebonyi State University, Abakaliki
[2]Institute of Management and Technology, IMT, Enugu

Abstract
This study examined North Korea's nuclear programs in relation to the nuclear Non-proliferation Treaty, to determine the extent of the violations and ascertain if the sanctions imposed on North Korea has deterred them from Nuclear weapon development. The study adopted a descriptive design technique. Also the study employed a documentary data to the collection of data and content analysis was used in data analysis. The study found that the North Korea's Nuclear weapons development has contributed significantly to nuclear proliferation to the extent of threatening collective security in the international system and in Middle East in particular. The study concluded that the division of Korea into North and South during Cold War; and U.S Security threats against North Korea are some of the reasons why North Korea decided to embark on nuclear development to guarantee its security. Also, this study found out that heavy sanctions imposed on North Korean economy is one of the reasons why North Korea agreed for negotiation with US and IAEA. Finally, the researcher recommends that sanctions imposed on North Korea's economy should be reduced and North Korea's nuclear program should not be used for security threats within or outside the region.

Keywords: North Korea; Nuclear Program; Non-Proliferation; Treaty; Analysis

Introduction
The use of nuclear weapons first began in 1945 when the 2nd war ended. The 1945 use of nuclear weapon was in Hiroshima and Nagasaki in Japan; due to the disastrous impact it had on the two Japanese cities, serious international concerns was sparked off on limiting both tests and use of nuclear weapons. In essence, the international community has struggled with the basic dilemma; how to restrain the atoms destructive effect while harnessing its vast potential for peaceful uses (NPT, 2010).The earliest effort to address this dilemma achieved little success; for instance, the 1946 US sponsored Baruch plan sort to outlaw nuclear weapons and internalize the use of nuclear energy. It failed, and by 1952, three states had nuclear weapons. The 1950s and early 1960s saw U.S. president Dwight Eisenhower's Atoms for peace initiative, the creation of the International Atomic Energy Agency (IAEA); the development of IAEA safeguards and the expansion of the peaceful use of nuclear energy. However, two more countries exploded nuclear devices by 1964, and concern heightened that the spread of nuclear technology for peaceful purposes could not be divorced from the proliferation of nuclear weapons. In March of 1963, US President John F. Kennedy described a world where as many as 25 states possessed nuclear weapons as the greatest possible danger and hazard.

By the early 1961, efforts to achieve a legally binding agreement to prevent the further spread of nuclear weapons began to show results. In 1961, the United Nation General Assembly approved a Resolution sponsored by Ireland calling on all states to conclude an agreement that would ban the further acquisition and transfer of nuclear weapons. In 1965 the Geneva disarmament conference began consideration of a draft nuclear nonproliferation treaty. The conference completed its negotiation in 1968, and on July 1st 1968, the Treaty on the Non-proliferation of nuclear weapons (NPT) was opened for signature. The NPT entered into force on March 5, 1970 with 43 parties, including three of the five nuclear- weapon states: The Soviet Union, the United Kingdom and the United States. Meanwhile nine states have nuclear weapons and many more can easily acquire, although only five States are officially recognized as possessing nuclear weapons by the 1968 nuclear Non-proliferation Treaty (NPT); these are; The United States (1945) Russia (1949), the united kingdom (1952) France (1960) and Chine (1964). Three states never joined the NPT but are known to possess nuclear weapon: Israel (N/A), India (1974) Pakistan (1998), and North Korea (2006). Two additional states that present immediate proliferation concerns are Iran and Syria.

North Korea was harboring plans to get the nuclear weapon earlier on but acceded to the NPT in 1985 and after South Korea announced that no US nuclear weapons existed on its territory, signed the IAEA safeguards agreement. In 1991 the state joined the United Nations and entered into a denuclearization agreement with its southern neighbor. Because of these positive developments no alarms sounded when a nuclear fuel reprocessing facility appeared at its Yongbyon plant in 1989.Tensions remerged only when the IAEA inspections uncovered troublesome information on the North's program. Since then a one step-forward and one-step backward dance become a continued pattern of actions between the international community and North Korea until the nuclear Club expanded yet again as North Korea detonated a nuclear weapon in October 2006. On May 25, 2009, the country conducted a second nuclear test, in violation of UNSC resolution 1718. The state pulled out of multilateral talks on its nuclear activities, and is believed to possess 5-15 warheads.

In 1994, faced with North Korea's announced intent to withdraw from the nuclear Non proliferation treaty (NPT) which requires non-nuclear weapon states to forswear the development and acquisition of nuclear weapons, the United States and North Korea signed the Agreed framework. Under this agreement, Pyongyang committed to freezing it's illicit plutonium weapons program in exchange for aid but later collapse in 2002 and North Korea claimed that they have withdrawn from the NPT in January 2002 and once again begin operation of its nuclear facilities. The second major diplomatic effort were the six-party talks initiated in August of 2003 which involved China, Japan, North Korea, Russia, south Korea and the United states. In between periods of stalemate and crisis, those talks arrived at critical breakthroughs in 2005 when North Korea pledged to abandon "all nuclear weapons and existing nuclear programs" and return to the NPT and in 2007 when the parties agreed on a series of steps to implement that 2005 agreement.

Those talks however broke down in 2009 following disagreements over verification and internationally condemned North Korea rocket launch. Other treaties of North Korea

includes; Convention on the prohibition of the development production and stockpiling of Biological and Toxin weapons (BYINC): The treaty prohibits the development, production, stockpiling or acquisition of biological and toxin weapons, and mandates the elimination of existing weapons, weapons production material, and delivery means, Antarctic treaty, joint declaration of south and North Korea on the denuclearization of the Korean peninsula, proposed fissile material treaty (FMCT), proposed internationally legal binding Negative security Assurances (NSAS), protocol for the prohibition of the use in war of asphyxiating , poisonous, or other gases and of bacteriological method of warfare (Geneva protocol), Treaty on the prohibition of the emplacement of nuclear weapons and other weapons of mass destruction on the seabed and ocean, floor and in the subsoil ETC.

There have been a number of North Korean missile tests. North Korea has also fired a number of short-range missiles into the Sea of Japan (East Sea of Korea) in what have been interpreted as political gestures. As of 30th November 2017, North Korea has carried out 117 tests of strategic missiles since its first such test in 1984. 15 were carried out under the rule of Kim II-sung and 16 under Kim Jong-Il. Under Kim Jong-un more than so tests have been undertaken. There is general agreement in Washington and Seoul and Tokyo that East Asia and the world will be a more dangerous place once North Korea achieves its declared goal of being able to hit the continental United States with nuclear weapons. Tensions/fear of North Korea posed weapon are; The treat of a nuclear attack, the potential for increased WMD exports, Increased risk of war by miscalculation; A breakdown of the international regime intended to stop the spread of nuclear weapons, Growing strains on the U.S nuclear umbrella provided to their allies.

Statement of the Problem

Nuclear proliferation in the international system has attracted series of debates regarding the complications for collective security. This has led to heated political arguments in relation to whether nations should be allowed to develop and posses nuclear weapon or not while some actors in the international system hold the view that country should be allowed to have access to the materials and technology for nuclear weapons to guarantee their national and regional security; Others contended that the possession of nuclear weapons should be regulated and restricted given the threats it portends for global peace and security. This has been the prevalent controversy in North Korea's nuclear programs. It is against this back drop that this study is poised to investigate nuclear proliferation and collective security in the international system with focus on North Korea nuclear program. In view of this, the study shall be guided by the research question: Did North Korea's nuclear program violate the provisions of nuclear non-proliferation treaty in the international system?

Review of Related Literature

Nuclear Program and Nuclear Proliferation

Nuclear Program refers to the plans and arrangement made to use atomic and fissile materials either for energy purpose or for the production of explosives and lethal weapons. The nuclear programs of various states include: several research sites, Uranium processing facilities like

Uranium enrichment plants. Nuclear proliferation is the spread of nuclear weapons, fissionable material and weapons-applicable nuclear technology and information to nations not recognized as "Nuclear Weapon states" by the Treaty on the Non-proliferation of **Nuclear weapons** commonly known as the Non-proliferation Treaty or NPT. Nuclear proliferation is generally caused by the fact that countries want to be secured and to be powerful. It is also caused to some degree by the fact it is difficult to prevent, countries see nuclear weapons as a path to security and power also countries sees that it seems to be impossible to prevent proliferation and therefore not deterred from seeking to increase weapons to augment their power resources. Proliferation has been opposed by many nations with or without nuclear weapons, as government fear that more countries with nuclear weapons will increase the possibility of nuclear warfare (up to and including the so called "counter values" targeting of civilians with nuclear weapons) de-stabilize international or regional relations, or infringe upon the national sovereignty of states.
The dimension of nuclear proliferation includes;

i. Proliferation of nuclear Materials
ii. Proliferation of Nuclear Technologies
iii. Proliferation of Nuclear Weapons.

The global importance of nuclear weapons program has led to the production of a vast scholarly literature on the causes and consequences of nuclear proliferation. Sagan and Waltz (1995) noted that nuclear program of any country is subject to the IAEA's verification and that nuclear program is very contentious geopolitical issue; hence Uriel Abul identified five factors that motivated countries to go into nuclear program which includes:

i. Economy: mainly energy need
ii. Identity politics: pride and prestige
iii. Deterrence of foreign intervention
iv. Compliance to boost regional influence on domestic politics

Throughout the nuclear program era, the conventional wisdom has been that one's nuclear acquisitions have driven its adversaries to follow suit. However, the former secretary of the state US George Shultz put instant "proliferation begets proliferation".
Although some of the earliest proliferation cases has been on the increase and it is taboo against the first nuclear weapons.

The primary security factor driving nuclear weapons proliferation today is the disparity in conventional military power. This is likely to continue in the future with profound consequence for which states do or do not seek nuclear weapons programs. Notably, the total of 30 countries has sought nuclear weapons and ten are known to have succeeded. Out of ten, South Africa remains the only country that subsequently dismantled her nuclear weapon programs. The countries with successful ongoing nuclear weapon program are North Korea, Britain, France, China, Israel, Russia and the United states. In addition, North Korea is suspected of actively seeking nuclear weapons. In this same manner, Libya previously

suspected of pursuing a nuclear weapons program, acknowledged and began dismantling the program in December 2003.

Practically, most of the nuclear weapons programs are surrounded by secrecy, particularly in their early stages of the program. This secrecy often continues long after a particular program has ended (Kramer and Brannan, 2004). Nuclear weapons then ensure security by balancing superior power even in the most asymmetrical dyads (Kramer and Brannan, 2004). More sophisticated realist arguments hold that some states are able to foresee the unintended consequences of their quest for nuclear weapons-a spiral of insecurity and subsequent nuclear arms race-while other state actors most notably aspiring great powers and non-great powers in enduring rivalries, will not act so "prudently" and engage in proliferation (Paul, 2017). Notably, existing security governance regimes such as the Nonproliferation Treaty of 1968 (NPT), do not limit proliferation but effectuate certain kinds of proliferation. In the case of the NPT regime, the strength of the nonproliferation norm pushes proliferators into denying their activities and pursuing weapons clandestinely (Nuclear Opacity). In fact, realism holds that security governance is limited to equally powerful countries regulating their behavior through nuclear deterrence/and balance of power.

The UN Security Council resolutions, particularly Resolution 1540, of 2004 focus on the responsibility of states to regulate nuclear-related activities and trade within their own territories. The resolution moves the regulating focus to non-state actors, in particular terrorist organizations. It also moves beyond the direct consent-based creation of legal obligations seen in the NPT and IAEA safeguards agreements by requiring all states to:

1. Refrain from providing support to non-state actor seeking to acquire weapons of mass destruction and their means of delivery
2. Adopt and enforce domestic laws which prohibit non-state actors from being involved in the manufacture or transfer of weapons of mass destruction; and
3. Create and enforce measures to control such items, in order to prevent their proliferation, including appropriate controls over related materials.

Extending the discourse on nuclear program and nuclear proliferation, Korthals (2012) studied "Iran Nuclear program: Towards de-escalation of a nuclear crisis". The objective of the study was to identify the strategies that can be applied in the de-escalation of nuclear crisis. Using content analysis is techniques in the light of idealist theory, the study examined the concise account of Iran's political history and enquired whether Iran has nuclear program or not. Korthals (2012) concluded that since the early 1990s there have been recurrent tensions between Iran and the international community as to whether or not Iran's nuclear program has purely peaceful intentions. Korthals (2012) knows no evidence to suggest that Iran was building nuclear weapons nor are there any indications that Iran's leaders intend to guide the country's nuclear program to a military dimension. At the same time, it must be noted that it was not certain that Iran's nuclear program is exclusively peaceful. This uncertainty will remain as long as Iran is unwilling to comply promptly unconditionally and in full to all the IAEA verification.

Similarly, Robertson and Carlson (2016) studied "India's nuclear program: the three overlapping streams of India's nuclear programs". The objective of the study was to identify the three over lapping streams of India's nuclear programs.Using the content analysis techniques, Robertson and Carlson 2016 identified the three streams of India's nuclear programs as follows:

i. The civilian safeguard stream
ii. The civilian unsafeguarded stream
iii. The military stream

The civilian safeguard stream: India operates 22 nuclear facilities under continuous IAEA safeguards. This include 14 of India's power reactors six conversion and fuel fabrication facilities for the reactors and two spent fuels storage sites. The U.S-India agreement foreshadows the construction of new reprocessing plants for U.S. Obligated nuclear material; if built, India has agreed to place these under continuous IAEA. India operates a number of facilities including eight of its pressurized heavy water power reactors (PHWRs), that service a civilian or commercial function and that are not listed in India's safeguards agreement. These facilities are not subject to safeguards (except in specific circumstance explained below, where India may introduce safeguarded nuclear material into them). This category includes three healthy water production plants that India expressly designated for civilian use as part of the separation plan but that are not subject to safeguards agreement and India's additional protocol does not extend to them. Arguably, India's fast breeder reactor (FBR) and thorium fuel cycle programs fall into the category of civilians safeguarded (as opposed to military) although both are capable of producing unsafeguarded weapons – usable material. In deciding whether or not to place a facility under safeguards, India's separation plan points to a "judgment" (by India) whether subjecting a facility to IAEA safeguards would impact adversely on India's national security. A facility could be excluded from safeguards simply because it is located into military facilities or otherwise related to activities of strategic significance. This appears to be the basis for excluding all of India's existing reprocessing and enactments facilities from being listed for continuous safeguards.

Civilian Unsafeguarded Stream: India indicated willingness to engage in a degree of transparency with respect to some of its facilities in the "civilian unsafeguarded" stream. As part of its separation plan, India declared nine nuclear-related research centers as civilian. Although these centers have not been placed under safeguard, the separation plan indicates "that they will play a prominent role international cooperation. Furthermore, the IAEA concluded and integrated Regulatory Review service (IRRS) review of India's regulatory framework for safety of nuclear power plants in March 2015. This review evidently extended to all the power reactors under the authority of India's Atomic Energy Regulatory Board including the eight operating nuclear power reactors that are not under safeguards and six reactors under construction that have not yet been, designated for safeguards.

Military Nuclear Facilities: India has military nuclear facilities, which are primarily designed to produce fissile material for nuclear weapons and naval propulsion. India also expands its

fissile material production capacity. India's enrichment plants are probably best characterized as military facilities although they may also have civilian applications (e.g. producing low enriched uranium (LEU) fuel use in the Apsara research reactor once it's conversion from high enriched uranium (HEU) to LEU is complete). If India proceeds with construction of the Special Material Environmental Facility (SMEF), it may eventually scale it up to the point where it can produce LEU fuel for its power reactors.

Robertson and Carlson (2016) concluded that India's civilian nuclear power program is undergoing a significant expansion arising from a series of nuclear cooperation agreements concluded with other states over some years back. This expansion is creating new pathways to the acquisition of fissile material and it is happening at a time when India is still producing fissile material for nuclear weapons. Safeguards should be used to provide a meaningful assurance to all states, including Pakistan, that elements of India's civilian nuclear buildup, particularly those that are being supported by international nuclear suppliers, are not contributing fissile material to India's rowing nuclear arsenal. India should take the opportunity to move fully and military programs by placing proliferation sensitive components of its nuclear power industry under permanent IAEA safeguards.

In contribution, Volha (2009) studied "Pakistan nuclear program: Nuclear Weapons Program" focusing on Uranium Enrichment Program, Plutonium program, Nuclear plutonium program, Nuclear Weapons Development, Nuclear Arsenal, Delivery systems, Non-strategic Nuclear Weapons, Nuclear Doctrine, Command and Control, fissile Material Cutoff Treaty, Nuclear Weapons, Security Proliferation etc. A 2013 state Department report explains that India and Pakistan's government view nuclear weapons as "***vital to their security***" adding that these states' respective decisions to pursue nuclear weapons stem largely from their troubled bilateral relationship, assessments of threats posed by each other (and China in India's case), perceptions of enhanced national power or status derived from possession of such weapons, and domestic politics. Meanwhile, Pakistan has *aircraft* and *land-based* missiles capable of delivering nuclear weapons; according to a 2013 State Department report, Pakistan has two types of delivery vehicles for nuclear weapons which includes:

(a) Aircraft controlled by the Pakistan Air force
(b) Surface-to-surface missile controlled by the Pakistan Army.

Pakistan continues to carry out ballistic missiles and notifies India in advance in accordance with an October 2005 bilateral missile pre-notification pact. Islamabad has several types of nuclear-capable road-mobile ballistic missiles which includes the following:

(A) The Solid fuel Hatf-III (Ghaznavi) with a range of approximately 250-290 kilometers.
(B) The Solid-fuel Hatf-IV (Shaheen) with a range of 750 kilometers.
(C) The Liquid-fuel Hatf –V (Ghaurie) with a range of 1,250 kilometers.

In 2004, a Pakistan official described four policy objectives for Islamabad's nuclear weapons:

- Deter all forms of external aggression
- Deter through a combination of convention and strategic forces.

- Deter counter force strategies by securing strategic assets and threatening nuclear retaliation deterrence in South Asia.
- to preserve territorial integrity against Indian attack and prevent military escalation, and counter India's conventional superiority.

Director of Arms control and Disarmament Affairs in Pakistan's Strategic Plan Division explained in December 2011 that Islamabad's nuclear arsenal is part of an effort to deny India the space for launching any kind of aggression against Pakistan. More recently, Pakistanis foreign Ministry spokesperson asserted in a 3rd March, 2013 statement that the country's nuclear deterrence capability is aimed at maintaining regional stability in South Asia.

The foregoing expositions suggest that there are several countries in the Middle East and South Asia running nuclear program at different degrees with diverse objectives. But the primary concern of each country is always to guarantee national security and territorial integrity through deterrence with relative possession of nuclear weapons. But the literature reviewed did not highlight whether the nuclear program and nuclear weapons constituted violations of the Nuclear Nonproliferation Treaty or not. Hence, this study is poised to make input on the nuclear activities of North Korea considered to be violations of the Nuclear Nonproliferation Treaty.

North Korea's Violations of Nuclear Non-Proliferation Treaty

Nuclear Nonproliferation Treaty began with Partial Test Ban Treaty established in 1963.It was the first treaty meant to limit or reduce nuclear weapons, testing and stock piling. The Outer-space Treaty was formed in 1967 which provided that states should not test weapons in outer space. Also, the Nuclear Non-Proliferation Treaty established in 1970 stated that all signatories must agree in a long term goal of complete nuclear disarmament. Comprehensive Test Ban Treaty was established in 1996: Adopted by the general assembly; however, it has not been ratified. The Non-proliferation Treaty grand bargains rest on three pillars: Non-proliferation, the peaceful use of nuclear energy, and Disarmament.

Nonproliferation: Under Article 1 of the NPT, nuclear weapon states pledged not to transfer nuclear weapons or other nuclear explosive devices to any recipient or in any way assist, encourage or induce any non-nuclear-weapon state in the manufacture or acquisition of a nuclear weapon. Under Article II of the NPT, non-nuclear weapon states pledge not to acquire or exercise control over nuclear weapons or other nuclear explosive devices and not to seek or receive assistance in the manufacture of such devices.

Peaceful Uses: Under Article III of the Treaty, non-nuclear weapon states pledge to accept (IAEA) International Atomic Energy Agency safeguards to verify that their nuclear activities serve only peaceful purposes. Hence, NPT Article IV acknowledges the right of all parties to develop nuclear energy for peaceful purposes and to benefit from international cooperation in this era, in conformity with their non proliferation obligations. Article IV also encourages such cooperation.

Disarmament: Under Article VI of the NPT, all parties undertake to pursue good-faith negotiations on effective measures relating to cessation of the nuclear arms race, to nuclear disarmament and to general and complete disarmament.

North Korea joined the NPT in 1985 and declared to the IAEA the existence of the Yongbyon facility. However, North Korea did not accept the comprehensive IAEA Safeguards agreement covering all of its nuclear activities required by the NPT for seven years. Meanwhile, the North Korean nuclear program can roughly be divided into four phases:

i. Phase I (1956-1980), *Basic Nuclear Knowledge*: this phase dealt primarily with *training and gaining basic knowledge;* in other words, the Soviet Union began the training of North Korean scientist and engineers, giving them basic knowledge to initiate a nuclear program.
ii. Phase II (1980-1994), *Growth in Plutonium production program*: this phase covers the growth and eventual suspension of North Korea's domestic plutonium production program; they built a factory at Yongbyon to refine yellow cake and fuel for reactions.
iii. Phase III (1994-2002), *Freeze on North Korea's Plutonium Program:* this phase covers the period of the freeze on North Korea's plutonium program (though North Korea pursued uranium enrichment in secret)
iv. Phase IV (2002-present), *Renewed Nuclear Activities*: This phase covers the period of renewed nuclear activities with the help of some notable allies like Russia, Bulgaria and China, while the following are the enemies of North Korea.

In 1989, a Secret Yongbyon facility was discovered through intelligence agencies, after US President George H.W. Bush and President Roh Tae Woo of South Korea called for denuclearization of the Korean peninsula. North Korea allowed for inspection of their plutonium. In the end, the IAEA found that more Plutonium had been separated than North Korea admitted. Although North Korea threatened to withdraw from the Treaty, it still remained a party to the treaty. In 2001, President Bush described North Korea as an axis of evil. After years of non-compliance with NPT safeguards obligations, in January 2003, North Korea officially announced its intentions to withdraw from the NPT. Hence, North Korea was accused of violating the provisions of the NPT; though there was no evidence that any enrichment facility has been built or operated. In the joint statement of the Six-Party Talk of September 2005, North Korea committed to abandoning all nuclear weapons and existing nuclear programs and to return at an early date, to the NPT and to IAEA safeguards. Evidently, North Korea has not honored its commitments and as such faced sanctions under two UN Security Council Resolutions for its announced nuclear tests on October 9th 2006 which resulted to 4.2 magnitude earthquake. Since then, there has been series of other tests as captured in table 1.

Table 1: Timeline of North Korea's Nuclear Test indicating Yield and Magnitude

Date	Nuclear Test Description	Estimated Yield	Magnitude
October 9, 2006	North Korea successfully carried out it first nuclear atomic test in an underground explosion	0.5 – 2 kiolotons (kt)	**4.1mb**
May 25, 2009	An underground atomic explosion which is reported to be as powerful as the Hiroshima bomb was carried out by North Korea	2-4 Kilotons (kt)	**4.52mb**
February 12, 2013	A miniaturized lighter nuclear device with greater explosive force than previous test was carried out by North Korea.	6-9 Kilotons (kt)	**4.9mb**
January 6, 2016	North Korea carried out its first underground test of a hydrogen bomb signaling the country's huge leap forward in its nuclear capabilities.	7-10 kilotons (kt)	**4.85mb**
September 9, 2016	North Korea carried out a successful test of a nuclear warhead that can be mounted on a strategic range ballistic missile.	10 Kilotons (kt)	**5.1mb**

Source: (1) Centre for Strategic and International Studies (2017) ;(2) Comprehensive Test Ban Treaty Organization (CTBTO, 2017); (3) Republic of Korea (ROK) Ministry of Defense (2017)

Figure 1: Trend of North Korea's Nuclear Tests

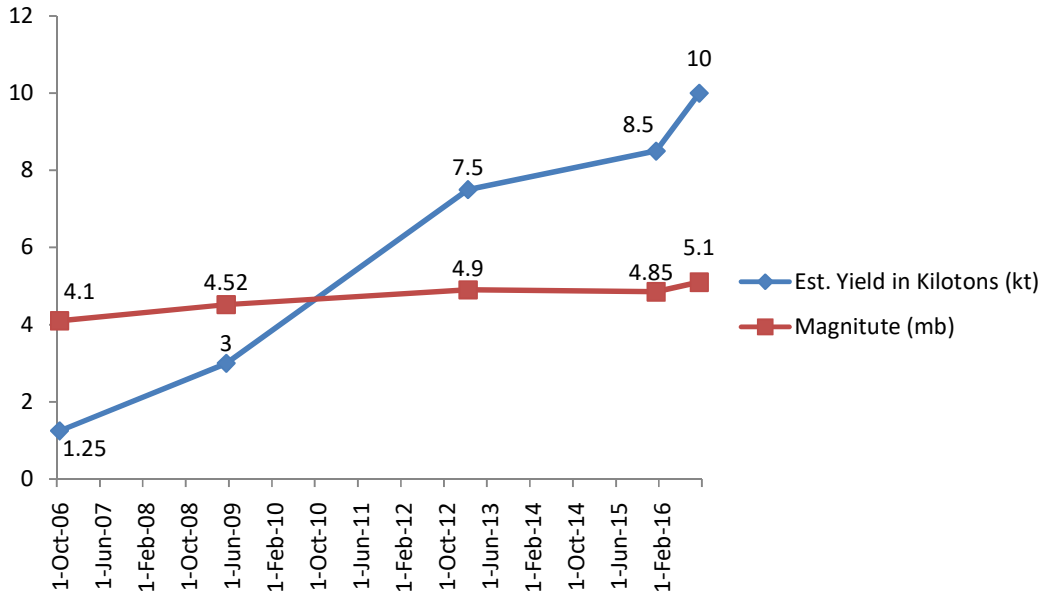

Fig. 1 shows increasing trend in the capacity of North Korea's Nuclear Tests in both the estimated yield and magnitude. This indicates that North Korea has the capacity to sustain its nuclear program beyond energy purposes to massive possession of destructive nuclear weapons. This submission may further be substantiated with the timeline of other North Korea's Nuclear Tests as contained in table 2.

Table 2: **Timeline of other North Korea's Nuclear Tests**

February 12 2017	North Korea launched a missile into its Eastern Sea. This was the first known missile launch after Trump became president of United States.
March 6th 2017	The rogue nation fired four banned ballistic missile that were believed to have been in response to military drills in Washington and South Korea. The missiles flew 620 miles and landed in the ocean off North Korea's eats Coast
March 28 2017	North Korea successfully test- launched a rocket engine.

May 13th 2017	North Korea launched a missile that landed in the sea of Japan U.S pacific command said it detected and tracked the ballistic missile. It was believed to have been a KN-15 medium-range ballistic missile.
May 21st 2017	North Korea launched a mid-range ballistic missile, U.S. and South Korea officials said at the time. The launch came from an area near Pukchang, which is located in the South Pyongyang Province. It flew east for roughly 310 miles before landing in the sea.
May 29th 2017	The rough regime test-fired a short-range Scud ballistic missile, U.S official said. The missile landed in the Sea of Japan, according to U.S Pacific Command in Hawaii.
June 8 2017	from it's east coast, North Korea launched multiple projectiles believed to be short-range surface-to-ship Cruise weapons
June 23rd 2017	North Korea conducted a rocket engine test that U.S officials said could be used on future intercontinental ballistic missiles.
July 4th 2017	North Korea successfully test-launched it's first intercontinental ballistic missile, according to U.S officials. It flew longer than any other missile conducted by North Korea
July 28 2017,	North Korea fired a Hawsong-missile which travelled 620 miles before landing in waters near Japan
August 26th 2017	North Korea fired three short range missile.
	On August 29th 2017, for the first time in eight years, North Korea fired a missile over Japan
September 13,2017	North Korea carried out its ever largest hydrogen bomb test causing an earthquake felt as far away as Vladivostok, Russia; a test carried out to check power control technology and a new design for producing H-bomb to be placed as the payload of the intercontinental ballistic missile (ICBM)
15th September 2017	North Korea fired an intermediate range middle which flew over Japan's Hokkaido Island and later landed in the Pacific Ocean. The US territory of Guam was in range of the missile which flew 2,300 miles out.
September 15th 2017	North Korea launched a missile from Sunan, the site of Pyongyang's international airport. The missile flew over Northern Japan before landing in the Pacific Ocean,
28th November 2017	North Korea fired an intercontinental ballistic Millie into Japanese waters
November 29th 2017	North Korea fired an intercontinental ballistic missile in the middle of the night local time, the Pentagon Confirmed to Fox News. The missile flew eastward from the vicinity of Pyongyang" toward the Sea of Japan

Source: 1. Centre for Strategic and International Studies (2017)
2. Comprehensive Test Ban Treaty Organization (CTBTO, 2017)
3. Republic of Korea (ROK) Ministry of Defense (2017)

Notably, the various tests carried out by North Korea have been sustained since 2006 as seen in figure 1. The estimated yield and magnitude of each test continued to be on the increase; this implied that the capacity and intensity of each Nuclear Test is being sustainably improved upon. The fact that North Korea is regularly augmenting its Nuclear Power Potentials triggered fears and threats among some countries like US and Japan. For instance, in response to the 2013 North Korea Nuclear Test, Japan summoned an emergency United Nations meeting for 12 February, while South Korea raised its military alert status. Two days after the blast, Chinese, Japanese, South Korean investigators could not detect any radiation.

The tremor caused by the test was felt by residents of the neighboring city of Hunchun, and Antu, in Yanbian, Jilin province, China. A citizen of Hyesan Ryanggang Province of North Korea 80km (50m) west from the nuclear test site reported that many 5 and 7 floor building shook very severally and this caused cracking. The series of tests conducted in defiance of the International Community prompted wide International condemnation, resolutions, and sanctions because they constituted violations of the Nuclear Nonproliferation Treaty. Meanwhile, the U.S, South Korea and Japan immediately called an emergency closed door meeting of the United Nations Security Council. In response, the council strongly condemned the test and resolved to invoke Article 41 of the United Nations Charter if further test were recorded. Still, North Korea conducted its sixth nuclear test on 3 September 2017, stating it had tested a thermonuclear weapon (hydrogen bomb). The United States Geological Survey reported an earthquake of 6.3 magnitudes not far from North Korea Punggyre-ri nuclear test site. South Korean authorities said the earthquake seemed to be artificially consistent with the nuclear test. The United Nations Security Council met in an open emergency meeting on 4 September 2017, at the request of the US, South Korea, Japan, France and the UK, Canada, China, Indonesia, Japan, Malaysia, the Philippines, Russia, Singapore, South Korea and the United states voice strong criticism of the nuclear test.

Due to the foregoing violations of the nuclear nonproliferation treaty evident in various tests by North Korea, the UN Security Council made several resolutions which ranged from mere expression of concern to extension of panel of inquiry mandate, condemnations, and sanctions. But all this did not deter North Korea from its nuclear weapon development efforts.

Table 3: List of UN Security Council Resolutions and Sanctions Related to North Korea's Nuclear Proliferation

Date	Resolution	Content
11 May, 1993	**S/RES/825**	Urged North Korea to reconsider its withdrawal from the Nuclear Non-Proliferation Treaty (NPT) and oblige by its international obligations.
15, July, 2006	**S/RES/1695**	Condemned North Korea's 2006 launch of ballistic missiles and improved sanctions.
14 October, 2006	**S/RES/1718**	Expressed concern over North Korea's 2006 nuclear test, imposed sanctions and set up the sanctions committee on North Korea.
12 June, 2009	**S/RES/1874**	Expressed concern over North Korea's 2009 nuclear test. Extended sanctions to concern all arms materials and related financial transaction, technical training, advice, services or assistance, management and maintenance. Sets up the panel of expert to assist the sanctions committee.
24 June, 2009	**S/RES/1887**	Called for implementing the UNSC resolution 1540 for nuclear non-proliferation and disarmament.
7 June, 2010	**S/RES/1928**	Extended mandate of the panel of experts until 12 June, 2011.
10 June, 2011	**S/RES/1985**	Extended the mandate of Panel of Experts until 12 June, 2012 and asked it to submit its mid-term and final report

		to the sanctions committee for discussion one month before they are submitted to the Security Council.
12 JUNE, 2012	**S/RES/2050**	Extended the mandate of the Panel of Experts until 12 June, 2013
22 January,	**S/RES/2087**	Condemned North Korea's 2012 Satellite launch and added to sanctions
7 March, 2013	**S/RES/2094**	Imposed sanctions after North Korea's 2013 nuclear test.
5 March, 2014	**S/RES/2141**	Extended the mandate of the Panel of Experts until 5 April, 2015
4 March, 2015	**S/RES/2207**	Extended the mandate of the Panel of Experts until 5 April, 2016.
2 March, 2016	**S/RES/2270**	Imposed sanction after North Korea 2016 nuclear and missile test. Sanctions include inspection of all passing cargo to an from North Korea, prohibition of all weapons trade with the country, restrictions of North Korean imports of luxury goods and expulsion of certain North Korean diplomats suspected of illicit activities
30 November, 2016	**S/RES/2321**	The UNSC unanimously sanctions regime against the DPRK in response to the country's 9 September nuclear test.
23 March, 2017	**S/RES/2345**	The UNSC extended the mandate of the panel of experts into 2018
2 June, 2017	**S/RES/2356**	The UNSC unanimously sanctioned a list of individuals and entities designated as being engaged in or providing support for Pyongyang's nuclear related program
5 August, 2017	**S/RES/2371**	The UNSC unanimously strengthened its sanctions regime against North Korea in response to that country's 28 July, 2017 missile test.
11 September, 2017	**S/RES/2375**	The UNSC unanimously strengthened its oil sanctions regime against North Korea in response to that country's sixth nuclear test, limits exports of refined petroleum products to North Korea from 4 to 2 million barrels annually, bans overseas sales of North Korea textiles and further restricts the country's export of its workers.
22 December,2017	**S/RES/2397**	The UNSC unanimously strengthened its sanctions in response to the launch of Hawsong-15 intercontinental ballistic missile.

Source: UN Security Council Resolutions, 1993-2017

Conclusion

In view of the foregoing expositions, it is observed that North Korea's nuclear program is not just for energy purposes but also for weapons development. This manifested in the various nuclear treats and tests that altercated the concern of not only the United state but other relevant actors in the international community like; (IAEA) the international Atomic energy Agency. Nonetheless, North Korea is said to have violated the (NPT) Nuclear Nonproliferation Treaty because it wanted to guarantee its security in the Middle East region given the super imposing dominance of U.S in the Korean Peninsula. Hence, North Korea's development of nuclear weapon to counteract U.S domineering presence in the Korean Peninsula seem to have largely posed security treats to the collective security in the Middle East region. In other to forestall the treats to collective security, some actors like U.S and UN Etc. unleashed sanctions against North Korea yet; North Korea was not deterred ab initio until they came to negotiating table of which the nuclear weapons became an instrument for negotiation. So if nothing is done about North Korea's nuclear program, other neighboring countries may likely embark on their own nuclear development.

References

Korthals (2012). Iran's Nuclear Program: Towards De-escalation of Nuclear Crisis. The Hague: Advisory Council on International Affair.

NPT (2010). Treaty on the Non-Proliferation of Nuclear Weapons. US: Treaty Review Conference

Paul, K. (2017). Iran's Nuclear Program: Status. US: Congressional Research Service.

Robertson, K. and Carlson, J. (2016). The Three Overlapping Streams of India's Nuclear Programs. Harvard: Belfer Centre for Science and International Affairs.

UN Security Council Resolutions, 1993-2017

Volha, C. (2009). India's Nuclear Program. India: Nuclear Age Peace Foundation.

Sagan and Waltz (1995). Nuclear Weapons. US: Congressional Research Service.

Volha, C. (2009). Pakistan's Nuclear Program. US: Oxford University Press.

Centre for Strategic and International Studies (2017)

Comprehensive Test Ban Treaty Organization (CTBTO, 2017)

Republic of Korea (ROK) Ministry of Defense (2017)