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Power Asymmetry and Nuclear Option in India-Pakistan Security Relations

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ABSTRACT

The India-Pakistan rivalry is an inheritance of past antagonism. Both countries have fought three wars and several bloody conflicts over the possession of Kashmir. This territorial dispute which originated soon after the India-Pakistan partition in 1947, has been a major impediment in their bilateral relations for more than six decades. To address this security dilemma, both countries have acquired nuclear capability to balance each other. This situation has led to arms race and increased hostility in their relations. This article examines how 'nuclear capability' is used in the balance of power between India and Pakistan. It argues that, in an asymmetrical power relations, countries may seek to balance each other through military alliances or by developing nuclear arsenal. The findings suggest an asymmetric power balance between these two countries, favouring the Indian side. The nuclear card, coupled with other security options, has been employed by both countries to gradually balance each other. The nuclear option has also given Pakistan a better bargaining power in its negotiations in managing the Kashmir dispute and other contentious issues with India.

Key words: Power asymmetry, India, Pakistan, security relations, disputes

INTRODUCTION

Protracted dispute between India and Pakistan over Kashmir has remained one of the most intractable disputes, despite numerous initiatives to manage it peacefully through bilateral and multilateral means. India and Pakistan have never been able to achieve peaceful settlement of their differences over Kashmir, since the two states became independent in 1947. They fought three conventional wars in 1947, 1965 and 1971 and experienced numerous crises on the question of Kashmir and in their bilateral relations. All these wars and crises did not effectively contribute to the cessation of hostility with a more permanent solution to the dispute (Sum *et al.*, 2013).

Bloodshed in Kashmir is in reality centuries old. As the former Indian Foreign Secretary J.N. Dixit observed, the Kashmir dispute and the Indo-Pakistan rivalry, just like the Israel-Palestinian conflict, is a legacy of history. The hostilities between India and Pakistan can be traced back to the seventh century. Hindu-Muslim antagonism originally emanated from the time of Muslim rule in India (Dixit, 2002). Hatred between the two different religions worsened due to the British 'divide and rule' policy. It intensified at the last stage of the struggle for independence and finally converted into vigorous hostilities between the two new-born States. In relation to this

historical legacy, Krishna (1998) argues that there are four major factors that contributed to the Kashmir dispute: The existence of two competing ideological forces on the subcontinent, irredentism on the part of the Pakistani leadership, the strategic location of Kashmir and the lack of sufficient institutional arrangements by the British to ensure an orderly transfer of power (Krishna, 1998).

Jammu and Kashmir is the largest princely state in the Indian sub-continent, bordering India, Pakistan, China and Afghanistan. Although the ruler of Jammu and Kashmir was a Dogra Hindu, his subjects were predominantly Muslims. When the Indian sub-continent was divided into two states in 1947, the ruler of Jammu and Kashmir-Lieutenant-General his Highness Shriman Rajrajeshwar Maharajadhiraj Sri, Sir Hari Singh Indar Mahindar Bahadur, Sipar-i-Sultanat or well known as Maharaja Singh-could not decide whether to join the new dominion of India or Pakistan. In the mean time, the Muslims from Poonch region of Jammu and Kashmir revolted against oppressive taxation of the ruler (Bose, 1997). The situation further deteriorated during August and September of 1947 when tribesmen from the Northwest Frontier Province of Pakistan joined with the Kashmiri muslim rebels. The tribesmen and the rebels later captured several towns, massacred large numbers of civilians and advanced within four miles of the Kashmiri capital, Srinagar. Under this circumstance, the panic-stricken Maharaja signed the Instrument of Accession in return for the military assistance of India. The Indian military succeeded in recapturing two third of the princely state. But the rest went to the control of Pakistan and since then, the Kashmir conundrum was born.

India, with over 1.26 billion population and 1.27 million square miles of territory, is a big power and a giant as compared to Pakistan which only had 180 million population and 307,374 square miles of territory (UNDESA., 2012). In addition to its superiority in conventional defence capability, India enjoys a naturally extended strategic depth, covering most of the subcontinent. Pakistan is much smaller comparative to India and as such Pakistan has struggled to narrow the asymmetry by aligning itself with outside powers and receiving military assistance. Pakistan has made use of her close military relations with the United States and China to reduce the power asymmetry with India. In the 1950s, Pakistan achieved near parity with India because of the military and economic support from the United States. But, the power asymmetry turned to favour India by the 1980s in spite of Pakistan, receiving extensive supplies of conventional weapons from China and North Korea and financial aid from Saudi Arabia (Kapur, 2005).

This prevailing asymmetrical power balance may have contributed to both countries in acquiring nuclear capabilities. It should be noted that the initial motivation for the acquisition of nuclear weapon by India was more to do with the threat from China than with Pakistan. However, Pakistan considered nuclear weapons as the sole means for counterbalancing India's great advantage in conventional forces when facing impossibility of matching up the demographic, economic and military dimensions of Indian posture. Pakistan failed to win a single war with India and its allies appeared unreliable and reluctant to render assistance during the wars. It seemed that Pakistan could only get weapons and support from the United States when the United States needed her. Therefore, Pakistan sought nuclear weapons to be able to compete with India without assistances from the United States. The threat of nuclear conflict in South Asia had become more apparent with nuclear tests conducted by India and Pakistan in 1998, shering these countries into the nuclear club. Over the years, both countries have built up large armies and developed nuclear weapons primarily to defend themselves from each other. The continued nuclear arms race between the two countries had impeded their bilateral relations.

ASYMMETRIC CAPABILITIES

Neo-realists, like Waltz (1979) had argued that states may balance against threats either externally through forming alliances or internally through its own military built-up (Waltz, 1979). In contemporary period, the ultimate balance is mostly against nuclear arsenal. In this regard, some states seek security guarantees from nuclear powers or aligning their military capability with that of great powers while others prefer developing their own nuclear weapons to strengthen their position vis-a-vis adversaries. Asymmetric conflicts involve states of unequal power capability calculated in terms of material possessions such as size, demography, population, resources, military capacity, economic prowess, defence expenditure and other intangible factors such as will, aspiration, nationalism, morale and others which are not included as these are difficult to measure (Paul, 1994). In general, capabilities distributed across the states under anarchic system have been measured in terms of tangible factors and when we say a powerful state, it refers to a state superior in tangible material resources that can be measured and seen.

The relations between India and Pakistan have been characterized by a distinct form of asymmetric capabilities. In South Asia region, India occupies a strategic and central geographical place. It accounts for 73.4% of the territory, 76.5% of the population and 80% of the Gross Domestic Product (GDP). As a result, India is labelled as the core power while Pakistan is a bargainer (Hussain, 2006). As Compared with Pakistan, India is over seven times larger in population and in size of national economy and four times in territorial dimension. While Pakistan's population was 180 million in 2012, India's population reached 1.26 billion (UNDESA., 2012). Besides, India's GDP growth is in double digits and its economy has been expanding more rapidly than that of Pakistan (Khan, 2009).

Initially, India's defence posture against Pakistan was based on matching capabilities. But India changed its policy in 1965 from matching capabilities to maintaining adequate deterrence or a slight edge in its force deployments vis-a-vis Pakistan (Thomas, 1996). During the period from 1987-1972, Pakistan weakened significantly due to its defeat in the third Indo-Pakistan war of 1971 (Thomas, 2004). Thus since 1971, India has achieved the slight edge in defence areas over Pakistan, both qualitatively and quantitatively.

In addition as Rodney Jones highlighted, there has been a substantial disparity in military expenditures since the third Indo-Pakistan war of 1971. In 1970, the ratio of defence expenditure between India and Pakistan was around 2.35:1 but it increased to 3.38:1 in 1980. Subsequently India raised its defence expenditures up to US \$9.65 billion in 1987, versus Pakistan's US \$2.58 billion, broadening the ratio further to 3.74:1 in 1987 (Jones, 2005). That gap remained the same through 1989 and 1990. In 1992, India's low point defence expenditure is of US \$6.7 billion made near parity with Pakistan's defence expenditure of US \$3.55 billion resulting in the ratio of 1.89:1. But thereafter, Pakistan's expenditure flattened out and dropped towards the end of the decade whereas India's expenditure resumed its climb quite sharply for two years after the nuclear tests in 1998 (Jones, 2005). Subsequently, India raised its defence expenditure from US \$17.697 billion in 2000 to US \$22.273 billion in 2005 whereas Pakistan's defence expenditure increased from US \$3.320 billion in 2000 to US \$4.534 in 2005 (Alagappa, 2009).

Even though Pakistan was confident in the late 1950s that its military was powerful enough to challenge India's grasp over Kashmir, it never enjoyed a preponderant military capacity to invade India deeply. At the time of second Indo-Pakistan war in 1965, there was considerable imbalance in air and naval strengths. The Indian Air Force had five Gnat squadrons, five Mystere

squadrons, six Hunter VI squadrons and three Canberra squadrons together with three Ouragan and seven Vampire fighter squadrons (Rahman, 1996). Each of these squadrons consisted of 16 aircrafts. In addition, nine Russian MIG-21 supersonic fighters were also in service and the number of transport aircrafts and helicopters was more than three hundred. In the meantime, Pakistani Air Force had 10 F-104 star-fighters, 90 Sabre F-86F, 22 B-57 light bombers and four C-130 transport aircraft (Rahman, 1996). Similarly in naval strength, Indian Navy contained an aircraft carrier, two cruisers, six destroyers and eleven frigates while Pakistani Navy had only a single cruiser, five destroyers and three frigates (Rahman, 1996). In addition, India achieved numerical and qualitative superiority in mechanized ground forces. Indian army was expanded from 500,000-825,000 men and was also equipped with nine mountain divisions (Ganguly, 1994). India leads Pakistan two-to-one in tanks and three-to-one in modern tank capabilities (Lavoy and Smith, 2003). India's mechanized infantry also provided significant firepower and mobility compared to the Pakistan.

Despite Pakistan's conventional military capacity to block an air and armoured assault by India which has slightly increased after the third Indo-Pakistan war of 1971, India's capacity to cut through Pakistan's blocking capability has improved at the same time as a consequence of India's military modernization of the 1980s and 1990s (Jones, 2005). India, being geographically large and having more than 15,000 km of frontiers and 6,000 km of coastline, has large conventional forces (Rajain, 2005). Moreover, constraints on Pakistan's ability to acquire state of the art systems have hindered its own conventional modernization so that the asymmetric capability between India and Pakistan continues to widen.

India's growing military power has heightened Pakistan's strategic vulnerability to an all-out Indian invasion of its territory. According to the analysis of Rodney Jones, Pakistan has two key vulnerabilities at the conventional level (Jones, 2005). The first vulnerability is that the growing air power imbalance has enabled India to achieve a qualitative advantage over Pakistan. By 1990, India had considerable advantage over Pakistan on inventories of modern and high-performance combat aircrafts, the ratio was 3.33:1 in India's favour (Jones, 2005). Moreover, India's overall airpower superiority was six times more than Pakistan. This aerial advantage could deny Pakistan control over its own airspace and its ground forces may be exposed to systematic air raids. Secondly, geography also does not favour Pakistan. If India were to attack, Pakistan may possibly be sliced into two portions on its longitudinal axis, south of its own Punjab province. Pakistani ground forces may be stretched and outgunned by Indian forces, especially in the desert terrain opposite to Pakistan's narrow waist near Rahim Yar Khan (Jones, 2005). In fact, Pakistan is a narrow country and most of the industrial centres and major cities situate unfortunately close to the Indian border, where there are no geographical impediments such as a major river or a mountain range to slow advancing forces (Smith, 1994).

NUCLEAR DEVELOPMENTS

The nuclear tests made by India and Pakistan in May 1998 drew widespread condemnation and economic sanctions from the United States, Japan and several other countries. The primary concerns and anxieties of the international community about the nuclear tests were based on two arguments, the potential to undermine the non-proliferation regime and the possibility of developing Kashmir as a nuclear flashpoint (Mudiam, 2003). For India and Pakistan, there might be a number of factors that enabled them to acquire nuclear weapons. It is also sure to mention

that all the factors are bound to portray every reason in the name of national security (Balakrishnan, 1998). Among them, the power asymmetry, the urgent need of self-reliance to safeguard its national security and the aspiration to become a greater power are the most important factors that drove both countries to the path of nuclear proliferation.

WHY INDIA NEEDS NUCLEAR WEAPONS

India published its Draft Report to the National Security Advisory Board on Indian Nuclear Doctrine' in August 1999 (Izuyama and Ogawa, 2003). The fundamental principles of the Draft Nuclear Doctrine are 'credible minimum nuclear deterrence' and unconditional 'No First-Use' (NFU) posture. Credible minimum nuclear deterrence is regarded as a policy based on 'retaliation only' in which great emphasis is put on survivability of nuclear forces (Rajain, 2005). Indian Prime Minister Atal Behari Vajpayee in 1998 assured publicly that the Indian nuclear capability would be defensive in nature and emphasized that, 'India shall not use these weapons to commit aggression or to mount threats against any country, these are weapons of self-defence and to ensure that in turn, India is not subjected to nuclear threats and coercion' (Indian Parliament, 1998).

The draft report maintains that the purpose of India's nuclear weapons is the deterrence of the use or the threat of use of nuclear weapon's by other states and assures that India will not initiate any nuclear attacks (Izuyama and Ogawa, 2003; Rajain, 2005). In relation to the command and control structure, the draft report further states that after nuclear weapons are inducted into the armed forces, the Prime Minister would have the authority to release them for use (Rajain, 2005). However, Pakistan responded that India's nuclear policy would fuel an arms race (Diamond, 1999).

India's primary goal for developing nuclear weapons is to acquire a minimal deterrence capability against China and Pakistan while avoiding the fusing of warheads with delivery vehicles during peacetime. Indian intention is to use its deterrence simply to give pause to any would-be attacker or black-mailer (Chellaney, 2002). However, India's No-First Use (NFU) nuclear posture necessitates developing and deploying second strike capabilities.

India initiated its first nuclear research for the development of nuclear power by founding Tata Institute of Fundamental Research (TIFR) in 1944 and the Atomic Energy Commission (AEC) in 1948. In the early 1950s, Dr. Homi Bhabha, widely known as father of India's nuclear program led a compromise among a core group in New Delhi on the right to develop nuclear energy (Rajain, 2005). He harboured a vision on seeing India becoming the sixth member of the nuclear club (Smith, 1994). From 1954, India started receiving necessary funds for its nuclear research and nuclear energy development under the auspices of the Department of Atomic Energy (Rajain, 2005). In January 1956, Nehru announced that if adequate resource were diverted, India could make atomic bomb in three to four years (Menon, 2000). In 1957, India succeeded in operating Apsara, its first nuclear reactor. The development of nuclear power generation further advanced steadily with the technical assistance from the United States and Canada. The Canadian-Indian Reactor, U.S. (CIRUS) the second research on heavy reactor began operating in 1960 while the Trombay plutonium reprocessing plant was constructed in April 1961 (Izuyama and Ogawa, 2003).

India considered that while nuclear science and technology was common intellectual property, the use of atomic energy was just a choice of sovereign state (Rajain, 2005). In 1961, Nehru announced that although India could make the bomb in two years, it chose not to do so as he did not think an atomic bomb could help India in any of its problems at that time (Menon, 2000). However, Indian humiliating defeat in a war with China in 1962 and the subsequent nuclear test

by China in 1964 greatly contributed India's quest for nuclear weapons. Politicians in northern India who had strong anti-Chinese feelings and atomic energy scientists with strong technonationalistic intentions, maintained that India should carry out its own nuclear tests to counter China (Izuyama and Ogawa, 2003). Lal Bahadur Shastri, soon after taking over the premiership in 1967, sent his Foreign Minister to find out the answers from the United States, USSR and UK on its quest for nuclear guarantee against nuclear threat (Dixit, 2002). But India failed to get a security guarantee from them and, Shastri approved principle Bhabha's plan for an underground nuclear explosion (Smith, 1994). From that time onward India began militarizing its nuclear program (Rajain, 2005).

Although India decisively won the third Indo-Pakistan war of 1971, the actions of India were said to be greatly constrained by the three nuclear powers, the U.S., China and the USSR and thus this aggravated parliamentary debate on nuclear weapons (Izuyama and Ogawa, 2003). During the time of Prime Minister Gandhi, the Pokhran-1 nuclear test was carried out on 18 May 1974 by describing it as a 'Peaceful Nuclear Explosion (PNE)'. Despite conducting the nuclear test, Indian government at that time made it clear that it had no intention of producing nuclear weapons. However, the statement should be referred to as the option policy which means that India would continue its weaponization provided that there is a new strategic threat (Izuyama and Ogawa, 2003). This provision was realized around in 1987 by Pakistan's nuclear development. In order to counter Pakistan's nuclear capability, India moved a step closer to the weaponization of its nuclear program (Smith, 1994). It is said that Prime Minister Rajiv Gandhi officially gave permission for the development of nuclear weapons in 1988 (Izuyama and Ogawa, 2003). Raja Menon, a retired Rear Admiral from Indian Navy argues that if Pakistan had not made the nuclear bomb first, India would have never needed a nuclear arsenal against Pakistan (Menon, 2000). Similarly, J.N. Dixit mentioned that if the Indian initial request to nuclear power states for nuclear guarantee had received positive responses, India would not have gone for a nuclear program. Thus, it is arguable that the nuclearization of Pakistan facilitated Indian nuclear development.

INDIAN NUCLEAR WEAPONS CAPABILITIES

The United States was aware of India's capability to produce nuclear weapons even in the 1950s (Perkovich, 1993). The U.S. Department of Defence believes that India has both the ability of manufacturing complete sets of components for plutonium-based weapons and a small stockpile of such components. Estimates on the number of nuclear warheads vary from a few to 120. Some believe that India possesses around 30-35 nuclear weapons stored in component form (Squassoni, 2005). But others assume that India's weapons grade plutonium stocks about 450 kg in 2000 is adequate for 90 weapons (Menon, 2000). As in 2013, the Federation of American Scientists estimated that India has a stockpile of around 90-110 nuclear warheads (Kristensen, 2013). India is expanding its stockpile and most believe that India probably can deploy a few nuclear weapons within a few days to a week and can deliver these weapons with fighter aircraft.

Essentially, India's nuclear system is for addressing eventualities from China and Pakistan. India's delivery capability had required the use of ballistic missiles due to the long distance between India and China and lack of long-range bombers. Against Pakistan, India's war planes will be adequate for retaliatory strikes. Furthermore, India's air power is far more sophisticated than Pakistan's (Perkovich, 1999). India has the fourth-largest air force in the world and possesses a variety of aircrafts, assigned for operational nuclear strike force and it likely assigns nuclear missions to Mirage 2000H, Jaguar IS/IB and possibly MiG-27 aircrafts. In 2012, India possessed

49 Mirage 2000H fighters (combat radius with external fuel tanks of 1,852 km), 76 Jaguar IS/IB deep-penetration strike aircrafts (combat radius with external fuel tanks of 1,408 km) and an estimated 135 domestically manufactured aircrafts. Soviet-origin MiG-27 Flogger fleet (combat radius with external fuel tanks of 540 km), were also undergoing an upgrade in 2012 (Kristensen and Norris, 2012).

As in 2012, India had three types of land-based missiles that may be operational: the short-range Prithvi I, the short-range Agni I and the medium-range Agni II. The Prithvi I, India's short-range ballistic missiles (with range between 150-250 km), entered service in 1998 with the 333rd and 355th Missile Groups (Kristensen and Norris, 2012). The Prithvi could reach almost all parts of Pakistan posing major security risks (Perkovich, 1999). Agni-I missile (with more than 700 km range) was deployed with the 334th Missile Group in 2004 (Kristensen and Norris, 2012). India's development of the Agni-II missiles (with a 2500 km range) could reach as far as the Chinese National Command Post, in the western hill (Menon, 2000). It was deployed with the 335th Missile Group in 2004 (Kristensen and Norris, 2012). With fast launch capability, the Agni-II enhances India's ability to react quickly in crisis situation (Squassoni, 2005). In addition, India is developing more advanced missiles such as the Agni II (land-based missile with more than 2,000 km range, test-launched on 10th December 2010), Agni III (land-based missile with more than 3,000 km range, fourth test-launch on 7th February 2010), Agni IV (land-based missile with more than 3,500 km range, first test-launch on 15th November 2011), Agni V (land-based missile with more than 5,000 km range, first test-launch on 19th April 2012), Danush (sea-based missile with 350 km range, seventh test-launch on 11th March 2011) and Sagarika/K-15 (sea-based missile with 300-700 km range, test-launch on 26th February 2008) (Kristensen and Norris, 2012). By analysing the range of missiles developed by India, it is arguable that India's military modernization was to ensure conventional superiority over Pakistan, to enhance its deterrence capability against China and to enhance force projection capability in the region, in line with its major power aspiration (Kristensen and Norris, 2012).

WHY PAKISTAN NEEDS NUCLEAR WEAPONS

Pakistan has not publicized its nuclear doctrine. However, it is apparent from the motivation for the development of nuclear weapons that Pakistan's nuclear policy is mainly directed at India and largely a passive response to India's nuclear policy. Moreover, Pakistan's formulation of its own nuclear strategy is a manifestation of its inferiority in conventional military capability (Karr and Nikitin, 2009).

A typical example of this can be seen in Pakistan's decision to decline India's proposal of 'no first-use' policy. Pakistan has pledged no-first-use only against non-nuclear-weapon states but has not ruled out first-use against a nuclear-armed adversary, such as India (Lamont and Bukhari, 2008). Apart from making clear its intention of retaining the option of nuclear 'first use,' Pakistan has so far not made public details of its nuclear strategy.

Pakistan at first sought nuclear program for civilian use. Its civilian nuclear program started with participation in the US Atoms for Peace initiative an instrument of US foreign policy under the Administration of Dwight Eisenhower promoting the benign atom to win 'hearts and minds' of nations friendly to the US in the early years the Cold war (Weiss, 2003). Under this scheme, the Nuclear Research Laboratory was set up in 1954 with the aim of providing research facilities to students (Rajain, 2005). In January 1955, Atomic Energy Committee (AEC) was formally established to advise the government on the peaceful uses of atomic energy. On 11th August 1955,

the Pakistani government signed an agreement with the United States on cooperation concerning the peaceful uses of nuclear energy. In 1956, the Pakistan Atomic Energy Commission (PAEC) was established and Dr. I.H. Usmani, the principal architect of Pakistan's nuclear program became the chairman of PAEC in 1960. In the early 1960s, the United States agreed to provide enriched uranium and plutonium for a research reactor at Pakistan Institute of Nuclear Science and Technology (NTI, 2012). The Karachi Nuclear Power Plant (KANUPP) was also created with the assistance from Canada.

In the meantime, Indian Prime Minister Shastri stated in response to the Chinese nuclear test of October 1964, that he was in favour of developing nuclear weapons for peaceful purposes. Pakistan believed that India's nuclear power would be directed against its country. Thus, the Pakistani Minister of Foreign Affairs, Zulfikar Ali Bhutto strongly reacted against Shastri's statement by saying for the first time in 1965 that Pakistan would acquire nuclear weapons. Bhutto said.

'Pakistan will always find it difficult quantitatively to keep peace with India but qualitatively we have maintained a balance in the past and will have to continue to maintain it in the future for survival. If India developed an atomic bomb, we too will develop one even if we have to eat grass or leaves or to remain hungry because there is no conventional alternative to the atomic bomb' (Rajain, 2005; Saeed, 2004).

The second Indo-Pakistan war of 1965 which showed the disparity between the two countries' military capabilities made the turning point in Pakistani nuclear program. In addition, the humiliating loss of East Pakistan in the third Indo-Pakistan war of 1971 triggered a political decision to embark upon nuclear weapons program. Bhutto called a meeting of eminent Pakistani scientists in January 1972 in which he announced his desire to make Pakistan a nuclear weapons state and urged his scientists to help him achieve his aim, if possible, within three years (Dixit, 2002). Furthermore, India's first peaceful nuclear explosion in May 1974 strengthened Pakistan's determination to acquire its own nuclear arsenal and increased the level of urgency. Pakistan argued that there was no difference between peaceful nuclear explosion and a nuclear development.

Despite sanctions and embargos, Pakistan was able to access into the market of nuclear technology for its nuclear program. Pakistan sought uranium enrichment technology and missile technology from many sources, including Europe, China and North Korea (Squassoni, 2005). Kahuta plant, the hub of Pakistan's nuclear weapons program was built with covert contributions from Britain, Canada, West Germany, Italy and Switzerland (Rajain, 2005). Moreover, Pakistan had requested Libya, Saudi Arabia and Iraq to fund its nuclear weapon program between 1972 and 1974 (Dixit, 2002). Among them, it was reported that China may have helped Pakistan nuclear weapons design and become the main supplier for Pakistan nuclear weapons program (Burr, 2013). Unlike India, Pakistan's primary desire in developing nuclear weapons is not to become a major nuclear power or to increase its international standing. Its main aim is to solely respond to India's nuclear development and to act as strategic deterrence to India's vast conventional military power (Izuyama and Ogawa, 2003).

Pakistan nuclear programme boosted up with noteworthy contributions by Abdul Qadeer Khan, a metallurgist who returned to Pakistan from Europe in 1975 (Izuyama and Ogawa, 2003). In 1979, the United States cut off its military and economic aid to Pakistan due to the latter's nuclear program. Only three years later, the embargo on aid was lifted. However, the US Congress passed the Pressler Amendment in 1985, banning all US aid until Pakistan proved that it had no nuclear

explosive devices. Instead, A. Q. Khan and Pakistani President General Muhammad Zia-ul-Haq announced in 1987 that Pakistan had the ability to produce nuclear weapons (Smith, 1994). There was also a report that a Pakistani nuclear device was tested at the Chinese testing site at Lop Nor in the western province of Xinjiang in 1987 (Dixit, 2002).

In 1990, the United States concluded that Islamabad had acquired the capability to assemble a first-generation nuclear device with technical and material assistances from China (Shadid-ur-Rehman, 2008). Both A.Q. Khan and Pakistani Foreign Secretary Shahryar Khan confirmed on 8 February 1992 that Pakistan was a state capable of building a nuclear weapon. India also agreed that Pakistan had a nuclear bomb (Menon, 2000). As a result, the United States suspended its economic and military aid and enacted sanctions in order to prevent Pakistan from developing nuclear weapons. Despite all these sanctions and international condemnation, Pakistan launched its first nuclear test two weeks after Indian nuclear tests in 1998.

Pakistan responded to Indian nuclear tests by launching six tests at the Chagai Hills test site on May 28 and 30, 1998 near the Iranian border in Baluchistan justifying that Pakistan had to restore the strategic balance with India (Wirsing, 2003). According to A.Q. Khan, the Pakistani bomb was ready in 1984 with cold tests done in 1983 but he denied testing in China (Menon, 2000). Prime Minister Nawaz Sharif announced that Pakistan had successfully conducted nuclear tests. He later declared that whether the country was recognized as a nuclear weapons state or not, it was in fact, a nuclear power. For Pakistan it was necessary to demonstrate that Pakistan too had a capability comparable to that of India. Moreover, Pakistan would increase its dependency on nuclear weapons, since it believes that nuclear weapons compensate for conventional inferiority.

PAKISTANI NUCLEAR WEAPONS CAPABILITIES

Like India, Pakistan is believed to have a small stockpile of nuclear weapon components (Chellaney, 2002; Kristensen and Norris, 2011). In 2011, Pakistan has been reportedly continued to produce Highly-Enriched Uranium (HEU) for weapons at a rate of 120 and 180 kg per year, an amount sufficient for 7-15 warheads (Kristensen and Norris, 2011; Norris and Kristensen, 2007). Some observers estimate that Pakistan has highly enriched uranium and a small amount of plutonium for about 60 nuclear weapons (Kristensen and Norris, 2011). In addition to its uranium enrichment program, Pakistan has also pursued plutonium-based program since the 1990s with Chinese assistance (Menon, 2000). As such, most believe that Pakistan possesses 55-90 weapons of highly enriched uranium and 20 to 60 plutonium bombs in 2004 (Mishra, 2005). The 40-50 MW heavy water Khushab plutonium production reactor has been operating since 1998 and a second heavy water reactor is being built at Khushab which will double Pakistan's plutonium production capacity (Albright and Brannan, 2006). As of 2013, the Federation of American Scientists estimated that India has a stockpile of around 100-120 nuclear warheads (Kristensen, 2013) but if the current nuclear weapons expansion continue at its current rate, Pakistan's nuclear weapons stockpile could reach 150-200 warheads in 2021 (Kristensen and Norris, 2011).

Pakistan has three means of delivering nuclear weapons: ballistic missiles, cruise missiles and fighter planes. Following India's first test of its Prithvi ballistic missile in 1988, Pakistan launched its own missile program with the development of Hatf-I based on French technology. Currently, five types of Pakistani ballistic missiles are thought to be nuclear-capable, the Hatf-II (Abdali) which is a ballistic missile with more than 180 km range introduced in 2012, the solid fuel Hatf-III (Ghaznavi) derived from the Chinese M-11 with a range of 400 km introduced in 2004, Hatf-IV

(Shaheen-1) derived from the Chinese M-9 with a range of 200-650 km introduced in 2003, Hatf-V (Ghauri) with a 1300 km range introduced in 2003 and Haft-IX (Shaheen-2) with a range of more than 2,000 km introduced in 2011 (Tkacik, 2010). Hatf-V (Ghauri) missiles which reported are based on the North Korean No-Dong and Taepo-Dong-1 are capable of reaching New Delhi with large payloads (Chellaney, 2002). Pakistan is believed to have 12 and 15 units of the Hatf-VI (Shaheen-2) which has a range between 2,000 and 2,500 km allowing it to threaten almost all of India. Pakistan also launched other long distance and nuclear capable Abdali missiles with 2,500 km range (Hilali, 2002).

Reports also indicate that Pakistan developed two nuclear-capable cruise missiles, the Hatf-VII (Babur, with ground, sea and air-launched versions with a range of 500-700 km in 2011 and the Hatf-VIII (Raad) with a range of 350 km in 2013 (Karr and Nikitin, 2009). As for fighter planes capable of carrying nuclear bombs, Pakistan purchased a total of 40 F-16A and F-16B aircrafts from the United States during the period from 1983-1987. It is suspected of having modified, approximately 32 F-16s to deliver nuclear weapons within a range of 1,600 km, most likely carry a single bomb on the centreline pylon. In addition, Pakistan has equipped itself with two more nuclear-capable fighter planes, the France-made Mirage-V (approximately 2,100 km range) (Izuyama and Ogawa, 2003). Reports estimate that although Pakistan may have fewer nuclear warheads than India, it possesses more effective and deployable delivery system both in terms of aircraft and missile (Dixit, 2002).

ALIGNMENTS WITH OUTSIDE POWERS

As the power asymmetry between India and Pakistan became gradually significant with the steady growth of India's economic and military capabilities, Pakistan, the weaker state attempted to borrow capacity to balance against India through attainment of external military assistance and alignment with big powers. The politico-military supports that Pakistan enjoyed off and on from the United States and almost continuously from China, since the 1960s has enabled Pakistan to reduce the power asymmetry with India to some extent (Paul, 2005). During the Cold war period, India and Pakistan were involved in conflicts. While India gradually inclined towards the Soviet Union, Pakistan strengthened its ties with the United States and China.

Following the first Indo-Pakistan war of 1948, Pakistan decided to foster a closer relationship with the United States in order to achieve a strong external equalizer against the threats to its national security (Khan, 2010). Pakistan's concern over its national security intensified in 1951, when India deployed its troops along its borders. Pakistan wanted to strengthen its defence capability but it lacked resources and as such it turned to the United States to receive material and moral support (Soherwordi, 2010). Accordingly in early 1950s, Pakistan joined the US-backed alliances South East Asian Treaty Organization (SEATO) and Baghdad Pact which was later renamed as Central Eastern Treaty Organization (CENTO). One of the key motivations for Pakistan's joining these pacts was to strengthen its defence capability vis-a-vis India (Khan, 2010). Subsequently, Pakistan concluded 'Mutual Defence Assistance Agreement' with the United States in May 1954 and entered into a period of Special Partnership. Pakistani leaders were pleased with such pacts and defence agreement because they hoped that it would assure Pakistan's security as well as enable them to negotiate over Kashmir issue from a position of strength (Soherwordi, 2010).

During the 1950s and early 1960s, Pakistan received substantial amounts of weapons and economic aid from the United States (McMahon, 1994). While the United States rendered military assistance and moral support with the objective of using Pakistan for its strategic goals, Pakistan's

main purpose to obtain such assistance was to enhance its capabilities to balance India (Paul, 2005). However, establishing close relationship with the United States, joining the US-backed pacts and signing Mutual Defence Agreement with the United States distanced Pakistan from the Soviet Union. The latter became closer to India and as a consequence, India enjoyed the Soviet support over Kashmir issue. The Soviet leaders openly supported the Indian claim and declared Kashmir as an integral part of India in November 1955 (Khan, 2010). Later in February, 1957, Soviet Union vetoed in the Security Council a draft resolution on Kashmir which was not acceptable to India. Thus, Pakistan was unable to achieve proper solution to the Kashmir issue under the UN Resolutions due to the strong opposition of the Soviet Union.

As a stronger state compared to Pakistan, India was less in need of a formal ally and capability improvement to counter its nemesis. But, the US alliance with Pakistan and its tilt toward Islamabad caused India's leadership to abandon its non-alignment policy and as such India aligned with the Soviet Union in 1971. Moreover, the Sino-Indian war of 1962 demonstrated that India could not compete properly against China. Therefore, Indian Prime Minister Nehru requested friendly countries for assistance. The request received immediate response particularly from Britain and the United States by supplying US \$70 million worth of military equipment to meet India's urgent requirements (Soherwordi, 2010). India also received arms worth US \$730 million from the Soviet Union and its East European allies (Rahman, 1996). In the meantime, Pakistan's relationship with the United States became strained due to the U.S. decision to support India both militarily and economically (Khan, 2010). Pakistan reacted strongly against the US arms supply to India and established a closer relationship with China.

During the war, both states were equipped with US supplied weapons. India procured weapons to counter against china while the arms obtained by Pakistan were to counter against the Soviet Union (Soherwordi, 2010). Following the end of the war, the United States punished India and Pakistan for the war over Kashmir by suspending its weapon supply to both countries. Unlike the United States, China, one of the nuclear powers fully supported Pakistan in the war (Soherwordi, 2010). Consequently, India asked for the security guarantee from all nuclear powers except China against external nuclear threat in 1967. But all the responses were indecisive and thus the situation confirmed the need of self-reliance for India to safeguard its national security which ultimately led to the development of its own nuclear weapons (Dixit, 2002).

Although Pakistan's relations with the United State softened significantly when the Washington sought Pakistan's assistance in the implementation of entente with China in early 1970s, the State Department later suspended arms delivery to Pakistan, valued around US \$35 million. As Soherwordi (2010) pointed out, with the Soviet Union completely on India's side and the United States virtually neutralized from supporting Pakistan, India had no hesitation to attack Pakistan (Soherwordi, 2010). In 1971, the third Indo-Pakistan war broke out in which the United States again failed to support Pakistan. Although showing some tilt towards Pakistan, the Nixon administration did nothing to prevent East Pakistan from secession in December 1971 to establish the state of Bangladesh (Choudhuri, 1993). On the contrary, economic and military assistances from the United States for Pakistan were suspended again (Mahdi, 1999). A few months after the formation of Bangladesh, Pakistan launched the nuclear program. The nuclear program subsequently gained momentum in 1974 after the Indian peaceful nuclear tests.

In addition to alignment with outside powers, the nuclear development was another attempt for India and Pakistan to achieve parity. Pakistan's search for parity with India has been greatly facilitated by its military and strategic relationship with China which has emerged as the main

source of nuclear, missile capabilities and conventional weapons for Pakistan (Paul, 2005). With the acquisition of nuclear weapons, Pakistan believes that it has obtained a 'great equalizer' at the strategic level, since its missiles can hit most parts of India. Thus New Delhi's overall conventional superiority has been severely constrained in the event of a war.

SUMMARY

In a nutshell, the overall conventional military balance has been in favour of Indian side. In numerical terms of population, resources, GDP, trade, economic might, military capability and defence equipment, India is preponderant in every aspect over Pakistan. Therefore, Pakistan is still far from matching India's capability and conventional military strength. However, Pakistan has tried to bridge the inequality; attempted to balance the asymmetric capability and managed to achieve near parity with India through alignment with outside powers, acquisition of external military assistance and eventually through the development of nuclear weapons.

At the outset, Pakistan, particularly the weaker state attempted to diminish the asymmetric capability through alliances with outside powers and acquisition of external military assistance. But in practice, neither China nor the United States fully assisted Pakistan in time of conflicts with India. The Pakistani anxiety was further compounded by its humiliating lost of East Pakistan in 1971 war and the Indian Peaceful Nuclear Explosion of 1974. These situations thus enabled Pakistan to shift from a policy of external balancing to that of internal balancing. Pakistan considered nuclear weapons as the best available means to ensure its own security and the only way of defending itself against a powerful India. In the same way, following its defeat in the 1962 war with China and subsequent Chinese nuclear test in 1964, India appealed nuclear powers for security guarantee against nuclear threat. But its request achieved no success and therefore India decided to embark on self-reliance by developing its own nuclear weapons for its national security. Hence, India's adoption of nuclear weapons program had served as deterrence, not only to China but also to Pakistan.

Since the 1998 nuclear tests, India and Pakistan have continued to build their nuclear arsenals and nuclear capable missiles. Although India and Pakistan have not publicly declared the statistics regarding their nuclear warheads, most analysts believe that India has more nuclear stockpile, qualitatively superior. Nonetheless, both India and Pakistan have the capacity to target each other's important locations with their nuclear arsenal. Most worrisome is the fact that neither state is a member of the nuclear Non-Proliferation Treaty (NPT) as well as neither has signed the Comprehensive Test Ban Treaty (CTBT). The outstanding Kashmir dispute has remained a significant 'thorn' in Indo-Pakistan relations for decades. Successive Pakistani governments have chosen to identify Pakistani interest by claiming Kashmir and demanded changes while India is content with the status quo in the dispute. Thus, Pakistan resorted to use its nuclear arsenal to gain the upper hand in the negotiations. Pakistan puts high value on its nuclear weapon and views it as an essential force to generate change in Kashmir issue.

REFERENCES

- Alagappa, M., 2009. *The Long Shadow: Nuclear Weapons and Security in the 21st Century Asia*. NUS Press, Singapore, ISBN: 9789971694784, Pages: 571.
- Albright, D. and P. Brannan, 2006. Commercial satellite imagery suggests Pakistan is building a second, much larger plutonium production reactor: Is South Asia headed for a dramatic build-up in nuclear arsenals? ISIS Working Paper, Institute for Science and International Security, July 24, 2006.

- Balakrishnan, K.S., 1998. India-Pakistan nuclear race: Tilting the strategic balance. *Asian Defence and Diplomacy*, July, 1998.
- Bose, S., 1997. *The Challenge in Kashmir: Democracy, Self-Determination and a Just Peace*. Sage Publications, New Delhi, ISBN: 9780803993501, Pages: 211.
- Burr, W., 2013. China may have helped Pakistan nuclear weapons design, newly declassified intelligence indicates. *The National Security Archive*, The George Washington University, April 23, 2013. <http://www2.gwu.edu/~nsarchiv/nukevault/ebb423>.
- Chellaney, B., 2002. The India-Pakistan-China strategic tri-angle and the role of nuclear weapons. *Proliferation Paper*, Institut Francais des Relations International, France, pp: 1-30.
- Choudhuri, M.A., 1993. *Pakistan and the Trouble World*. Royal Book Co., Karachi, Pages: 474.
- Diamond, H., 1999. India releases nuclear doctrine, looks to emulate p-5 arsenals. *Arms Control Today*, July/August, 1999. https://www.armscontrol.org/act/1999_07-08/indja99.
- Dixit, J.N., 2002. *India-Pakistan in War and Peace*. Books Today, New Delhi.
- Ganguly, S., 1994. *The Origins of War in South Asia: Indo-Pakistani Conflicts since 1947*. Westview Press, San Francisco, USA.
- Hilali, A.Z., 2002. Pakistan's nuclear deterrence: Political and strategic dimension. *Department of Politics, Centre for Security Studies, University of Hull, UK*.
- Hussain, S.R., 2006. Changing Security Trends in South Asia: Implications for the Gulf Region. In: *Dynamic Alliances: Strengthening Ties Between GCC and Asia*, Sager, A. (Ed.), Gulf Research Centre, Dubai, pp: 77-98.
- Indian Parliament, 1998. Evolution of India's nuclear policy. Paper Laid on the Table of the Lok Sabha on May 27, 1998. <http://fas.org/news/india/1998/05/980527-goi1.htm>.
- Izuyama, M. and S. Ogawa, 2003. The nuclear policies of India and Pakistan. *The Japanese National Institute for Defense Studies Reports No. 4*, March 2003, pp: 59-89.
- Jones, R.W., 2005. Conventional military imbalance and strategic stability in South Asia. *South Asia Strategic Stability Unit (SASSU), Research Paper No. 1*, pp: 1-48.
- Kapur, A., 2005. The Major Powers and the Persistence of India-Pakistan Conflict. In: *The India-Pakistan Conflict: An Enduring Rivalry*, Paul, T.V. (Ed.). Cambridge University Press, London, ISBN: 9780521671262, pp: 136-155.
- Karr, P.K. and M.B. Nikitin, 2009. Pakistan's nuclear weapons: Proliferation and security issues. CRS Report of Congress. <http://fpc.state.gov/documents/organization/125954.pdf>.
- Khan, A., 2009. India-Pakistan military balance. January 15, 2009. <http://www.riazhaq.com/2009/01/india-pakistan-military-balance.html>.
- Khan, J., 2010. US-Pakistan relations: The geo-strategic and geopolitical factors. *Can. Soc. Sci.*, 6: 61-79.
- Krishna, A., 1998. *India's Armed Forces: Fifty Years of War and Peace*. Lancer Publishers, New Delhi, ISBN: 9781897829479, Pages: 181.
- Kristensen, H.M. and R.S. Norris, 2011. Pakistan's nuclear forces, 2011. *Bull. Atomic Scientists*, 67: 91-99.
- Kristensen, H.M. and R.S. Norris, 2012. Indian nuclear forces, 2012. *Bull. Atomic Scientists*, 68: 96-101.
- Kristensen, H.M., 2013. Status of world nuclear forces. *Federation of American Scientist*, October 28, 2013.

- Lamont, J. and F. Bokhari, 2008. Pakistan in trade and arms offer to India. Financial Times, November 23, 2008.
- Lavoy, P.R. and M.A.J.S.A. Smith, 2003. Strategic insight: The risk of inadvertent nuclear use between India and Pakistan. Department of National Security Affairs, Naval Postgraduate School, Monterey, California.
- Mahdi, N., 1999. Pakistan's Foreign Policy 1971-1981: The Search for Security. Feroz Sons, Lahore, ISBN: 9789690015341, Pages: 316.
- McMahon, R.J., 1994. Cold War on the Periphery: The United States, India and Pakistan. Columbia University Press, New York, USA., ISBN-13: 9780231082273, Pages: 431.
- Menon, R., 2000. A Nuclear Strategy for India. Sage Publication, New Delhi, ISBN: 9780761994619, Pages: 320.
- Mishra, R.K., 2005. India-Pakistan: Nuclear stability and diplomacy. Strat. Anal., 29: 101-130.
- Mudiam, P.R., 2003. The India-Pakistan dispute over Jammu and Kashmir and the United States. Global Change Peace Secur., 15: 263-276.
- NTI., 2012. Pakistan nuclear chronology. Nuclear Threat Initiative (NTI) by the James Martin Center for Nonproliferation Studies at the Monterey Institute of International Studies, USA. http://www.nti.org/media/pdfs/pakistan_missile_1.pdf?_id=1339713540.
- Norris, R.S. and H.M. Kristensen, 2007. Nuclear notebook: Pakistan's nuclear forces, 2007. Bull. Atomic Scientists, 63: 71-73.
- Paul, T.V., 1994. Asymmetric Conflicts: War Initiation by Weaker Powers. Cambridge University Press, Cambridge, ISBN: 9780521466219, Pages: 248.
- Paul, T.V., 2005. The India-Pakistan Conflict Enduring Rivalry. Cambridge University Press, ISBN: 9780521671262, Pages: 273.
- Perkovich, G., 1993. A nuclear third way in South Asia. Foreign Policy, 91: 85-104.
- Perkovich, G., 1999. India's Nuclear Bomb: The Impact on Global Proliferation. University of California Press, California, USA., ISBN: 9780520232105, Pages: 641.
- Rahman, M., 1996. Divided Kashmir: Old Problems, New Opportunities for India, Pakistan and the Kashmir People. Lynne Rienner, London, UK., ISBN: 9781555875893, Pages: 219.
- Rajain, A., 2005. Nuclear Deterrence in Southern Asia: China, India and Pakistan. Sage Publication, New Delhi, ISBN: 9788132103257, Pages: 495.
- Saeed., 2004. Motivation of nuclear proliferation in Pakistan: The India factor. J. South Asian Middle Eastern Stud., 27: 34-51.
- Shadid-ur-Rehman, 2008. China offers to help Pakistan build two more reactors at Chashma. Nucleonics Week, October 23, 2008.
- Smith, C., 1994. India's Ad Hoc Arsenal: Direction Or Drift in Defence Policy? Oxford University Press, Oxford, ISBN: 9780198291688, Pages: 267.
- Soherwordi, S.H.S., 2010. US foreign policy shift toward Pakistan between 1965 and 1971 Pak-India wars. Res. J. South Asian Stud., 25: 21-37.
- Squassoni, S., 2005. Indian and Pakistani nuclear weapons status. CRS Report No. RS21237, United States Congressional Research Service, USA., February 17, 2005.
- Sum, H.K., R. Moorthy and G. Benny, 2013. The genesis of Kashmir dispute. Asian Soc. Sci., 9: 155-165.
- Thomas, R.G.C., 1996. Indian Security Policy. Princeton University Press, Princeton.

- Thomas, R.G.C., 2004. The South Asia Security Balance and Western Dominant World. In: Balance of Power: Theory and Practice in the 21st Century, Paul, T.V., J.J. Wirtz and M. Fortman (Eds.). Stanford University Press, Stanford, ISBN: 9780804750172, pp: 305-334.
- Tkacik, M., 2010. Pakistan's nuclear weapons program and implications for US national security. *Int. Relat.*, 24: 175-217.
- UNDESA., 2012. Population division database: Detailed indicators. United Nations Department of Economic and Social Affairs, New York, USA., May 1, 2012.
- Waltz, K.N., 1979. Theory of International Politics. McGraw Hill, New York, USA., ISBN-13: 9780201083491, Pages: 251.
- Weiss, L., 2003. Atoms for peace. *Bull. Atomic Scientists*, 59: 34-41.
- Wirsing, R.G., 2003. Kashmir in the Shadow of War: Regional Rivalries in the Nuclear Age. M.E. Sharpe, New York, ISBN: 9780765610904, Pages: 285.