

MS. Thesis

**Indo-Pak Conventional Asymmetries: Implications for The
Strategic Stability of South Asia**



Researcher:

Nadia Iram

Reg No 130-FSS/MSPS/F-21

Supervisor:

Dr Masood Ur Rehman Khattak

Department of Politics and International Relations

Faculty of Social Sciences

International Islamic University, Islamabad

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Nadia Iram

Reg No 130-FSS/MSPS/F-21

Submitted in partial fulfillment of the requirements for the M.Phil. Degree in
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Sciences International Islamic University Islamabad.

Supervisor

Dr. Masood Ur Rehman Khattak

May 29, 2024

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Dedication

I dedicate this M.Phil. Thesis to my esteemed parents for their unwavering support and financial assistance. Dear Ami and Abu Ji, your selflessness will always be remembered. Thank you for enabling me to achieve this feat.

(Acceptance by the Viva Voce Committee)

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Name of the Student: Nadia Iram

Registration No: 130-FSS/MSPS/F-21

Accepted by the Faculty of Social Sciences and Department of Political Science and International Relations, International Islamic University, Islamabad, Submitted in partial fulfillment of the requirements for the MS degree in social sciences with specialization in political science.

Viva Voce Committee

Dean

Head of the Department

External Examiner

Supervisor

Member

May 29, 2024

FORWARDING SHEET

The thesis entitled '**Indo-Pak Conventional Asymmetries: Implications for the strategic stability of south Asia**', submitted by Nadia Iram is partial fulfillment of MS degree in Social Sciences in Political Science has been completed under my guidance and supervision. I am satisfied with the quality of student's research work and allow him to submit this thesis for further process as per IIU-rules & regulations.

Date: May 29, 2024

Signature: _____

Supervisor

Dr. Masood Ur Rehman Khattak

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List of Abbreviations

ABAO	Airborne Assault Operations
ACDA	Arms Control and Disarmament Agency
ACM	Air Chief Marshal
AESA	Active Electronically Scanned Array
AEW&C	Airborne Early Warning and Control
APC	Armored Personnel Carrier
APC	Armor Personnel Carrier
ASW	Anti-submarine Warfare
ATAGS	Advance Towed Artillery Gun System
ATGM	Anti-Tank Guided Missile
AWACS	Airborne Warning and Control System
BFSR	Battlefield Surveillance Radar
WLR	Weapon Locating Radar
CSD	Cold Start Doctrine
MBTs	Main Battle Tanks
SLBMs	Submarine Launched Ballistic Missile
ACDA	Arms Control and Disarmament
SPD	Strategic Plans Division
IFV	Infantry fighting vehicles
TTP	Tehrik-I-Taliban Pakistan
INS	Indian Naval Ship

IOR	Indian Ocean Region
CPEC	China Pakistan Economic Corridor
DRDO	Defence Research and Development Organisation
WWR	War Wastage Reserve

ABSTRACT

This study explores the enduring rivalry between Pakistan and India since their independence, focusing on the escalating conventional military dynamics in South Asia and their implications for regional stability. It emphasizes India's ongoing efforts to modernize and enhance its conventional weaponry, leading to a growing power disparity between the two countries. This conventional asymmetry, exacerbated by India's Cold Start Doctrine and proactive military operations strategy, poses a significant challenge to Pakistan's security. The Kashmir issue remains a primary source of tension, with both countries maintaining nuclear capabilities that deter large-scale conflict but leave room for limited warfare. India's military modernization, including the acquisition of advanced tanks, artillery, anti-tank weapons, helicopters, and air force assets, aims to bolster its offensive capabilities and maintain superiority across domains. Additionally, India's ambitious naval expansion seeks to establish dominance in the Indian Ocean, potentially encroaching on Pakistan's maritime interests. The study underscores Pakistan's efforts to counterbalance India's military advancements, particularly through investments in main battle tanks, artillery, attack helicopters, anti-tank missiles, and armed UAVs. However, it acknowledges areas where Pakistan faces gaps in its defensive capabilities, such as nuclear submarines, advanced aircraft, satellites, air defense systems, and submarine-launched ballistic missiles. Furthermore, the study warns against the economic strain of an arms race with India and stresses the need for Pakistan to closely monitor India's military developments and devise comprehensive strategies to address emerging threats. It emphasizes the importance of deterrence and readiness to respond effectively to any provocations or incursions, thereby safeguarding regional stability in South Asia.

CHAPTER-01:

Theoretical Framework: *Conventional Deterrence*

1.1. Introduction:

The South Asia is an 'Indo-centric' region because of India's strategic position, its huge population, military and economic geographical size. India is powerful state but Pakistan never accept its hegemony in south Asian region. Pakistan will always try to use asymmetric warfare to balance India. This has increased the defense spending and the nuclearization of India and Pakistan. There have been three large-scale wars (1947, 1965, and 1971) between India and Pakistan and countless disputes. The main issue is the issue of Kashmir between the Pakistan and India. India want to control the Kashmir. Pakistan always stand for Kashmir. Pakistan always speak for Kashmir at national and international level. And India also want to harm the Pakistan territory and in 1971 Pakistan lost its important wing because of India. According to Brig Feroz H. Khan (former DG Arms Control and Disarmament (ACDA) directorate of Pakistan's Strategic Plans Division (SPD)) said that Dhaka's fall was a "Never Again" moment for Pakistan. For the future, Pakistan should take security measure to avoid the tragedy like the 1971. India is larger in population, national economy and larger in regional dimension as compared to Pakistan. Indian population is over 1.38 billion and area is about 1.27 million square miles India is a major power. Pakistan has been struggling to reduce this gap by making allies with other countries like China and USA. In the 1950s, USA help Pakistan economically and militarily assistance but in 1980s, USA stop helping Pakistan and give its help to India. Pakistan get financial support from Saudi Arabia and China. China help Pakistan economically and militarily. For Pakistan security nuclear weapon is the only mean of balancing India's conventional powers. If the hostility between India and Pakistan continues to increase then there is the possibility that nuclear war could start. This study examines how changing security dynamics lead to power imbalances between India and Pakistan.

Indian enormous military development creates imbalance in the security areas and it will create serious trails for Pakistan. Since the independence of Pakistan, India and Pakistan have different disputes like Kashmir issue, water issue, Sir Creek, terrorism and the issue of Siachen.

All of these issues effect the peace and stability of this region, south Asia. Due to nuclear weapon Pakistan and India are not involve in any major war but there is always possibility of surgical strikes and limited war in south Asia. The Indian rapid military modernization will develop and create conventional asymmetries in the region. India make difficult for Pakistan and force Pakistan to involve in arm race. The Indian massive military modernization would challenge the security and peace of the region. India adopted a strategy of limited war which would be risky for south Asian security. Both Pakistan and India have nuclear weapon. There are two categories and the first group believed that rivals having nuclear will not in a fight because they have fear of rise of conventional war. On the other hand, the other group believed that the conventional war will turn in to nuclear war because of three different factors like misunderstanding, technical changes and the change in the doctrines of rivals. All of these will result into a nuclear war. But in the case of India and Pakistan nuclear deterrence brought huge change in the strategic stability of south Asia. India and Pakistan are the two nuclear states and both spend huge amount of money on the defense system. Pakistan economy is not matching the economy of India.

So Pakistan depended on its nuclear weapons. The nuclear factor brought huge change in the strategic environment of South Asia. India and Pakistan have shared border and both not want total war. Because India and Pakistan have nuclear weapons and both states know about the risks and results. War between India and Pakistan would challenge the stability of south Asia. Kashmir issue is the main reason of conflict between India and Pakistan. Pakistan take Kashmir issue at international level but no one wants to discuss the issue of Kashmir there. India make different deals with the western states America, Russia and Israel. India get modern weapons from Russia, America and Israel. Indian economy is the fastest growing economy. India is third largest armed forces in the world India spend its large part of economy to modernize its military, weapons and equipment. India is working on its army, navy and air force. India also wants its hegemony in the Indian Ocean region. India launched massive military buildup in South Asia to overcome weakness in the overall military. India is changing its Army with T-90-S Main Battle Tanks to carry out Quick & Swift limited war. The Indian Army is also want to keep long range Artillery Guns, Aircraft Carriers, Frigates, Corvettes, Destroyers, P8I-Survellince and Reconnaissance Aircraft, Rukmini Spy Satellite, Guardian UAVs for Sea, SU-30 MKI Russian

Aircraft, Rafale French Aircraft, Armed UAVs: Heron TP, Harpy Missile, Harop Missile, Apache Helicopter, Spy Satellite for IAF, Brahmos etc.

All these capabilities would help the IAF to attack the enemy territory effectively. Nuclear weapons will not prevent India from military operations and from any limited war. Pakistan must keep modern weapon and equipment. This study explain that Pakistan has effectively balanced the Indian military in certain areas which includes Main Battle Tanks, Advance Artillery Guns, Attack helicopters, anti-tank guided missiles, second strike capability and armed UAVs. But there are some areas where Pakistan would require to keep modern weapons and equipment to counter any offensive operations on its territory which are Long Range Air Defense, Nuclear Submarines along with SLBMs, Fifth Generation Aircraft and Spy Satellites. India is forcing Pakistan to involve in costly Arms Race with India. But Pakistan's economy cannot afford to fill this huge gap with Indian military. Pakistan economy is weak. The military and higher authorities of Pakistan get help from China in the defense system and Pakistan always try to handle the difference and imbalance in the conventional domain effectively. The military of India is strong power and it get help from US, Russia, Israel, France and choking its operational lacks. This partnership effects the security of Pakistan in this region India make it difficult for Pakistan to balance the gap. Indian aggression and its join hands with other major powers America, Russia, France and Israel is playing important role in the development of modern weapon and equipment in the south Asia. The conventional power is imbalanced that forced Pakistan to see nuclear weapons 'capability, as a deterrence against India, after the separation of former East Pakistan. This is the situation of 'deterrence' in South Asia. There is only solution to the problems created by the region's nuclearization is to engage seriously and constructively to build a better understanding of each other's conventional and nuclear policies, doctrines, and CBMs both in conventional and nuclear spheres to build trust and understanding. India and Pakistan have to maintain rational decision-making. This will help to ensure the credibility of their deterrence and to achieve the objective of maintaining stability. All nuclear states want to avoid nuclear war, India and Pakistan also want to avoid war that's why India focused more on conventional weapons. "An arms race is defined as the competitive, resource constrained, dynamic process of interaction between two contending nations or groups of nations in their acquisition of weapons (Brito and Intriligator 1999)."

In the defence system, military's main and important element is an air power in modern warfare and can be used to support a conventional ground and is used to occupy territory. If India want to launch a surprise attack on Pakistan with the purpose dividing Pakistani territory and destroy the Pakistani state. The Indian air force would have to achieve air superiority. According to analysis of Indian and Pakistan air power, Pakistan's air force is clearly unparalleled then India. In 2017, India had a total number of 845 combat aircraft. And Pakistan had 425. This make imbalance between the India and Pakistan. India has nuclear submarine and three hundred and twenty-seven advance fighters, 250 Su-30 Mki 'Flankers', 62 MiG-29 'Fulcrums' and 50 Mirage-2000. In contrast, the Pakistan Air Force has jointly produced with the help of China 76 F-16 of various types as well as 50 JF-17 which are a fourth generation aircraft. India had enjoyed superiority over Pakistan but Pakistan removed this gap. However, these numbers alone are not decisive, most of the tanks are older second generation types. India deployed more modern high-performance main battle tanks deployed like the T-90 (122 vehicles) and the Arjun (around 1,100 vehicles), while Pakistan has main battle tanks like 320 T-80UDs and 300 Al-Khalid. In the year of the nuclear tests (1998) Pakistan has number of artillery pieces in its arsenal 2,600. In 2017 Pakistan has made a significant effort to increase the number of artillery pieces to 4,472. In 1998 India has 5785 artillery pieces and India has 9,684 in 2017. Pakistan has 1,605 armored personnel carriers and India has only 336 such vehicles available. On the other hand, India has 2,500 infantry fighting vehicles (IFV) and Pakistan none. According to this calculation and comparison of the conventional military capabilities proves that India does enjoy a very significant superiority over Pakistan. The nuclear weapons will not prevent India from any limited war. It is important for the security of Pakistan to keep the conventional weapon to give answer Indian aggression and its limited war. Pakistan military make it difficult for India to start the limited war against Pakistan.

Unlike India Pakistan is a weak state when we talk about the environment of south Asia. Its environment is very instable and complicated. This complex environment blocks the economic prosperity of the south Asia. Pakistan and Indian strategic competition and enmity between the two states will affect the stability of south Asia. This enmity force Pakistan to develop its defense system and for this reason both nuclear states Pakistan and India invest huge amount of money on the defense system. India and Pakistan both states have enmity since the first day of their independence (August 1947). Both states Pakistan and India have different

unsettled issues and because of these unsettled issues Pakistan and India passed through three main wars and face difficult situation and fights on the Line of Control (LoC). Because of past wars and Indian aggression Pakistan introduced its nuclear weapon. India also have nuclear weapon. Since the day of independence India and Pakistan both states are developing their military weapon and equipment in this way both states expanding the nuclear and conventional collection. If both states solved their disputes, the strategic condition of south Asia will be change. But both states will always remain in conflict because of Kashmir issue. So that Pakistan and India are not able to solve their disputes through a dialogue. The Indian perspective is that they keep nuclear weapon and equipment because of China. But Indian main target is Pakistan. India attack on LOC again and again. The term Line of Control (LOC) known as Asia's Berlin wall, refers to the military control line between the Indian and Pakistani-controlled state of Jammu and Kashmir line it does not constitute a legally recognized international boundary but is the de facto border. Firstly, it was known as the —Cease-fire Line and now it is known as the —Line of Control. On the other hand, Pakistan have threat from India. The security policies of Pakistan are India centric. India not accepted the Pakistan as the independent state since the first day. India wants to weaken the Pakistan. India want its supremacy in the south Asia region. But Pakistan is well aware of all the bad aims of India. Pakistan will always secure its national integrity and security. Since the independence of Pakistan, Pakistan's main focus is on its security that how to balance Indian modern weapons. Pakistan focus on how to take stand against India if Pakistan has threat from India. Pakistani talented leader Zulfikar Ali Bhutto was a civilian programmer wants nuclear weapon for Pakistan. Because of India Pakistan lost its part, Bangladesh. Since the Independence Day Pakistan has fear of domination by India. India builds its nuclear weapon in May 1974 named peaceful nuclear test. Pakistan after the Indian nuclear test decided to make its nuclear weapon. Pakistan main aim of nuclear weapon is to prevent India from conventional attacks, surgical strikes and nuclear weapons against Pakistan. Pakistan also wanted to respond Indian technical advances. Pakistan also wanted to balance especially in the nuclear weapons field.

In south Asia, other states have their own interest. USA and China are also effecting the south Asia. Pakistan and India are rivals and for mitigating the Indian aggression Pakistan need advance and more weapons. The USA and China are also two main powers that also have their own interests in the south Asia. That is the reason both USA and China are impact the south Asia

and it resulted in the arm race. Now major powers again taking interest in south Asia after the British rule. The USA help the India while on the other hand Pakistan and China are friends and China help Pakistan. China help Pakistan in the development of its weapons and also in the economic zone. Pakistan also make alliance with China. India is also worry because of Pakistan alliance with China. China help Pakistan in every field like economically and militarily. India believe that China is their enemy because India and China have territorial disputes. India and China fought a war of 1962. In this Sino Indian war India was defeated. This war show India China has superiority over the Indian military, Indian weapon and equipment. After Indian that defeat from China, India wants to make friends, alliances, and acquiring weapons and equipment to counter China threat. China builds its nuclear weapon in 1964 to deter Indian aggression. The nuclear weapon of China makes a huge impact on India and make complexities for India. The nuclear weapons help China seemingly had a great impact on Indian security perceptions and added new complexities to security dilemma in the region. Now the governmental authorities of India are upset and they will think hundred times before taking any action.

1.1. Background of the Study:

Since the Day of Independence both states Pakistan and India are facing conflicts. Both nuclear states fought the three wars. Because the several unresolved issues there is always possibility of limited war. Both Pakistan and India have complicated issues including the Kashmir issue, issue of Siachen, terrorism and water issue. India and Pakistan not settled their issues. These issues are the main reason of conflicts and war. India have modern weapon and equipment and it effect the stability of south Asia. It also creating the conventional imbalance between the Pakistan and India. Both states India and Pakistan have several unresolved issue. All the issues are creating conflicts and it open the fire at the border and Line of Control. Kashmir issue is the main reason of conflict. Nuclear weapon of Pakistan warns and stop India from major war but there is always possibility of limited war. Kashmir is main reason of fight between India and Pakistan. Kashmir issue has become very complicated now. The issue of Siachen created new conflict between the Pakistan and India. In this issue Pakistan lost its three thousand soldiers and India lost its five hundred soldiers. Due to Indian aggression and attack on Line of Control Pakistan need to convert into the security state. India is now using the Afghanistan against Pakistan. Indian support the BLA and TTP. India now Pakistan is facing two front war issues. India is supporting the terrorist groups and providing them funding and training against Pakistan. India wants to overcome its

deficiencies for this India would carry out contracts with other countries. India is creating serious threats for Pakistan since its independence. The nuclearization shows the stability in the south Asia. After the nuclearization of Pakistan India not involve in war with Pakistan again. India reduce the major war to small skirmish like Kargil and Mumbai attack. Indian these limited operations are because of its change in doctrine. But these limited operation and war are becoming the threat for the south Asia especially for Pakistan. These limited operations will improve the Indian warfare capabilities.

Actually Indian military want to boost its weapon system and defense capabilities for the hegemonic power. Pakistan is also improving its defensive, nuclear and conventional capabilities. India is improving and increasing its capabilities. Moreover, India is making defense deals with the USA, Russia, and France and with Israel. This Indian defense cooperation with other states will help India in the industry of defense, technology, weapon and equipment. Through this India will be capable to fill the gaps. Pakistan will not allow India to attack. Pakistan nuclear is aimed at India. If India go for war Pakistan will use its weapon against India. Pakistan make Indian attack and operation costly for India. China also help Pakistan in the defense system and in economic area. Now Pakistan and China has signed deal. This project help Pakistan to improve its economy and end the Indian hegemonic position in the Indian Ocean. India is continuously developing and purchase advance and modern weapon and it create the imbalance in the south Asia. Pakistan will not fulfill this gap because its economy is weak. Pakistan should focus on its China Pakistan economic corridor and improve its conventional capabilities so that India will think before attack.

1.2. Indo-Pak Rivalry: Historical Context

Historically, Nehru desires that India will become a hegemonic power in the regional arena soon after its independence. India and Pakistan have fought in numerous armed conflicts since their independence. They fought three major wars that have taken place between the two states. Issues between Pakistan and India always remained serious and complicated. Both Pakistan and India are unable to solve these issues. India is advanced in conventional weapons which are cause serious threat for the peace and security of Pakistan. India is increasing weapon and equipment and force Pakistan on the road to take some counter measures for its security. Both states have

unresolved issues like Kashmir issue, terrorism, sir creek and Siachen issue and many others. All these issues are the main reason of conflict. All of these issues caused disturbance among the Pakistan and India Pakistan prevent India from attack and war through its nuclear weapon. But the nuclear weapons increased the possibility of limited war.

1.3. Problem Statement

The competition of India and Pakistan has evolved after nuclearization of the region. Now the both nuclear belligerents would avoid large scale war against each other and would rely more on limited war concepts. To execute her limited war strategies Indian military would require modern weapon and equipment. The rapid military development will make security threat for Pakistan and undermine conventional deterrence, which may lead to escalation between the two nuclear rivals. The study would focus on the increasing asymmetries between India and Pakistan in the conventional domain and how it is going to undermine regional security. The rapid Indian military modernization is worrisome for the region. The Indian military buildup both on conventional and unconventional grounds along with numerous International Agreements to improve the economy and strengthen her military weapon and equipment. These policies are presumed as extraordinary and beyond Pakistan and China Centric. India is struggling for the status of Regional and Global Hegemon. Indian developments are adding more unrest and hostility in regional relations which would have direct impact on regional strategic stability.

1.4. Significance of the study

Both Pakistan and India have same border and both are neighbor states. But soon after independence of Pakistan. Pakistan has threat from India. Because of unresolved issue of Kashmir there is always possibility of limited war. Now the both nuclear belligerents would avoid large scale war against each other and would rely more on limited war concepts. This study will only focus on the Indian policy of surgical strikes after 2012 and how it impacts the deterrence stability of South Asia. The military modernization of India is the main reason of imbalance and this also cause the securities issues for the Pakistan as well as for this region. However, Pakistan must strengthen its conventional deterrence vis-à-vis India to maintain strategic stability in south Asia and prevent the Indian military from any aggressive plans. It is an

undeniable fact that Nehru wanted India to be recognized as great power in the international community. Nuclear weapons help India to secure higher status and prestige at the global level. Pakistan believed in peaceful uses of nuclear energy. The disparity of power kept on shaking due to constant Indian developments in military, air force and naval strength. The Indian capabilities are growing in conventional and nonconventional weapons. So, the rapid Indian's military modernization would affect the strategic stability of this region. Due to the presence of such alarming capabilities and intensions this study becomes significant because it gives a detailed explanation of the overall situation which may help in further analysis and investigation in the subject matter. It is important to note that this study is also necessary due to its uniqueness and newness as one hardly finds an academic detail on the subject matter. Since, this study is different and new so it requires academic and scholarly attention. The researcher also aims to fill this existing gap for further investigation.

1.5. Objectives of the Study:

- To identify increasing conventional asymmetries between India and Pakistan?
- To highlight the implications of conventional asymmetries between India and Pakistan for the Strategic Stability of South Asia?

1.6. Research Questions:

- Q.1. How India's rapid military modernization is creating asymmetries vis-à-vis Pakistan in the conventional domain?
- Q.2. what are the implications of conventional asymmetries between India and Pakistan on the strategic stability of South Asia?

1.7. Literature Review:

Zulfiqar Khan stated that in his article," The Changing Dynamics of India-Pakistan Deterrence" The nuclear deterrence policy adopted by India and Pakistan are in a state of instability. Indian military and other elements of national power are creating a risky situation for the weaker country, Pakistan. In this complicated situation Pakistan has to adopt a policy which improves the effectiveness of its deterrence. India has adopted a 'Cold Start Doctrine' to force a

nuclear-armed Pakistan. In fact, the emerging security dilemma for Pakistan is multidimensional. The growing conventional asymmetry and the access of other groups, external players from across border with Afghanistan into its tribal belt has further enhanced its woes and increased the international community's threat sensitivities about the safety and security of Pakistan possessions. And the strategic partnership of India through other countries is considerably shifting the security to Pakistan's interests. It can create risks for the capability of Pakistan to secure its sensitive nuclear facilities in the supposed presence of terrorists in its frontier regions adjoining Afghanistan. In reality, the spate of extremism and terrorism has increased since the occupation of Afghanistan, which has pushed these radicals into Pakistani territory. It is also creating stress on Pakistan to balance these emerging challenges. The writer narrates that the issue of terrorism is not a single nation's issue rather it is an international problem and for solving this problem there is a need of collective efforts at the international level to eradicate this danger. It is necessary for Pakistan to invest in development of its conventional, tactical and strategic nuclear forces to balance the emerging multidimensional asymmetrical security threats. Pakistan is weaker state and India is creating difficult situation for Pakistan using different methods like rapid military modernization, and making difficult situation through strategic partnership with developed countries etc. (October 2013).

Walter write in his article that in current time military of India increases in its defense budget and raised serious question that India's on-going military modernization is threat for Pakistan. Such things are considered as tactical-nuclear weapons and other actions that are not healthy for strategic stability of south Asia. In this article the writer talks about the possibility for Pakistan's conventional deterrence. Here are different things such as territory, the favorable deployment of Pakistani forces eliminate which help India in gaining the benefits and supremacy through the modern and developed defense system. In some areas, India has more technology. Indian government is increasing the Indian defense budget and a high-profile military modernization program which have alarmed observers who worry that these developments could challenge the conventional military balance which maintaining 'ugly stability' in South Asia. While on their face these concerns have validity, upon deeper examination, there is still good reason to continue to be optimistic about the prospects for conventional deterrence. India always increase its military weapon and equipment. While Pakistan get help by China and others and

through this Pakistan has stopped the emergence of sharp asymmetries in the conventional military balance and narrowed existing gaps.

Muhammad Ali and Syed Mussawar Hussain Bukhari explains in their article “INDIAN MILITARY DOCTRINE AND ITS IMPACT ON SOUTH ASIA’S STRATEGIC STABILITY” that according to India’s aggressive military doctrine there is questionable space for a limited war under a nuclear overhang. Indian military high command has always thinking about fighting a conventional war against Pakistan. India want Kashmir and because of this there is instability in South Asia. India has S-400 missile systems, Assault Rafale fighter jets and others while it might temporarily alter for the region’s strategic stability. Pakistan must rebalance its strategic stability. There is a need to review the idea of strategic stability as it applies to the region’s nuclear balance of power. India’s aggressive military doctrine increasing its desire to fight a limited conventional war against Pakistan and it is serious threats to deterrence stability of South Asia. India decided to upgrade its defense budged but Pakistan has not been able to match India’s enormous military goals, primarily because of limited economic condition. India has made different contract with US, Russia, Israel and other states. India said that it has threat from China that’s why India modernized its weapon and equipment but Indian focused the energy and attention of its armed forces towards Pakistan.

“South Asian nuclearization”, in this book the writers Yogesh and Frank stated that the nuclear deterrence in India and transformation in the thinking of military strategy of India. The writers narrate in this book that after the China’s nuclear device and Pakistan nuclear weapon India change its strategy. India rapidly changed its military doctrine. The writers marked that after 1998 the period of nuclearization of the region, the conventional and nuclear doctrines of India changed rapidly. India changed its military’s doctrinal shift rapidly because of the threat from China and Pakistan. India says that China and Pakistan both are Indian enemies. The Indian policy makers want to modernize its military weapons and equipment. According to India they have threat from Pakistan and China. However, basically it is threat for Pakistan because it is economically weak state. The Indian military’s doctrinal transformation and rapid military modernization is an aggressive step for Pakistan which may invoke Pakistan’s nuclear threshold. And Indian rapid military transformation is threat for regional and global security. The writers stated that triangular strategic rivalry among India, China and Pakistan would seriously disturb

peace in the region and also threat for the security of the south Asia. (Yogesh Joshi and Frank O'Donnell, 2018).

In his book “Indian nuclear deterrence: its evolution, development and implication for south Asian security” and research article that the changing condition of nuclear states and nuclear weapon and equipment in the south Asia. The work of Zafar Cheema mainly focusses the nuclearization of south Asia. Zafar Cheema explain the different reasons of the nuclearization in the region. Zafar Iqbal Cheema examine strategic developments between India and Pakistan. He narrates that the situation and all circumstances that were the cause of nuclear weapons in south Asia. The writer discusses comprehensive debate between nuclear worriers and nuclear optimists. He discusses and examine the different changing aspects of south Asia. He explains that first China build its nuclear weapon then India and after Indian nuclear weapon Pakistan builds its nuclear weapon. Zafar Iqbal Cheema write in his book that India and Pakistan both states are trying to keep their military forces at a vast level. Both states not think about is their economic condition allow them for forces or not. In his book Zafar Iqbal Cheema not discuss about the non-state actors and their role in the relationship of Pakistan Indian nuclear process. He narrates in his book that how Pakistan make its nuclear weapon. He writes that what are the main reasons of Pakistan nuclear weapon, for example Dhaka and Kashmir issue. He explains that Pakistan has fear from Indian from the first day since independence. India want control over Pakistan. He explained in his book how US not stand with Pakistan when Pakistan need the support of US. Zafar Iqbal Cheema write in his book Zulfikar Ali Bhutto decided for the nuclear weapon after the Dhaka incident. In his book he explains that India want the hegemonic power in south Asia so that India make its nuclear weapon., China was not the reason India force Pakistan for the nuclear weapons and arm race but Pakistan is a weak state. Now Pakistan main concern is Kashmir issue and the security of its territory.

Munazza Khalid stated in the article that US India space cooperation started since 1963. US help India in the space field. They signed different deals like “Next Step in Space Partnership (NSSP) etc. USA help India because China is the common threat for both states, India and USA so that USA support India and provide help in its space capabilities and technology. USA in fact help India for its own security purposes against China but it is also a serious threat for Pakistan. India is also a member of different regimes like export control regime, Missile Technology

control regimes etc. India want the hegemonic position in all field and also in space. For this reason, India need the space technologies and advance space capabilities and awareness. This impact the security of Pakistan and it also effect the strategic stability of south Asia. In this case Pakistan need the Chinese help and Pakistan should improve and advance the space program. Munazza explain in this article that the main purpose of this study. And she wants to make us understand that why USA help India in space program and why both USA and India cooperate in the domain of space? Moreover, she wants to explain that how this USA and Indian cooperation will affect the South Asia? She writes in this article basically USA help India for his own interest and USA through this way responding the Chinese power in the space domain. Both states USA and India are cooperating in civilian as well as in the military domain. All of these initiatives will affect the Pakistan's security. The USA and Indian agreements and memberships is a serious threat for the security and stability of south Asia. Basically it is an arm race which enhance the capabilities and strengthened the space power and military power. This cooperation of India and USA is a threat for the strategic stability of this region.

1.8. Theoretical Framework

This study selects an exploratory method and make it understand all the challenging area of analysis for the well and thoughtful understanding of the study. According to this study the rapid military modernization of India is flexible and free. Indian partnership with other developed states help India in the defense system. India has defense partnership with USA, France, Russia and Israel. India get help through this partnership and it depends on the theory conventional deterrence of John Mearsheimer. Conventional deterrence and limited war strategies is used to understand ongoing Indian modernization. India has nuclear weapons but India play limited warfare for its hegemony in south Asia. Mearsheimer's original analysis examined the power of conventional deterrence against military strategies regardless of the presence of nuclear weapons. This study focused on the Chanakya Kautilya's two approaches. First is preparation of war and the other is undeclared war. These two approaches help to understand the Indian strategies of hybrid war and developing military weapon. According to Indian policy of "No first Use", India need more conventional weapons. Conventional deterrence in south Asia mainly increased the Indian military modernization. According to Mearsheimer that state is friendly one day and on the other day it can be change and state can be hostile. One States will not understand the aims

and behavior of other state especially when there is always doubt about the other state that it will attack or not. It is not clear that other state has peaceful attention or it has the forceful and aggressive attentions. It is a difficult and challenging to evaluate and understand that when will the state change its attention or not. Any time states attentions will change rapidly. In this theory John Mearsheimer stated that the primary goal of every state is survival. And states always work for achieving its goals. States try to maintain the security and integrity of territory. States cannot tolerate external interference in the decision making and it order its internal and external matters freely and independently. States work for the human rights, protection of its citizens and work for the welfare of its citizens, but every state main and important goal is survival. According to this theory Indian all military modernization create imbalance and a huge gap for Pakistan. Pakistan is a weak state and Pakistan will unable to fill this gap. Pakistan have nuclear weapon but nuclear weapons not stop India from limited war. Pakistan should go for conventional weapons as well.

1.9. Methodology

This research project would be analyzed through mixed method approach which lies under Descriptive, Exploratory and Predictive data analysis `approaches. The study will use of primary and secondary sources. The secondary data will make use of books related to the subject matter. The study would analyze the published official documents of India available online and research reports from different think tanks. Most of the research material related to India's doctrinal transformation and military modernization is available online which could be utilized through digital libraries. This research focus on the rapid Indian military modernization and its effect on the strategic stability of south Asia. There is a significant knowledge gap on the subject matter and requires comprehensive study to be taken place. This study is discussing about the Pakistan's national security and how Pakistan and India will change the strategic environment of the south Asia.

1.10. Delimitation of the Study

This study is qualitative in nature and will be relying upon primary sources of data collection i.e. Face to Face Interviews, Online Interviews, and Interviews through emails from diplomats, high ranked military officers, scholars having expertise on the subject, and others from India and Pakistan; and secondary sources i.e. books, journals, published and online archived reports related to Indian strategic thinking from India and Pakistan and contacting all of the prospective respondents would be a limitation of this study. Moreover, this study will only focus on the Indian policy of surgical strikes after 2012 and how it impacts the deterrence stability of South Asia. Most of the research material related to India's doctrinal transformation and military modernization is available online which could be utilized through digital libraries. This research focus on the rapid Indian military modernization and its effect on the strategic stability of south Asia.

Chapter-2

India and Pakistan's Conventional Asymmetries

2.1 Introduction:

After the partition of the former British colony of India into two states of India and Pakistan, there has been a lasting conflict between India and Pakistan which has caused different crises. The main reason of conflict is national identity, territory, and the power position in the region. Kashmir is first and main reason between the two and this conflict escalated into war at the very creation of the state of Pakistan in 1947–48, as well as in 1965 and 1971. The war in 1971 resulted in the division of Pakistan, a defeat that realized Pakistan to find a way to overcome India's military superiority. Pakistan wants to balance India's conventional military superiority, for this reason Pakistan acquired a small-scale nuclear weapons capability using bombers and medium-range missiles as delivery vehicles. Already by 1974, India had a significant nuclear industry and had capacity to explode nuclear devices. India acquired a nuclear capability as part of an ambition to be recognized as a great power and seeks to deter not only Pakistan but also China. Whereas Pakistan's nuclear weapons doctrine is Indo-centric. The

Indian Army's rapid modernization will make the conventional asymmetries in the region. India also force Pakistan to keep weapon and equipment. The Indian Army's continuous doctrinal transformation and massive military buildup would challenge the regional peace and security. The concept of limited war under the nuclear shadow would be risky for south Asian security. According to pervaiz Iqbal Cheema "Modi recognizing that India has economically done very well. They have sufficient money to purchase the modern weaponry, so they are purchasing a lot of weapons from various parts of the world, including Russia, America, Israel and France. Their idea is, first you build the strength, equip them with the modern weapons and then try to attain whatever your objective is. I think their regional objective is to be acknowledged as the most dominant and powerful country in South Asia and others should follow their dictates".

India has large military as compared to Pakistan's military. Here one thing is the main that Indian all number of army is not working on the Pakistan border. India army stationed on different borders. Twenty five percent are located in the east of the country, oriented towards the borders with China, Bangladesh or Burma. And fifty percent are stationed in the states bordering Pakistan near Punjab, Gujarat, Rajasthan, and Jammu and Kashmir. And fifteen of these are for limited offensive power. Large increases in the Indian defense budget and a high profile military modernization program have alarmed that these developments could undermine the conventional military balance and maintaining 'instability' in South Asia. These concerns have validity, through deeper examination, there is good reason to continue the prospects for conventional deterrence. India's defense continues to producing military power. On the other hand, Pakistan get helped by China and others in the conventional military balance and even narrowed the existing gaps. "The Indian Ocean will be the center of an emerging geopolitical competition between China and India. Pakistan seems to have decided to work with China to balance India." The Indian military is capable of bringing far less force to bear in a limited conflict with Pakistan. As a result, Indian policymakers can either achieve strategic surprise against Pakistan. Indian policy maker carry out highly-effective air strikes. All of this is a necessary condition for deterrence failure. Consequently, Pakistan needs a strong foundation for its current efforts to develop tactical nuclear weapons and delivery systems on security grounds.

Table 1: Military strength of Pakistan and India

	Pakistani Army	Indian army
Nuclear warheads	170-180	160-170
Defence Budget	\$6-7bn	\$73-74bn
Aircrafts	1,434	2,2961
Tanks	2496	3500
Armed Forces	800,000	1.4 million

Source: Author's own description

2.2 Maritime Domain: Naval Supremacy:

Currently the development of Indian navy directs its aim of the major power. It is the main desire of India to improve and develop its Navy in the Indian Ocean Region. This Indian developing desire create instability and serious challenges for the south Asia. And it causes serious threats for its neighbor state Pakistan. Indian navy wants the second strike capabilities and nuclear based capabilities at the sea level. "It maintains 171 vessels along with more than 250 aircraft and 16 submarines. India is the only South Asian country with an aircraft carrier and, by 2020, it plans to maintain three aircraft carriers for ensuring its dominance in the Indian Ocean Region (IORs)". (Chietigj, 2015). Indian naval capabilities and efforts will create threat for Pakistan. Indian create the Indian Ocean nuclear because it added nuclear weapon in the Indian Ocean. Indian nuclear submarine INS Arihant is active in the Indian Ocean with nuclear missiles. And in the near future India will demand for more nuclear submarines. For the developing and modernization India make deals and friendship with Israel, Russia, France and USA. It is believing that Indian is the second largest buyer of modern weapon in the world. In addition, India is getting ready for the conflicts in the Indian Ocean region and for the border fight with Pakistan and China. Moreover. India want to add 6 more Arihant-class SSBNs in its defence system. India have frigates with the missiles. All the development will take south Asia to the war, instability and arm race.

i. Nuclear Submarines:

The Indian government has allocated \$8 billion to revamp its Navy. India acquired its weapons from Russia and India want to boost its maritime modernization, for this purpose the navy of Indian have 171 maritime vessels. The Indian government have 250 aircraft and India

has 15 conventional diesel-electric submarines, (SSKs), and one nuclear ballistic submarine (SSBN) so India have 16 submarines and Indian forces are want to achieve three more Aircraft carrier. And they have planned to get five more such submarines. India nuclear submarine is “Arihant” its cost is US \$500 million. Arihant surfaced speed is 12–15 KN (22–28 km/h) and submerged speed is 24 KN (44 km/h). Arihant will increase India’s maritime ability and power against the Pakistan. The navy of India achieve second strike capability through the Indian nuclear submarines. The credible second-strike give India a capability to proactive type of operations to deter Pakistan’s nuclear response. The Indian navy second strike capability India purchased nuclear submarine. Pakistan also need the nuclear submarine that’s why Pakistan has tried cruise missile on its conventional submarine. India has achieved its long-held goal. India establish a nuclear deterrent across the air, land and sea domains and a so-called ‘nuclear triad’. Indian authorities stated that a credible nuclear deterrent is the need of the hour. The Prime Minister Narendra Modi in November 2018 announced that India’s first nuclear-powered ballistic missile-carrying submarine (SSBN) had successfully completed. He said the success of the INS *Arihant*, ‘gives a fitting response to those who indulge in nuclear blackmail’. And Pakistan’s Ministry of Foreign Affairs responded by stated that the deployment of nuclear warheads was not only a matter of concern for the India Ocean littoral states, but for the international community as a whole. India started work on its submarine programme in the 1970s. India started work by leasing vessels from Russia, the Indian Navy was capable to gain important operational experience and it started work from 1988 to 1991 and India acquired on a Charlie-class nuclear-powered attack submarine (SSN). After that in 2012, India again work by a ten-year lease and installed an *Akula-II* class SSN. Finally, first indigenous SSBN of India, the INS *Arihant*, was commissioned in 2016. In November 2017, the second INS *Arihant* was launched. They arranged to carry 24 K-15 Sagarika missiles with a range of 750km or eight K-4 missiles. These are currently in process of development. And their expected range of 3,500km. In addition to SSBNs, India has plans to introduce six indigenously built SSNs into its fleet within the next 15 years. Three main areas of India are covered by the Indian navy nuclear submarine. For checking the Bay of Bengal Indian navy installed its nuclear weapon in Visakhapatnam, for the Arabian Sea they installed in the area of Mumbai and for at the Kavaratti for checking the place near Mumbai about 650 km. Indian nuclear submarine is creating serious threat for the Pakistan and the two station Karwar and Mumbai are threat for the Pakistan and its maritime interests and

benefits in the near areas and especially in Arabian Sea. Pakistan economic center Gwadar port is important place for Pakistan and China so Pakistan should achieve the second strike capability. Pakistan must inaugurate the nuclear submarine and aircraft carrier. These weapons help Pakistan and mitigate the Indian hegemony. The Indian nuclear submarine and other maritime weapons may cause serious threat and harm the Pakistan-China interests at Gwadar port. Both states Pakistan and China should increase more bases near their economic hub, Gwadar. For countering the influence and threat from India, both Pakistan and China should increase the security of the area. This also help Pakistan and China to mitigate the influence of India in the Indian Ocean region and also in the Arabian Sea.

a INS Kamorta:

Kamorta is an anti-submarine weapon system. Currently Indian Navy using this warfare corvettes. This Kamorta is the first one which is built at Garden Reach Shipbuilders & Engineers (GRSE) in India. Bigger Navies use the anti-submarine for the specific area while smaller sea forces use the normal and regular surface combatants. The navy of India use corvettes for shooting and destroying the submarine. Russia also use the corvettes for shooting the submarine. USA used its littoral combat for this purpose. The navies of different states have different method and tactics for the ASW ships. Indian navy demanded for more powerful corvettes in the Indian Ocean because of powerful and increasing presence of submarine of Chinese. India navy want real, active and effective ASW corvettes in the Indian Ocean. Indian corvettes play important role as the frontline warships. It also serves as the anti-surface warfare and as the anti-air warfare. Indian authorities named this corvette after the island. This corvette has the capabilities of deck space, long survival and radical moderate engines all these capabilities make it special for the operations. Like frigates it size is so big it was designed according to the design of corvette of Russia. This corvettes design contains features of stealth ship, decreased audio and vibration vessels. The high tensile steel is used for its production and it is produced by state-owned steel Authority of India (SAIL) and the other is carbon fiber reinforce plastic (CFRP). Indian industry objective was to enhance the localization, development and advancement of warship construction industry of India. The Indian navy demanded the high level equipment and sophisticated equipment. For the perfect production and high level weapons Indian industries

need more time so this become the reason in the delay of perfect and well equipped weapons. Indian navy in 2003 give order of four Kamorta- class corvettes. Its speed is 25 knots and the length of Kamorta is 109 meter. The Garden Reach Shipbuilders and Engineer put the processing system and sensors Revati Central Acquisition Radar in this corvette. It also has the Sanket electronic warfare system. This is anti-air weaponry and anti- submarine warfare capabilities. It is constructed by high grade special steel DMR 249A in India. This superstructure ship was built by composite material. The slopped surface and X-shape develop and increase the stealth features and reduced Radar Cross Section (RCS). Indian navy stated that “the advance ship stealth structure makes it vulnerable to revealing by the enemy”. This corvette has the ability to fight with enemy’s weapon. Indian industry prepared this ship with unique system and equipment that make possible to fight in any war condition whether it may be biological, chemical or nuclear. This ship is run by a team containing sailors, officers and commander. Indian navy planned four corvettes. And now they have four all corvettes and all of four are active. Indian Kamorta corvette give India more power. India use this against the Pakistan. Indian all weapons creating serious threats and critical condition for Pakistan. India is responsible for the instability in the south Asia. The ship is manned by a team containing twelve officers and 134 sailors with Commander Sandeep Singh at the helm as her first Commanding Officer. The ship would be an integral part of the Eastern Fleet under the Eastern Naval Command.

ii. Long range submarine launched Ballistic Missiles:

a Sagarika, k-15:

India has the capability to launch its missile from underwater from the platform ten kilometer from the coastline Visakhapatnam. The range of this missile is 700km. this missile give the equal standing position to India like France, China, Russia and United States of America. This missile improves and increase the Indian nuclear capabilities such as sea-launched missiles. Moreover, it enhances the Indian second strike capabilities. It provides security for the land, air and sea level, and enhance second strike capabilities. It is strategic submarine to surface missile. It can carry five hundred of load. It can be launched from mobile launcher and also from various platforms on ground. The DRDO, Advance System Laboratory (ASL), Research

Center Imarat (RCI) and Defence Research and Development Laboratory (DRDL) develop the Sagarika in Hyderabad. For attaining the great power Indian nuclear weapon and its power projection programs help India attaining power. India use its long range submarine launched ballistic missile again Pakistan and China. Sagarika has the code names such as K-15, B-05 and PJ-08. The range of Sagarika is 750km. The design of Sagarika assist nuclear strikes. The Sagarika belongs to K-family. The Indian submarine has the capacity to carry up to twelve Sagarika. The Sagarika has ability to cover and target the Pakistani territories. Indian Navy want to enhance these capabilities.

New Delhi would need the longer-range K-4 to reach Islamabad and northern parts of Pakistan. The extended range of the K-4 would also allow India to reach more targets in China. Indian and Pakistani nuclear warheads are largely believed to be de-mated, or stored separately from delivery systems. On a submarine, however, de-mating is not feasible, and the warheads are installed atop the ballistic missiles.

b K-4:

K-4 is an intermediate-range submarine launched ballistic missile. The K-4 missile is established by the Defence Research and Development Organization of India (DRDO).this missile is installed on the Arihant-class submarines. The operational range of K-4 is 4000 kilometers. The Indian K-4 is ten km and it has the capacity to weighing twenty tones. The K-4 is in service from 2020. The length of K-4 is 12 meter. In January 2020, India installed its missile which enhance and expand the Indian second strike capability. India conduct two test from the submerged platform in the Bay of Bengal. The missile K-4 was launched in 2016 but later in 2017 the missile test failed. India conduct test in January 2020 and India deploy the k-4 on the Arihant-class ballistic missile submarine. The Indian submarine was able to carry four k-4s and now it could be extended for the eight. K-4 extended range would let Indian reach to Islamabad and Pakistani northern areas. Indian navy K-4 submarine-launched missile on the coast Andhra Pradesh.

c K-5:

The K-5 is the missile belong to K missile family of submarine launched ballistic missiles (SLBM). Indian authorities and Indian navy demanded for this missile. This missile is developed by India. Through the massive weapon development India try to boost the second-strike capabilities. India after the k-4 intermediate range submarine launched ballistic missile in 2020 now looking for the development of k-5. Indian aim is to expand, increase and acquire the modern nuclear weapons for the nuclear deterrence. The range of new K-5 submarine launched ballistic missile is expected from five thousand to six thousand kilometers. Moreover, the k-5 will carry the four Multiple Independently targetable Reentry vehicle (MIRV). And each vehicle has weight of 500 kilograms.

iii. Aircraft Carriers:

In the naval warfare, the main and most important thing is aircraft. An anti-submarine warfare aircraft would provide Navy the information superiority of the enemies and through this information a state can achieve influence and control in the war. India buy aircraft from its allies The Indian Navy has acquire aircraft for the maritime surveillance, control and other multi-mission aircraft for the Indian Ocean region, Bay of Bengal and Arabian Sea. India buy modern equipment and weapon for keeping its hegemony and stable its war fighting capabilities in the Indian Ocean and at the border with Pakistan and China. “To threaten Pakistan, India has to keep it (aircraft carrier) 600 miles away from Pakistan, because we may kill it in two days. It would be national mourning for them, their flag would be on the half-mast that Aircraft carrier has been destroyed. We have weapons that can hit 200 km away. So, I think (Indian) Aircraft Carrier has not much relevance as far as Pakistan is concerned.”(Masood 2017)

a P8-I:

In the naval warfare, the main and most important thing is aircraft. An anti-submarine warfare aircraft would provide Navy the information superiority of the enemies and through this information a state can achieve influence and control in the war. In 2009 the Indian authorities signed a deal with the USA. According to this deal India will buy P8-I from the USA. The P8-I is the supreme and greatest aircraft. The Indian Navy has acquired P8-I maritime surveillance, multi-mission aircraft in the

Indian Ocean region, Bay of Bengal and Arabian Sea. India buy modern equipment and weapon for keeping its hegemony in the Indian Ocean Region, Bay of Bengal and Arabian Sea. India signed a \$2 billion deal with US and buy twelve highly sophisticated P8-I. The P8-I is multi-mission aircraft to boost power capabilities at sea level. India is the first international buyer of P8-I. The Indian navy aircraft P8-I has an effective range of about 1,200 nautical miles and P8-I has Synthetic Aperture Radar- (SAR). This Synthetic Aperture Radar has ability to detect diesel submarines. This will help the Indian Navy to easily detect Pakistani diesel submarines. Indian authorities will use this aircraft against Pakistan and China in the Indian Ocean Region, Bay of Bengal and Arabian Sea. The P8-I aircraft would increase the Indian Navy's maritime surveillance capabilities in the IOR.

In any war and conflict the Indian P8-I aircraft will destroy Pakistan's submarines and other warships. India has signed a deal with USA that USA will help India for the training of its personnel and other training about P8-I. Indian Navy rapidly acquiring long range reconnaissance abilities and skills for the Indian maritime security, power and hegemony. Indian mainly want its hegemonic power because of the two nuclear states China and Pakistan its neighboring states. Both states China and Pakistan share border with India. And Chinese presence in Asia pacific region is the main tension of India on the other hand China and Pakistan are friends. Pakistan and China's strategic cooperation in the Indian Ocean and mainly and most importantly in the China Pakistan Economic Corridor (CPEC) had increased the fear and pressure for the Indian government, authorities and military. China's this cooperation create trouble for India. The port of Gwadar increased the difficulties and worrying for India in the Indian Ocean region. For the interest of India in the Indian Ocean region India buy P8-I. Through this P8-I India want to maintain dominance, control and power. Moreover, India wanted to enhance its weapon and technologies. And P8-I carrying weapon like missiles, light weight destroyers, and harpoon and rockets etc. this P8-I give details of the data through internal and external ships. It also provides information of enemies' missiles, aircraft etc. So that Indian military will get information and react according to this information and achieve their target. The cooperation of Pakistan and China make India attentive and push India to increase

their weapon and aircraft in the Indian Ocean region. Now for maintaining power, searching and attacking the Chinese and Pakistanis modern weapon and submarines in the Indian Ocean region India is continuously adding the maritime weapon.

b INS Vikrant

INS Vikrant is an Indian aircraft carrier. The INS Vikrant is India's fourth carrier. This carrier is the first to be built in India and it was constructed by the Cochin Shipyard Limited in Kochi, Kerala. Basically the ship Vikrant India buy from the British navy and India relaunched it. They started the construction of its aircraft when the Second World War was in the greatest level. The war was ended. But the construction of this aircraft was not completed and they sold the aircraft. The navy of India buy this aircraft in 1957. The construction of this aircraft is completed in the year 1961. The name Vikrant was in the honor of India's first aircraft carrier INS Vikrant. The high speed of INS Vikrant is 28 knots. The first aircraft carrier “INS Vikrant” was delivered to the Indian Navy on 28 July 2022. The Prime Minister of India Narendra Modi commissioned the INS Vikrant aircraft carrier on 2 September 2022 at Kochi and it is expected to complete its flight trials by mid-2023 after which it will be fully operational. The INS Vikramaditya, the pride of the Indian Navy, has been serving since 2013.

“The Kiev Class INS Vikramaditya, at 45,400 tons, remains a cornerstone of the Indian Navy, showcasing the importance of versatile assets in naval operations”.

(Gulshan, Brace, 2023).

Originally a Russian Kiev-Class ship, it was transformed into a full-fledged aircraft carrier after its acquisition by India. Not only Vikramaditya is heavily armed, but it also hosts a variety of soft-power assets such as a fully equipped hospital, survey systems and can also serve as humanitarian relief & disaster relief (HADR) platforms to deal with any natural calamity such as tsunami, earthquake etc.

iv. Frigates

For the great fire power, strength, survival, perfect detector and for other multiple roles Frigate is most important and main warship is operated by the Navy. Frigate speed is also most

important factor that help the operator in the warfare against enemy. The main role of a frigate is to keep safe and defend the significant choke point from the rival and the naval vessels and state from the enemy's weapon. Navy also used the frigate in maritime domain for the security of aircraft carriers. It is also used against the enemy's submarine and other important weapon. Frigate has ability to detect enemy submarine and destroy it.

a Indian Talwar- Class Frigate:

Indian has Talwar Class Frigates. The Navy of India has seven Talwar Class Frigates. These Frigates are highly equipped with modern and advance weapon. Talwar Class Frigates are the modern time frigates and these Frigates are really helpful to encounter the maritime challenges and threats. Tis frigate is guided missile frigate and the speed of this frigate is 32 knots. This frigate has the capacity to remain in the sea for a month. India buy Talwar Class frigate from Russia. India also started work and make frigate for increasing and advancing its industry. "Project 11356 or Talwar Class Frigates, featuring better stealth and armament at 3,850 tons is set to see the first two Russian-built ships enter service in 2023, followed by the final two in 2026".(Gulshan, Brace, 2023). At the sea level, Talwar Class Frigate has ability to attack the submarine and vessels of foe. The defence cooperation of Russia and India is worthy. Russia is also help India in the United Non Security Council. Because India is its consumer and friend. With this advance and modern frigate, the navy of India control and perform the activities in the deep sea easily and courageously. These frigates give the offensive opportunity to the navy of India and that's why India create issues for Pakistan and it may operate against Pakistan in the Indian Ocean region for their own interests.

v. Corvettes:

The corvettes are the important part of the defence system India has modern corvettes for the coastal patrol craft, fast attack air craft and patrol aircraft. These corvettes displacing five hundred to thousand tons and also equipped with anti- aircraft, missiles, guns, torpedoes etc. India also has corvettes for its defence system. India has INS Kamorta which is the one of the best Indian weapon.

vi. Destroyers

Indian Navy signed a deal with Mazagon Dock Shipbuilders in 2011. This deal was named as the Project 15B. According to this Project 15B Mazagon Dock Shipbuilders will develop the four destroyers. First one is INS Visakhapatnam in November 2021, second was INS Mormugao in December 2022, third destroyer is INS Imphal in December 2023. The last one is INS Surat and it is expected till 2024. All the destroyers' names are the titled after major cities of India as Visakhapatnam, Mormugao, Imphal and Surat. These destroyers designed according with Kolkata-Class destroyers and also develop with high amount automation and also add advanced stealth structures. With these features destroyers are having great abilities of sea keeping and survivability. These vessels are difficult to detect because of body design and its transparent radar area fittings make it more difficult for the enemies. According to this project, this destroyer will provide more consistence and survivability to the Indian navy in the emergency situation. This vessel provide protection from the nuclear, conventional, chemical and biological threats. According to this project 15B the navy of India boost its power in the Indian Ocean region. Moreover, this project create supremacy against Pakistan. According to this project the navy of India develop modern and advance four destroyers by steal and greater fire power attributes.

a INS Visakhapatnam:

INS Visakhapatnam is an Indian destroyer. On 28 October 2021, India acquired its INS Visakhapatnam. INS Visakhapatnam is built by the Mazagon Dock Limited (MDL). Indian Navy operated this destroyer worth of \$1.2 Billion. INS Visakhapatnam other name is the Brave Buck. Under the project 15B, INS Visakhapatnam is the first and there are more three destroyers. INS Visakhapatnam speed in open sea is about 30 knots. And it is 163 meter long. Indian navy use this advance destroyer as an offensive tool against Pakistan in the Indian Ocean region. This destroyer has modern and advance information system. This destroyer has sensors that make it more advance and helpful in warfighting situation. INS Visakhapatnam has ability of surface to surface missiles which make it dangerous and

harmful machine. Moreover, this destroyer give protection to the Indian navy and vessels from anti-ship and ballistic missiles, aircraft and Unmanned Aerial vehicles.

b INS Mormugao:

Under Indian navy project 15B, Mazagon Dock Shipbuilders Limited (MDSL) introduced the INS Mormugao in December 2022. The length of this destroyer is 163m and it belong to the Visakhapatnam-class destroyer. This destroyer has great importance because of its great security and defence system. It boosts the Indian defence system and it is a destroyer with stealth guided missile. It is designed for improving the maneuverability, sea keeping and survivability. This destroyer has ability to detect the enemy's vessels. By making this destroyer the ability in Indian navy increased and self-reliance in designing and constructing the warship. The destroyer Mormugao has ability like surface-to-Air missiles and surface-to-surface missile. This destroyer has radar system for the surveillance. This radar system gives urgent information to the operator and help in quick targeting the enemy's weapons and equipment. The Mormugao is the name of the city of Goa and the name the destroyer because of the historic port. This destroyer enhances the Indian navy power in the Indian Ocean and give Indian navy agility. Free movement, high range and mobility in its achieving targets. Indian lethal arms and weapon is creating huge gap, instability and arm race.

c INS Imphal:

Under the project 15B INS Imphal constructed at Mazagon Dock Limited. It is Indian Navy third of the Visakhapatnam-Class stealth guided Missile destroyer Indian destroyer. Mazagon Dock Limited supplied to Navy of India in December 2023. The total length of INS Imphal is the 163m. INS Imphal also have the ability from surface to air missiles and it has BrahMos and anti-ship Missile capability. It is also anti-submarine capabilities and it launches rocket. All of this make it unique. Moreover, this destroyer carries 76 mm naval gun and remote controlled gun. All capabilities and growing modern weapons are creating serious threat fo the stability of south Asia especially for Pakistan.

d INS Kolkata:

Indian navy have INS Kolkata-class stealth destroyer. The navy of India installed this destroyer in 2014. The speed of this destroyer is about 30 knots. It is the most dangerous and harmful weapon it would create difficulties and gap for the rival. These destroyers have guided missiles and team of 250 persons. The Indian Thales LW-08 D-band radar is fitted in the INS Kolkata. The INS Kolkata has the ability to detect the surface warship as well as sub-surface warship of the enemies. The speed working and active radar will help the Indian operator take counter measures at the right and perfect time before any destruction. The Indian Destroyer Kolkata has variety of weapons such as radar, Barak-8, UAVs, missiles and Brahmos, gun and anti-submarine rocket launchers. Indian navy has all these modern, new and warfighting capabilities. All these capabilities create instability in south Asia. Pakistani Navy should take counter measures for the arriving and coming threats the vessels of Pakistan in the Indian Ocean also have serious threats from the Indians weapons and equipment.

vii. Rukmini Spy Satellite

India has Rukmini spy satellite GSAT 7. This Rukmini satellite is developed by the Indian Space Research Organization (ISRO) in August 2013. This Rukmini spy satellite will fulfil the communication requirements of Indian military. Rukmini spy satellite is the first Indian military spy satellite. Rukmini has provided low bit voice rate to high bit data and multi-band services. Rukmini has a weight of two thousand six hundred and fifty which is two thousand nautical miles in the Indian Ocean region. Rukmini will provide networking capabilities with various Indian Navy's assets. During Theatre-level Readiness and Operational Exercise (TROPEX) in the Bay of Bengal in 2014, Rukmini was able to network about 60 ships and 75 aircraft seamlessly. According to Indian Navy: "GSAT-7 was successfully launched by the Ariane-5 launch vehicle of Arianespace from Kourou, French Guiana. Ariane-5 precisely placed GSAT-7 into the intended geosynchronous transfer orbit (GTO)". Rukmini is an innovative, radical and communication Indian spy satellite. This satellite is responsible and give wide range of service from the range of low rate bit to high communication. The load and burden of Rukmini is planned in the way that GSAT-7 give its communication capabilities to wide ranging and extensive level like oceanic region. Indian scientists want these capabilities for his military and navy in the

Indian land living. And the Rukmini is a multispectral device of communication. It is believing that it is high class and joined platform for Indian class. It was previously it was placed in ships and it provide communication service and it was global mobile satellite provider. It was not assisting duties. And after 2013, Rukmini changed into operative and active mode and it go into GTO position. Rukmini is not like the satellite of surveillance that give the guidance of target. According to Indian Navy, “Rukmini will provide networking capabilities with various Indian Navy’s assets. During Theatre-level Readiness and Operational Exercise (TROPEX) in the Bay of Bengal in 2014, Rukmini was able to network about 60 ships and 75 aircraft seamlessly. The intention of Indian Navy is to use this geostationary naval communication and surveillance satellite to cover activities up to Malacca Strait in the east and the Strait of Hormuz to the west. Rukmini has a nearly 2,000 nautical mile ‘footprint’ over the Indian Ocean region.” Indian Navy has joined platform. Indian Navy control every sight and on earth upper atmosphere as related the cosmos communication is concerned. This satellite helps Indian navy to connect various naval vessels and submarines and it help Indian navy in the web centric processes.

viii. Guardian UAVS for Sea

The Navy of India is improving its capabilities and maritime supremacy and surveillance. India is getting help from different states e.g. USA, Russia, France, Israel etc. India get help from USA and enhance the capabilities of UAVs for gaining power in the maritime. For the dominance and reconnaissance and surveillance activities and interests the Unmanned Aerial vehicles are playing the most important and significant role in the Indian Ocean region. For a long period of time Indian Navy is using the Unmanned Aerial system. Indian forces acquired advanced weapon and also improve its modern technologies. All these modern tools and equipment help India different activities at the sea level. UAVs will help India to conduct unmanned activities in the Indian Ocean region and with the border of China and Pakistan. Indian has Unmanned Aerial system which includes Heron that is appropriate for required on shore. India buy Heron from the Israel. For obtaining the advanced and modern UAVs, India has close and deep alliance with Israel. Israel provide India superior fire power UAVs. Since 1970 IAI is developing and designed UAVs. Since 1999 India is a big customer of Israel and it is suppling India UAVs with drone. Indian and Israel signed a deal. According to this deal both industries Israel

Aerospace Industries (IAI) and Indian industry India's Hindustan Aeronautics limited (HAL) will developing the UAVs together. According to this deal Israel will help the HAL and it will give all the main and secret technologies about UAVs. It will also help to India in the making process of the UAVs. This mutual cooperation and program will help India in its defence system. Through this system India is able to repair its UAVs. It will boost the Indian abilities and capabilities in the defence system. Israel and India inked a deal of a worth \$500 million in 2009. According to this deal India will buy 50 Heron. These UAVs has ability to fly at the height of 35000 feet about 48 hours. These capabilities will help India in war and attacking its enemies. Heron is very toxic and harmful UAVs. This UAVs is better option for India because it attacks after flying over the territory of enemy without pilot service. In this situation now the pilot's life remained safe. India has also buy MQ-9B sea Guardian high- altitude unmanned aerial vehicle (UAVs).

a *Mq-9B Sea-Guardian high-altitude unmanned aerial vehicles (UAV)*

Recently, India has signed an agreement with the U.S. according to this deal India purchases 31 Mq-9B Sea-Guardian high-altitude unmanned aerial vehicles (UAV). Its worth is \$3.07 billion. This will boost the Indian Navy's airborne anti-submarine warfare (ASW) capabilities. According to the JCG, the MQ-9B can fly for more than 24 hours. The Indian Navy will get 15 UAVs from USA. When India receives the Mq-9b, the Indian Navy will become the second in the world, after the US Navy, to drive an airborne anti-submarine triad. This will allow it to search and destroy Pakistan's conventional attack submarines. Its ability to remain on station for long time makes it a perfect candidate. It can find and sink enemy submarines in open oceans, which is a time-consuming process. It also costs \$5,000 per hour. Thus this making it a cost-effective platform. Moreover, it has an operational range of over 5000 nautical miles and a flight ceiling of over 40,000 feet. It also has ability to communicate with other platforms in real-time. It detecting Pakistan's subs on the high seas and it will be a game-changer once inducted and will likely challenge the Pakistan's Navy offensive operations. The Pakistan Navy has to strengthen its naval air arm by inducting modern air superiority aircraft. Pakistan has serious threat from India. Pakistan navy should balance this gap by modernize its military weapons and equipment.

ix. Indian HAROP:

Indian government and the India Air Force want to boost and enhance its weapon system that's why India upgrade its defence system day by day. For this strategic and modern position India admire with two types of policies. The first one it makes allies with other states for buying modern weapon and equipment including Russia, France, USA, Israel. On the other hand India always try to get help from the other states in the production of guns, Rockets, Satellites, Radar, Artilleries, Tank, Submarines and Destroyers etc. India basically decided its own weapon production. So its friendly states help India in the weapon production. Through this system India will able to repair and maintain its weapon. India required drones for enhancing its defense system. India signed a deal with Israel in

September 2009 and procured ten drones worth \$100 million. First of all India presented the Harop to the world. According to a report, Indian Air Force and its higher authorities planned to add more 54 drones in its defence system and the Indian Air Force give new name to this drone that is P-4. India purchased the Harop from the Israel. The Israel Aerospace Industry (IAI) manufacture harop armaments. The Harop has the ability to launch from different and variety of boards the Harop is Unmanned Air vehicle from low-to-high power conflicts. The harop is used in the operations against enemies and also used in terror based operations. It is equipped with ultraviolet capabilities. Actually drone Harop is a small drone with the combined Unmanned Aerial Vehicle and harmful lethal missile capabilities. These combined capabilities increase its value more. The Harop wanders on the target and it search and identifies its target after that it attack the target and make its destruction possible. The small size only twenty-three kg Harop has ability to go around the aircraft of the enemy and attack it. On the other hand if this Harop not find its target so it has the ability to return and land on its base. Moreover, the operator can have launched it from any angle vertical as well as parallel and the fuel system of Harop make it ready at every moment. It has also ability of mission control area or shelter where the Harop operator can approve the attack and also cancel the attack.

2.3 Air Domain: Air Dominance

“The IAF consists of 33 squadrons, whereas for air superiority vis-à-vis Pakistan, it must possess 42 squadrons. To achieve this goal, the IAF will add more than 400 aircraft in future”.

i. SU-30 MKI Russian Aircraft

At present, the Air Force of India is considered as the fourth largest Air Force in the world. Pakistan effect fight to CSD is only possible with any close air support. This aircraft is a large and great power for the IAF and it is an air superiority aircraft. Currently, the Indian air force has more than 170,000 personnel all are in service with the Indian Air Force. Strength of 170,000 personnel. The IAF possess thirty-three squadrons whereas for air dominance in south Asia. There are forty-two operational troops in India. Indian air force possesses two hundred SU-30 aircraft.

“The SU-30 is a multirole aircraft with lethal firepower, advanced avionics and greater maneuverability. It is equipped with a 30mm Gsh-30-1 cannon with 150 rounds of ammunition and BrahMos cruise missiles. The SU-30 is an air superiority aircraft with an effective range of 3,000 km”.

Presently, the IAF flies more than 200 SU-30MKI aircrafts and it has placed an order with the Russian defence firms for another 53 aircrafts. This Russian aircraft best and advance features is it carry the cruise missile, Brahmos. The range of this aircraft is about 3000km and it covers nearly whole Pakistan. It would increase the strength of Indian armed forces and make it easy to Indian air force to take action and do their operations against Pakistan. Pakistan should take steps against the India. Indian more and more development is creating huge gap in weapons whether nuclear or conventional domain in south Asia, especially for Pakistan. All of this is cause instability in south Asia.

ii. Rafale French Aircraft

Rafale is French aircraft built by Dassault Aviation. This aircraft belongs to Rafale family. Rafale M is a multirole aircraft with twin engine and delta wing. The M meaning is here marine, which show the aircraft naval advancement and capabilities. This Rafale M is specially established for the navy of French for effective operational tasks from the aircraft carrier. This aircraft Rafale is introduced in year 2001. The length of Rafale French aircraft is 15.27 meters. And the wingspan is of 10.80 meters. This aircraft is famous and unique because of its resourcefulness, agility, flexibility and because of its advance features. The Rafale French aircraft perform various tasks and operations as well as it provides ground support, anti-ship strike, interception, anti-ship strike, reconnaissance, nuclear deterrence and it also provide the air superiority, the Rafale has weight of 24,500 kg when it is unfilled or empty and its takeoff maximum weight is 24,500 kg. And the maximum speed of Rafale French aircraft is Mach 1.8 per hour. This aircraft Rafale French can transport extensive range of weapons such as MICA and Meteor air to air missiles, SCALP-EG and AASM air to ground missiles and anti-ship missiles. Indian air force decided to change the ageing and AIF demand for the advance Rafale aircraft. Indian ordered the French Rafale and it takes tome more than sixty months. The Indian former chief said that: “thirty-six Rafale warplanes ordered from France for \$8.7 billion were not enough and India needed to buy at least 200 such fighter jets to sharpen its military edge” (Singh R., 2016). Indian make partnership and get help it will help India in the defence industry and

create serious challenges for south Asia. According to former general Ehsan that “we will never be able to match the Indian Air Force in numbers and now with access to western technology you may not be able to match them even qualitatively. The 89 earlier concept was that we will have smaller air force but qualitatively superior air force. Even that may not be feasible. So, we will have to focus in the anti-systems again which means we have to develop a cost-effective air defense solution, backed by a potent but smaller air force. We can get those solutions from China, Russia and Europeans” (Haq, 2018). Pakistan must take counter measures and improve its industry of defence.

iii. Armed UAVs: Heron TP

India has an agreement with Israel for enhancing its defence system. India planned to purchase new four drones Heron TP for the successful, reconnaissance and surveillance operations. India decided to purchase four from Israel. These heron TP assist in different missions such as reconnaissance and surveillance. Under the project Cheetah the Heron TP will be upgraded and added missiles for the accurate and reliable strikes. Firstly, India decided to lease the four Heron TP but later India decided to purchase Heron TP from Israel. When the cheetah project is confirmed the Heron TP will be upgraded and added with the capabilities of sensors, advance communication satellite. And it also upgraded with air to ground missiles and laser guided armaments for the accurate strikes. The sensor capabilities will help in the longer surveillance and reconnaissance in the operations. Moreover, the advanced and upgraded Heron TP UAVs strolling time will be 24 hours. The communication range of the Heron TP is 1000 km. For the first time the unmanned aerial vehicle Heron TP is uncovered in 2007 in the show Paris Air. In 2005, the Indian government, higher authorities and military decided to purchase 10 Heron TP and they confirmed the deal and buy ten Heron TP for the Indian Air Force. The structure of this Heron TP is twin boom. When boom stretched from wings and they form the structure of tail. It has two tails linked with the single tail plane.

iv. Harop:

The Harop is new, improve and big type of IAIs Harpy. The Israeli industry installed an electro-optical sensor in Harpy that help it in the operations. Harp search its target through loitering over the target area and destroy the target. In 2016, Israel showed it new member in its Loitering Munitions (LM) in Singapore Airshow. The IAI is famous in the world for the

Loitering Munitions. The Harop has the capability find the target and destroy. At large level Israel sold this Harop. It is an unmanned combat air vehicle (UCAV). Harop destroy missile through the ground-based pilot. Harop is used for the low and high range conflicts. It has the weight of 15 kg warhead. This Harop is used for countering the terror operations and also for the urban warfare. It can operate for the duration of six hours. In this span of time it searches its target by loitering and when it find it attacked and destroyed the target. Moreover, it has ability to attack from any angle and direction. Different states decided and purchased the Harop from Israel. Harop has greatest capabilities of observation capabilities. Harop will give India the significant operational system again enemy. Harop has a combine features of a UAV and missile. The Harop is an electro-optically guided advance defence weapon. Harop is controlled through a two- way link for full man in the loop process. For its targets Harop will not rely on other devices it is able to fulfil its mission effectively. Before the take-off Harop LMs are programmed by the GCS to fly freely and searched the target. The MCS check the status and position time to time during the loitering over specific area. The MCS always control the Harop during operations. Video image help it in search of target.

v. Apache Helicopter:

India aims at quick and swift operations under a nuclear umbrella but it lacks the speed and maneuverability to execute the CSD or also known as proactive military strategy. To add agility and greater firepower in its military, it has signed a deal with the US to induct 22 Apache Helicopters worth US\$2.5 billion. “To add agility and greater firepower in its military, it has signed a deal with the US to induct 22 Apache Helicopters worth US\$2.5 billion”. (Economic Times, 2017).

This helicopter is crucial for India to operationalize its aggressive military doctrines. The Apache is equipped with night vision capabilities, hellfire missiles, 70 mm rockets and an automatic gun, which makes it the most lethal machine in the world. The Apache would add agility and greater firepower to the Indian ground forces for any rapid and strong operations against Pakistan. The Indian Air Force (IAF) has already inducted 22 Apache helicopters under a separate deal in September 2015.

In any limited war or total war, the worth of transport and attack helicopter cannot be ignoring. In the present time, helicopter is the basic need of modern warfare. On the other hand, soldiers, troops, conventional weapons, nuclear weapons, missiles, drones, aircraft carrier play an

important and vital role in the total or limited war. After 2001, the strategic thinkers of India adopt a strategy of offensive doctrine. For the implementation of offensive doctrine, the military of India required modern weapon and equipment. Indian army acquire modern weapon and equipment since 2004 and India buy many weapon from different states like apache, Harop. S-400, chinook helicopter. The government. India buy 22 helicopter from US. Indian helicopter apache AH-64E is advance and great weapon. This helicopter has the ability to carry 16 missiles air to ground. This attack helicopter is also equipped with a M230 30mm chain gun which has the ability to fire 625 rounds per minute (Guez, 2017). and it will help India to go through with its offensive doctrine. According to Pawar senior army officer of India “With the Indian Army’s Doctrine of ‘Cold Start’ or the ‘proactive strategy’, which is Pak-centric, restructuring has been done of the Pivot Corps to enable quick and immediate action within 48-72 hours by using the integral assets at the Corps level. This also calls for induction of combat and other helicopters within the Army itself” (Pawar, 2017).The arm of India acquire more modern weapon and equipment and create instability in south Asia. These military capabilities will make able India to operate in any limited or swift war against Pakistan.

vi. Indian Ka-31 Helicopters:

For acquiring supersonic weapon and for the sake of gaining power India is making strategic weapon deal with other states. Here India signed a deal worth \$520million with Russia and the Indian and Russian defense cooperation is going very strong and deep. India buy different weapon and equipment from Russia including nuclear weapon and conventional weapon like BrahMos cruise missile, helicopters, aircraft, and nuclear submarines etc. for the maritime awareness and power India signed a deal with Russia according to this deal Russia provide India ten helicopters “ka-31 airborne early warning and control. The early warning is the main role of this helicopter it delivers information to the Indian Navy and they take counter measures against threat. These helicopter boost the maritime capabilities of the Indian Navy. Indian navy installed these helicopter on its aircraft carrier INS Vikrant. These helicopters radar system give information about targets from land and air it operates against air strikes and protect the army and its weapon from the rival target. Ka-31 has the power to detect the weapon like UAVs, helicopters, aircraft and missiles and others from the distance of two hundred km this long distance help India to take action against the enemies. And the best thing about these helicopters is these take narrow place on the air craft carrier because of its folding wings and it detect forty targets at a time and it can

carry weight of 12,200kg, moreover its speed is 100km/h. helicopter with these capabilities will bounce Indian navy high level power and capabilities in the Indian ocean region.

vii. MH-60 Sikorsky Romeo Helicopters:

India is continuously adding new weapons in its military such as helicopters aircraft carriers, destroyers, Missiles and many more in all the areas of defence. For enhancing its weapons India collaborate with other states and make close partnership. Through this partnership Indian operational capacity enhanced, increasing the mobility and flexibility of Indian navy, targeting capabilities enhanced and get more and quick awareness in maritime domain. For the integrated air defence system India cooperate with USA and signed a deal for the Sikorsky Romeo Helicopters. Under this major deal worth \$2.12bn India. Under this deal USA provide Indian military important and fundamental technology which improve the offensive capabilities of Indian navy at the sea level. Indian this helicopter creates serious threat for the enemy's submarine. The government of India can improve its own defence industry with the help of USA. THE Romeo Helicopters has the fatal Missiles, rockets, destroyers, and sensor so that India used it in its operations and get information. The use of this helicopter is dangerous and harmful for the Pakistani crafts. Indian massive modernization in its weapons and defence system is creating conventional and nuclear imbalance and Indian navy is creating security challenges in the Indian Ocean. Indian growing weapons development is forcing Pakistan for the arm race. Pakistan need to boost its defence system and acquire modern weapons and equipment. Through taking these steps Pakistan will take counter measures against India military. Indian nuclear submarine and other weapons of India is threat for the Pakistan's security, industries and for the economy. For the security and integrity of Pakistan, Pakistani navy must need offensive capabilities and second strike capabilities. Pakistan need to improve the real time information, surveillance and maritime capabilities. After that Pakistan will effectively deter Indian aggression and antagonistic behavior and acts. Now Pakistan deter Indian aggression through conventional weapons and military operation, but Pakistan need more modern weapons and equipment for land and sea. All the Indian helicopters are well equipped and according to the modern times need. On the other hand, Pakistan has Chinese attack helicopter Z-10 in 2015. Pakistan has MI-35, Pakistan buy four

helicopter from Russia and Pakistan has USA helicopter AH-IZ Viper. Pakistan also signed a deal with turkey and acquire attack helicopter T-129.

viii. Spy Satellite for Indian Air Force:

Indian Space Research Organization (ISRO) launched its latest spy satellite with name EMISAT. It is believed that this satellite would boost the Indian militaries so called surgical strike capabilities. The EMISAT identifies electronic signals on earth, particularly concealed adversary radars. This capability would help India to operationalize its concept of Surgical Strike against Pakistan. The Indian military's defense related acquisitions are in line with their doctrinal shift in recent times. The Indian military firmly believe that fighting a total or limited war in nuclear environment is a risky business and it effect the regional and global security. Indian military after 2018 emphasized on limited operations or surgical strike. For these types of operations India must possess real-time information about the targets.

In that context the ISRO the DRDO has launched a project Kautilya to enhance its ISR capabilities. The EMISAT was developed under the same project. This satellite has attributes of.

—Signal intelligence — intercepting signals broadcast by communication systems, radars, and other electronic systems on the ground from hundreds of kilometers away in space. The Ka-band frequency that EMISAT is sensitive to allows it to scan through ice, rain, coastal zones, land masses, forests and wave heights relatively easily (Economic Times, 2019).

The EMISAT could be great asset for the IAF for covert air assaults in behind the enemy lines because it has the ability to detect the enemy radars and sensors. In future, with these assets in space, the IAF may carryout Balakot type of surgical strikes with greater confidence and ease. India currently used about six to eight satellites for military use out of 47 operational satellites in space. This satellite could execute operations and not take more time without any time barrier, day & night. (Economic Times, 2019).

In line with its military strategy the ISRO launched another spy satellite and block all the holes in its surveillance as well as reconnaissance abilities. RISAT-2B was launched in space after botched surgical strike in Balakot.

The Indian authorities claim this spy satellite could relay real time information even in bad weather conditions or clouds. The RISAT-2B would bolster the IAF's capabilities for any

specialized operation against Pakistan. According to a report, —The special radar-enabled satellite will be placed at a low earth 557-kilometre orbit, a suitable level for detecting hostile installations as well as monitoring agriculture, forestry and possible disaster zones. The space agency is yet to release details or photographs of the satellite, considering that it is meant for strategic needs (Bagla, 2019). The Indian military believe that heavy clouds during Balakot operation were the major reason of their failure but now they believe with these set of new spy satellites in space the IAF would have clear view of the area/target, ability to track and get real time information about the activities or movement of people in hostile areas. The RISAT-2B is furnished with a special X-band radar adept of providing enhanced images of the target for better operations.

The ISRO further said that the RISAT-2B has life span time of about 5 years. The ISRO has also planned to launch RISAT-BR1 and RISAT-2BR2 in few months’ time which may boost the Indian military’s surveillance capabilities in space (Bagla, 2019). The ISRO introduced GSAT-7A spy satellite for specifically the IAF to boost its overall capabilities in the real time information domain. This is the ability of GSAT-7A that it would stay in the space for eight years. (Lele, the Space Review, 2018). The GSAT-7A is a designated spy satellite for the IAF and it will provide services in “Ku-band and offers a secure mode of communication expected to facilitate exclusive-frequency flight communications for the IAF” (Lele, The Space Review, 2018).

The IAF operates several bases across India in diverse topography, deserts, jungles, and mountainous terrain. This satellite would provide the IAF with unremitting connectivity even during harsh weather condition. It would help the IAF to seamlessly connect its command center, bases with air assets like AWACS, Aircraft and UAVs.

ix. The Air-Launched Brahmos Supersonic Cruise Missiles

The IAF has also made development in the air version of cruise missiles. In this domain, the IAF has closely collaborated with Russia to jointly manufacture air-launched cruise missile to create air dominance in the region and beyond. In May 2019, the IAF successfully conducted a test of Brahmos cruise missile from SU-30MKI aircraft. The BrahMos missile would provide the IAF with greater outreach and deep strike capability from stand-off ranges. The Brahmos supersonic cruise missile is joint venture of India and Russia and it has a range of about 300km. The

BrahMos missile would enable the Indian military to conduct precision strikes at greater distance at Sea and Land without any weather or time constraints in day or night (Negi, 2019). The IAF's Su-30 Aircraft with Nuclear BrahMos Cruise Missile will be lethal combination. At the moment 42 SU-30MKI aircraft were altered to carry Brahmos nuclear missiles. It would enhance the strategic outreach of IAF and give them greater confidence in any future conflict. The Brahmos Cruise missile is known for its blistering speed and accuracy. It has Mach 3.0 speed which means it travels 3000 km per second. Which means it is faster than a bullet. It knockouts the object with enormous sum of kinetic energy. It has also proven in tests, the BrahMos Cruise missile has mostly "cut warships in half and reduced ground targets to smithereens" (Defence Aviation Post, 2020).

2.4 Land Warfare: Offensive Muscle

The Indian Army is rapidly filling the gaps and trying to overcome their weaknesses to execute their aggressive doctrines against Pakistan. In that context this study would focus on the Indian Army's modernization drive and its impact on Pakistan's security.

i. Modern T90S Tanks

The Indian Army considers T-90 Main Battle Tank (MBT) as a backbone of any offensive operations. The India Army operates about 124 homemade Arjun tanks, 1,950 T-72 tanks and 900 T-90 tanks with upgraded night vision capabilities. It has also placed an order of 464 T-90 MBTs worth US\$2 billion from Russia. These tanks would provide the Indian Army with an offensive punch and greater outreach. "Currently, the Indian Army operates 18 regiments of T-90 MBTs, which are deployed in the Punjab and Rajasthan sectors for Pakistan specific operations". By 2020, India is planning to replace all of its ageing fleet with 35 T90S tank regiments. T-90 is equipped with 125 mm gun; it can fire different types of ammunition which includes Armor Piercing Discarding Sabot (APDS), High-Explosive Anti-Tank (HEAT) and shrapnel projectiles. It is also equipped with anti-tank guided missiles which take only 11.7 seconds to reach the target at a distance of 4,000 meters. It can take down low flying helicopters within the range of up to 5 km. All these features make T-90 tank a lethal machine with destructive firepower and superior maneuverability in the desert and plain areas against Pakistan. The T90 MBTs possess greater mobility, superior firepower, night vision/thermal imaging, and better communication system (Rekha, 2017).

2.5 Weapon Locating Radars

Indian and Pakistan are rivals and both states have different issues. The army of India do numerous ceasefire violations near the line of control. Pakistan Army face serious challenges and heavy damages the Line of Control is now ground of war between the India and Pakistan. Both states fight and use their weapon daily. All this happen because of the Radar system of India. Radar is a type of detection device that calculate the exact distance of weapon like rockets, missiles, motor vehicles, ships, aero planes and spaceships. India has a laboratory Electronics and Radar Development Establishment (LRDE) that work under the DRDO which has the responsibility of manufacturing radars for various purposes and some of which are also successfully used by the army of India.

“India has indigenously developed and installed four WLR at the LoC to detect the range and location of Pakistan’s artillery, mortar shells and short-range rocket sites at about 50 km distance”.

i. Indra I Radar

INDRA Indian Doppler Radar is designed by DRDO. INDRA is manufactured by BLE. This radar is a series of 2D radars used by the Indian Army and Indian air force. This radar INDRA-I is mobile surveillance radar and it is used to detect the low – level targets.

ii. INDRA-II

INDRA II is also used to intercept targets underground control. There are so many features in this radar system. The best features in this radar is including Automated Track while scan rate for high- speed detection. This is the first significant radar system that is manufactured in India.

iii. INDRA MK2 Radar

This is Indian Doppler radar. It is a modified version of Indra. This radar is used by Indian army. It is used for ground- based target interception. Indra MK2 is used for high range resolution, pulse compression and it is used for ECCM capabilities. This radar system is also used to detect low-flying aircraft in the areas with dense ground clutter and send the signal to the receiver. This radar is used by the army of India and air force. This radar is manufacture by the Bharat Electronics Limited. The India air force had ordered seven Indra-II aircraft.

iv. Rajendra Radar (TLR)

Rajendra is Indian radar and it is developed by DRDO and it is used for the Akash Air defense system. This radar system is used as a main fire control sensor for an Akash battery and it also helps in directing Akash surface to air missile system. This radar is a multifunctional electronically scanned phased array radar. This radar is a passive electronically scanned array (PESA) radar that directs Akash missiles to their intended targets. This radar is used for guidance, surveillance and it is also used for tracking. This radar is mounted on a two-wheeled vehicle.

v. Swati Weapon Locating Radar:

This radar is a mobile-phase array radar for locating artillery. This radar is used to detect the site of origin of country-battery fire by tracking incoming artillery and rocket fire. This radar is basically a threat for an artillery. This radar is manufactured by Bharat Electronics Limited, LRDE and the DRDO's Bangalore base laboratory (BEL). Indian army used this Swati radar for Pakistani artillery location near the Line of Control. This Swati radar has the ability to track the seven targets at once. The army of India has installed thirty Swati radars near the Line of Control. Indian Swati radar detect the Pakistani artillery at the range of about 50 km. this is the threat for Pakistani artillery. This radar also find the position of personnel near Line of Control. Because of this weapon the Indian military was able to locate the position of Pakistani Army's posts close to LoC, which enabled the Indian Army to allegedly kill 138 Pakistan Army personnel in 2017 on LoC ("Army kills 138 Pak soldiers in 2017 in tactical ops", 2018). In 2017, the Indian Army imposed heavy damages on Pakistan Army's outposts near the LoC. The reason could be the induction of Swathi Weapon Locating Radars- (S-WLR), because this radar has the ability to provide exact location of the enemy artillery, mortars shells and short-range rockets at a distance of about 50kms ("Army gets weapon locating radar from DRDO" , 2017).

vi. Central Acquisition Radar (3D-CAR)

Indian army has central Acquisition radar. This radar is created by DRDO. The DRDO created a 3D S- Band Radar for the Indian Airforce and Indian Army. This radar has two variants. One is Revathi and other is Rohini. The first one Revathi variant is used by the Air Force and the other Rohini variant is used by the Army of Indian. Central Acquisition Radar has ability to identify low-altitude objects and it has ability to find the supersonic aircraft travelling at above Mach 3

speed. It has also ability to track the targets out to a range of more than 180 km. the Central Acquisition Radar components are the digital receiver and programmable signal processor.

This 3D-CAR provides India High resolution, responsiveness, precision and information availability and it is mounted on two high-mobility TATRA vehicles to fulfil operational and tactical mobility requirements.

vii. Ashwini Radar

Ashwini radar is Indian radar. This radar has ability to detect range of up to 200 km. it can detect fast moving targets. This radar is works on 4D low level transportable radar technology. This radar is able to measures azimuth, distance, height and velocity vector that is helpful in tracking hostile targets with absolute precision

viii. Tethered Aerostat Radar:

India buy this radar from United State of America. This is low level airborne ground surveillance system. This radar is look like moored balloons and this is filled with helium. It main features is it can soar up to a height of 15000 feet while tethered by a single cable. The largest can hoist a cargo of 1000 kg to a working altitude that offers radar coverage at ground level and to the downward side.

ix. Swordfish Radar (LRTR)

The DRDO manufacture this radar. This is long range tacking radar. It is an Indian long range tracking radar which is also called Swordfish radar. It is created mainly to detect ballistic missiles. That's why it comes under the ballistic missile programme of India. Indian company started its testing in March 2009. Though this testing the performance of the indigenously developed swordfish long range tacking radar was verified.

Swordfish is a recognized descendant of the crucial element of Israel's Arrow missile defense system, the long- range Green Pine radar.

x. PJT-531 Battle-Field Surveillance Radar:

This is an Indian radar it operates in J Band in 21 frequencies and can detect crawling men, groups of men, armored vehicles and heavy vehicles at varying distances. It help the Indian army to detect men and armored vehicle. This radar can also help Indian army to detect the heavy vehicles.

xi. UTTAM AESA Radar:

Uttam is an Indian radar system. The army and air force of India used the Uttam radar for searching weapons near the line of control. Uttam is a solid state gallium arsenide (GaAs) based active electronically scanned array (AESA) radar under development by the Electronics and Radar Development Establishment (LRDE). It is a low probability of intercept radar intended to be installed on the HAL Tejas Mark 1A, HAL Tejas Mark 2 and HAL TEDBF aircraft. Uttam AESA is manufactured by BEL and HAL and it is designed by the Electronics and Radar Development Establishment (LRDE).

2.6 Spy Satellites

The launch of Sputnik is the initiation of the space age and also the beginning of the space race. During the cold war two strategic rivals (US-USSR) exploited outer space for military purposes which started an intense space race for dominance and increased the probability that space would become an area of arms race between the major powers and perhaps a future field of contest. The strategic importance of space attracts India to utilize space for both civilian and military purposes. Indian strategic space programs always consider offensive towards China and Pakistan. Indian space capabilities and intention to develop ASAT technology is a new threat for the security of South Asia in general and particularly for Pakistan and further intense Asian space race. Pakistan started its space program in 1960 and still has not developed any technology that can harm or hurt the common heritage (space) of man. If India is going to develop ASAT technology in the future, it will harm and destabilize the peace and security of South Asia and start an arms space race that destroys the peace of this region.

Chapter-3

Implications for the Strategic Stability of South Asia

In recent times, Pakistan is managing to balance the conventional asymmetries effectively with the help of China and its own defense industry. But it is difficult for Pakistan to maintain conventional balance with economically bigger rival. The security problem would emerge in South Asia due to the Indian military. Indian military becoming an impeccable force in south Asia by overcoming its operational deficiencies with the help of strategic partnerships with US, Israel, Russia and France, and it would affect Pakistan more than any other state in South Asia. Pakistan would have no other choice other than to counter Indian conventional superiority and any misadventure by its military with its non-conventional capabilities. Therefore, there exists a possibility of limited war in future where due to Indian strategic partnership with major powers the conventional deterrence of the South Asia is disturbed, and Pakistan would be forced to take counter measures by either relying less upon its nuclear weapons to counter Indian aggression or join hands with other major powers thus leading to an arms race in the region.

There are different implications for the South Asian Security because India modernize its military day by day. There are so many clashes between nuclear states India and Pakistan that is why this region is the very risky and dangerous place. There are the main reason of instability in south Asia is Indian military continuous doctrinal change and massive transformation and it

would make serious challenges for Pakistan and for this region also. The financial condition of India is good and it is developed state but on the other hand Pakistan financial conditions is not good but Pakistan would try to balance the Indian military modernization. India want a conventional and limited war but can't because Pakistan cannot afford any clash in the region because it would have vast impact on the economic growth of Pakistan. India consider China and Pakistan its enemies and India improve its warfighting capabilities. Warfighting capabilities will also help India in the Indian maritime operations in the Indian Ocean Region- (IOR). Indian military modern capabilities will help India to fight against Pakistan. Pakistan will take some counter measures to deter the Indian military from any aggression. Nuclear weapons are not workable in the critical case of India and Pakistan only the solution conventional deterrence is effective in South Asia.

Pakistan should improve its warfighting capabilities and improve its internal condition. Pakistan should improve its management system, financial condition and security system like India. The military modernization of India would value the Indian military to achieve its goal to execute the operations and take real-time information that's why conventional imbalance created in south Asia. Pakistan economy is not stable. Pakistan also have internal issues like corruption, debt, unemployment and mismanagement. Like economy and internal issues Pakistan military is also facing serious challenges. Pakistan must improve its Air force, Navy and its Maritime Domain. Pakistan have no nuclear submarine. Pakistan needs nuclear submarine for credible deterrence at sea. Pakistan should get help from China because China has vast experience in development of nuclear powered submarines. Pakistan must improve its military with defense deals. Pakistan economy is not stable so defense deals are really helpful for Pakistan military and regular military exercises can improve its warfighting capabilities. Pakistan would also speed up work on its military, weapon and equipment. So that Pakistan will be able to maintain strategic stability in south Asia. The Indian Army developing ATGM Nag, seeking to induct ATGM Spike, modern MBTs. India buy aircraft from France and Russia. India is buying Barak-8 air defense systems from Israel. India acquire S-400 from Russia. India has nuclear submarine "Arihant" its cost is US \$500 million. Arihant surfaced speed is 12–15 KN and submerged speed is 24 KN. Indian navy achieve second strike capability through the Indian nuclear submarines. Indian military is in process of improving its Army, Air force, Navy. India is also improving its conventional and nuclear capabilities to maintain overall warfighting superiority vis-à-vis Pakistan. India create a huge gap

for Pakistan. India would start limited strikes against Pakistan. If India start limited war then India may face severe response from Pakistan side which may not remain limited for India. The latest air defense, weapons, long range armed drones, equipment, and aircraft will increase their overall operational war fighting abilities.

If India attempt any fight with Pakistan or the surgical strike against Pakistan then India will be face strong response from Pakistan. India and Pakistan are enemies from the day of independence and also major economies in south Asia. Indo-Pak hostilities is a big problem for the stability of south Asia. If both India and Pakistan cooperate with each other they get benefit and this region gain collective growth and connectivity. But the main reason of problem is Indian military's modernization and aggressiveness. Which create asymmetries and increase uncertainty between both states Pakistan and India. SAARC will help both states India and Pakistan should solve their matters peacefully. In the region but the Indian government boycotted the SAARC session in Pakistan. . Indian and Pakistan's rivalry and competition is harming the stability and peace in south Asia. Indian modern weapon and equipment create the imbalance and huge gap for Pakistan. And the aggressive doctrine of India is also having negative impact on the security of Pakistan.

3.1 Increasing Conventional Asymmetries:

Indian military modernization and advancement is a main reason in the increase of weapon in south Asia. And the Indian doctrinal shift is also having negative impact in the security and stability of south Asia. Indian this military modernization will create huge gap in conventional domain for Pakistan. It is serious challenge for Pakistan. Unfortunately, Pakistan condition is not good its economy is falling and it is not possible for Pakistan to afford arm race and through this way India is creating problems for Pakistan. USA also help India and India get membership of various agreements so India is gaining more power and this is serious issue for Pakistan security. The Indian military weapons like spy satellites, aircraft, artillery, missiles, anti-tank guided missiles, long range air defense system and their modern weapons is forming huge gap. And all these modern weapon and equipment urge India to execute surgical strikes and limited war against Pakistan.

3.2 Arms Race between the two nuclear powers

Indian modern weapon and equipment are creating serious challenge for Pakistan. India buy dangerous weapon from different states like USA, France, Israel, Russia. India spend a huge part of its economy on its defense system but Pakistan cannot afford all of this because Pakistan economy is deteriorating. The growing modern and advance naval capabilities of India including conventional and nuclear submarines, lethal attack helicopters, modern and advance aircraft carriers, spy satellites , tanks, destroyers, frigates, radar system, rockets and missiles system all these capabilities changing the strategic situation and balance of the regional powers and creating arm race for other states especially for Pakistan. Because of India other states also increase and improve their forces, weapons and naval capabilities to fill the gap. Moreover, India wants its hegemonic power in all domain in south Asia. For this India keep modern weapons like spy satellites, aircraft, artillery, missiles, anti-tank guided missiles, long range air defense system etc. Pakistan will not fill this gap but for its security, Pakistan want to maintain the balance for the conventional deterrence for this reason Pakistan get help from China. Indian this dangerous arm race is the responsible of arm race in the south Asia. This Indian arm race would create serious challenges for the stability of south Asia. According to Masood Ur Rehman Khattak:

“The Indian military is facing the challenge of the outdated weaponry in its arsenal. On the other hand, Pakistan military is quickly filling the conventional gap but, at the same time, the Indian government has allocated billions of dollars to revamp its overall military machine to maintain its strategic dominance in South Asia. In future, it would become difficult for Pakistan to maintain the conventional parity with India”.

3.3 Limited war possibility

Indian conventional arm race is creating the chances of limited war. India and Pakistan both states are nuclear power. India is not going for nuclear war but no one can prevent India from limited war. Indian aggressive changes in their doctrine and military modernization changing the strategic situation of south Asia. But Pakistan will always give reply of any aggressive action of India against Pakistan like Balakot issue. In the Balakot surgical strike of India, India failed badly. Pakistan told India Pakistan will not accept the Indian aggression and Pakistan always give reply to India. And in this way India have to face heavy damages. Pakistan nuclear weapon is indo-centric. But Pakistan should improve its conventional weapon. India swiftly improving its

warfighting and ground capabilities against Pakistan. For the conventional modernization India is getting help from other major powers. India is making deals and signed agreements with United States of America and other countries for gaining its hegemony in south Asia. Indian all strategies are creating a huge gap for Pakistan in the conventional domain and it also impact the security of the region. According to former brigadier Feroz Hassan Khan he said about the limited war that; “Limited war in India’s mind would be a total war for Pakistan from the very beginning. You can start a war, but you cannot end it on your terms and conditions. Limited war as thought by India will never remain limited as they think, it will expand more, because much more destruction and escalation control would be very dangerous” (Khan B. F., 2017).

3.4 Threat of Escalation: Limited to full fledge War

Indian swift and quick change in their doctrine and the modernization of arms is changing the scenario of south Asia. India is spending huge part of its economy on its weapon but on the other hand Pakistan is totally depending on its nuclear weapon if India go for limited war or any other aggressive action. The huge imbalance in conventional domain is forcing Pakistan for arm race and depending Pakistan on its nuclear weapon. India should control his aggression and not go for limited war options. If India go for limited war or surgical strike at that time Pakistan will take action and respond to India. Such critically condition would result the limited war to full-fledged war. Pakistan will not allow India and other states to challenge the security of Pakistan. Pakistan want the regional and global peace but if India effect the security of Pakistan or challenge the nuclear or conventional deterrence of Pakistan it is necessary for Pakistan to give quick response and maintain the security of Pakistan. For the security of Pakistan it is important here Pakistan should keep modern credible weapon for its security and defence system. Pakistan should keep weapon locating radars, modern arms, long range air defence, modern helicopters, artillery, gunship and spy satellites etc.

a) Threat of Nuclear Exchange:

Indian military advancement and demand for acquiring more weapons is basically a threat for the south Asia. The government of India always try to increase the numbers of weapon more than Pakistan. The economy of India allowed it to achieve more weapon. In the case of

Pakistan it is very important to maintain the conventional weapon and capabilities to fill the gap in conventional domain.

Former Ambassador, Abdul Basit, highlighted the importance and role of nuclear weapons for preventing the conventional wars, “We will not like our deterrence to fail and secondly, Pakistan is not in an arms race with India. We will maintain our deterrence at a minimum level. If India becomes irrational in its approach vis-à-vis Pakistan and leaves no option for the country, then Pakistan would have no other option but to use Tactical Nuclear Weapons (TNWs)”.

Pakistan should improve and develop its conventional weapons for safety measures. Pakistan should require the strong defense system, second strike capabilities, missiles, advance radars and maritime capabilities. If India go for conventional war so Pakistan will respond properly. According to Mark Fitz Patrick views, “ Pakistan’s nuclear weapons as a deterrent to the Indian military’s conventional superiority: India has such a huge advantage over Pakistan in all forms of military spending and modernization, it is inevitable that India is going to outspend, out modernize, overwhelm in terms of numbers anything Pakistan can do. So, it is understandable that Pakistan sees nuclear weapons as an equalizer to all these advantages that India has”. The main participants India and Pakistan are the responsible for the regional stability. Other major power are also involved in the south Asia. The strategic cooperation of USA and India effect especially Pakistan than other states. Other states of south Asia are allied with India for the strategic, social, and economic and security purposes. But in the case of Pakistan, it challenged the Indian power and its hegemonic position in the south Asia. Pakistan also having nuclear weapon and both states have many clashes since the Independence Day so both India and Pakistan consider each other as rivals. Pakistan nuclear weapon system is for defence and security purposes however the Indian nuclear weapon is for the hegemonic power and position in south Asia. Both states Pakistan and India continuously struggle for gaining power.

In this continuously process of increasing weapons both states may face the future war. Indian increasing arm desire urge Pakistan for keeping more weapon to prevent India from aggression. Other states like USA also providing power to India. The increasing power of Pakistan is aimed at India to deter the risk and threat. Major Powers are also responsible for the instability and arm race in south Asia. The major powers have interest in the Indian Ocean. The

USA help the India at the internal level also. When India violate the Line of Control, USA India. India is violating the human rights in Kashmir but all the major powers do nothing. This all show that how USA helped India and how India is aggressive state. The Indian surgical strikes and human rights violation in Kashmir are the two main cases of Indian toxic aggressive behavior in south Asia. All the western states not any importance and attention to these issues. In the world USA always take stand for other issues but in the case of Pakistan and Kashmir USA do nothing and remained in the side of India because of the its own interests. Indian relations with USA will give it freedom at every level India buy more weapons and equipment but no one stop India but when Pakistan decided to achieve the weapons USA put sanctions. India get help and favor from USA at the international level. Because of USA support India behavior is becoming so aggressive. The Indian increasing conventional weapons may cause the future conventional war. So there is always the possibility of limited war no one prevent India from the limited war. The major powers must end the Indian aggression and only India is always accountable for any destruction.

Pakistan always attempt to avoid the conflict but it is necessary for Pakistan to take security measures. For balancing the Indian power Pakistan grow its relation with China. Pakistan and China cooperate with each other. China support Pakistan in every field. China help Pakistan in building its weapon and in the maritime abilities and know-how. Both China and Pakistan are close friends and allies. In the economic area China also help Pakistan and now both states have signed economic agreement which is CPEC. The great power China help Pakistan and Pakistan is able to stand against India. The cooperation of Pakistan and China is creating problems for India. Now India spend more on its defence system. The Indian and USA Cooperation effect the south Asia and its smaller states as well but China also help and support these states to make them independent.

Chapter-4

Conclusion

The Indian military's doctrinal transformation would seriously challenge the strategic stability of South Asia. India basically wants hegemony, control and power status in south Asia. For its control India required modern weapons and equipment. India is continuously advance its conventional force modernization for security and for its power. It effects the Pakistan's security. Pakistan face three wars after the Independence Day. Because several unresolved issues there is always possibility of limited war. Issues between India and Pakistan are very complicated. Whether it is issue of Kashmir, Siachen, Sir Creek, the water issue or terrorism, both India and Pakistan have been failed to overcome these issues. Soon after the independence of Pakistan and India, both states have Kashmir issue. India and Pakistan both states have nuclear weapon. No one afford major war but the possibility of limited war is always remain. India focuses on its conventional weapons. For modernization India has different deals with other states, Russia, America, Israel and France.

Moreover, India used the Afghan soil to create problems for Pakistan. In the post 2008 situation in which Islamabad faced huge losses. Indian policies in Afghanistan have put serious challenges for Pakistan and Pakistan is facing political, economic issues. Moreover Pakistan is

facing terrorism. The US and European countries are in strategic pact with India. India imports billions of dollars' worth weapon and equipment from these countries. Russia also enjoys close political, economic and defense collaboration with India. Most of the Indian arms are imported from Russia. Russia is also least concerned about Kashmir issue. Russia sees situation in Kashmir from the Indian lens. Pakistan has always supported the Kashmir. Pakistan always tried its best to keep this issue alive in the UN. Because of Kashmir issue India wants to destabilize Pakistan internally. The Indian military also working at sea for its power. Indian military is working closely to induct assured second-strike capability at sea to deter Pakistan from any undesirable action. This would seriously threaten Pakistan's Gwadar Port and maritime interests in the Indian Ocean and Arabian Sea.

In 2017, India introduced a joint doctrine of the Indian armed forces in which India intended surgical strikes against Pakistan. Indian doctrinal transformation and massive military modernization would create huge gap between India and Pakistan. This conventional asymmetry would allow India to carry out limited strikes against Pakistan in case of any terrorist attack on the Indian soil. Pakistan has declared nuclear policy of 'first use' to deter any threat to its security and territorial integrity. The strategic condition of South Asia cause instability and disorder because of the doctrinal shift in the Indian military. Indian rapid military modernization forced Pakistan to jump into conventional arms race to establish conventional deterrence. Pakistan want to make it costly for the aggressor. But in case, if it could not match the Indian conventional superiority in that situation Pakistan's nuclear threshold would be under great strain. It depends on situation how Pakistan control the situation and Pakistan is trying consistent and significant efforts to narrow the gap in military equipment holdings. . India launched massive military buildup in South Asia to overcome weakness in the overall military. India is changing its Army with T-90-S Main Battle Tanks to carry out Quick & Swift limited war. The Indian Army is also want to keep long range Artillery Guns, Aircraft Carriers, Frigates, Corvettes, Destroyers ,P8I-Survellince and Reconnaissance Aircraft , Rukmini Spy Satellite, Guardian UAVs for Sea, SU-30 MKI Russian Aircraft, Rafale French Aircraft, Armed UAVs: Heron TP, Harpy Missile, Harop Missile, Apache Helicopter, Spy Satellite for IAF, Brahmos etc. All these capabilities would help the IAF to attack the enemy territory effectively. Nuclear weapons will not prevent India from military operations and from any limited war. Pakistan has effectively balanced the Indian military in certain areas

which includes Main Battle Tanks, Advance Artillery Guns, Attack helicopters, anti-tank guided missiles, second strike capability and armed UAVs.

But there are some areas where Pakistan would require to keep modern weapons and equipment to counter any offensive operations on its territory which are Long Range Air Defense, Nuclear Submarines along with SLBMs, Fifth Generation Aircraft and Spy Satellites. India is forcing Pakistan to involve in costly Arms Race with India. Indian arms and weapon and doctrinal shift is certainly aimed at Pakistan and not aimed at China. If India try to harm the Chinese security and it is not possible for India to maintain its stability and security. China is a big power. So this is clear that Indian aggression and doctrinal shift is main for Pakistan. India create huge gap for Pakistan in conventional domain. This conventional gap allow India to go for limited war with Pakistan. India also want its hegemony in the Indian Ocean region. All the times, Indian Ocean war the main and concern of the major powers. Major Powers always controlled the water routes. When the colonial era ended, after the rule of British from the East Suez the Indians try to take control and maintain its hegemony in the Indian Ocean region. The coastal line of the region is not the only focus of India it is more than it. India want to control the Indian Ocean region. India install it nuclear submarine in the Indian ocean for the control. The Indian Ocean nuclearization is a big challenge for Pakistan, China and for the stability of south Asia. Because of Indian nuclearization in the Indian Ocean is worrying and also alarming for other states in the region. India is the main cause of threat in the south Asia, especially for Pakistan. Other foreign powers also have interest in the south Asia region and also in the Indian Ocean. The involvement of great power in this region is also the cause of more chances of warfare. All the factors are the main reason of the effecting stability and peace in the region. Pakistan should prepared for any misadventure from Indian side. It is essential for Pakistan to advance its weapon and deter India in war. Pakistan should advance its technology it must advance and increase its modern capabilities.

Though this Pakistan would able to respond the any attack and enemy measure in the air, land and sea level. Pakistan need to check and remain updated with the all movements of its enemy, India. The natural time information would reject the surprise from Indian side in limited war situation. For the peace of south Asia it is necessary for Indian and Pakistan to resolve all the conflicting issues through a dialogue. Pakistan should make alliances with other states for the

better influence, improving defence system and for the regional stability and security like India. India has strong partnership with others major states especially with USA, Israel and Russia. Because of Indian this strategic partnership with major powers Pakistan development process always remain slow. On the other hand Indian development process will go fast and now India has large number of weapons. The support from USA in the internal matters and also at the international level will help India. And this support will affect the security of south Asia because of Indian aggression and Indian modern weapon and equipment. The increasing number of modern weapons is a threat for the security of Pakistan. Indian powerful weapons make it necessary for Pakistan to take counter measures and also focusing to balance the India, internally and externally. Firstly, Pakistan must improve its political and economic and security properly. After the internal stability Pakistan should go for alliances and reliable friends. All these will help Pakistan economically, strategically and socially. Pakistan and Indian should improve their relations when the both states improves their relation, they will change their bilateral relation completely and it will bring prosperity and stability. Pakistan should offer India if India will agree so it will be good for Pakistan and Kashmir. On the other hand if India not agree with Pakistan and reject its offer. At that time Pakistan will prove that it is peace full state and always try for the regional peace, prosperity and stability of the south Asia.

Chapter-5

Finding and Discussion

- First question was related to How India's rapid military modernization is creating asymmetries vis-à-vis Pakistan in the conventional domain?
- Second question focused on the implications of conventional asymmetries between India and Pakistan on the strategic stability of South Asia?

After careful observation, literature review and analysis the study came up with following findings, these findings are according to the research questions but also started further debate on the subject under discussion for further research and investigation.

India and Pakistan are nuclear rivals. India increase its military capabilities day by day. India signs many defense deals with USA, Russia and France. India and Pakistan respond each other and increase their military capabilities. So that the conventional arms race between India

and Pakistan is rising when India strengthens its forces through increasing main battle tanks, Missile, Helicopter, Spy Satellite etc. then Pakistan also makes and keep more weapons and equipment. The increase in their conventional weapons and equipment may cause asymmetries between India and Pakistan. Pakistan increases its military spending in response to the increase in that of India. India pretend that there is no massive deployment of Indian forces in the states bordering Pakistan. But the most important elements of India's army are located geographical distance from the theatre of operations. India might struggle to support a major war for more than ten days. According to a report of CAG of India the Indian military have War Wastage Reserve (WWR). The WWR want to keep ammunition enough to fight a short powerful war of 20 days. The Indian military has applied undeclared war or hybrid war against Pakistan and this is still going on, making difficult for Pakistan to manage its internal security situation. India is creating challenges and difficulties for Pakistan in the shape of hostile neighborhood in Afghanistan and Iran. According to careful observation, literature review and analysis the study came up with following findings that the hybrid warfare has created more problems for Pakistan than direct military operations since 1947. India adopted this policy well. India would continue its hybrid warfare unless both states realize that proxy wars or secret operations against each other are impossible in the modern times.

Second finding deals with the implications of conventional asymmetries between India and Pakistan on the strategic stability of South Asia. The study found that it is not easy for Indian military to start limited war or surgical strike against Pakistan after the nuclearization of Pakistan. India faced problems. Now it is difficult for Indian army to fight a quick and swift conventional war against Pakistan a nuclear state. After the Operation Parakram' in 2001-02 India faced failure and Pakistan know about the Indian military weaknesses. India and Pakistan are hostile states and both are nuclear power states in south Asia. South Asia is the most dangerous place in the world because of the different disputes and problems like water issue, border issue and Kashmir issue. The military modernization of India create different serious challenges for its neighboring state Pakistan. The Indian military modernization would create security challenges for Pakistan and also create instability in south Asia. Indian military continuous doctrinal change and massive transformation and it would make serious challenges for Pakistan. Pakistan is challenging Indian hegemony in south Asia.

Financially India is good and developed state and Pakistan financial conditions is not good but Pakistan would try to balance the Indian military modernization. India want a conventional and limited war but can't because Pakistan cannot afford any clash in the region because it would have vast impact on the economic growth of Pakistan. India consider China and Pakistan its enemies and India improve its warfighting capabilities. Pakistan economically weak state but Pakistan would try to balance the Indian military's conventional superiority. India placed Indian Armed forces from Chinese border to their border with Pakistan in Rajasthan sector. Indian navy goal is to control the Indian Ocean Region- (IOR). Indian main focused is on maritime operations in the Indian Ocean Region- (IOR). India have nuclear submarine. . INS Arihant surfaced speed is 12–15 KN and submerged speed is 24 KN. Indian navy achieve second strike capability through the Indian nuclear submarines. Indian military is in process of improving its Army, Air force, Navy. India is also improving its conventional and nuclear capabilities to maintain overall warfighting superiority vis-à-vis Pakistan. Indian military would create serious challenges for Pakistan. Pakistan must acquire sea based second strike capability along with nuclear submarine and long range SLBMs. Pakistan has conventional submarine but its range not cover each and every part of India and it will not stay in water for more and long time. It need refueling after sometimes. Pakistan needs a nuclear submarine along with long range SLBMs for second-strike capability at sea to maintain stability in South Asia. Pakistan must improve its conventional capabilities. Modern conventional weapons and equipment help Pakistan to deter India from any such attacks under the CSD. In addition, Pakistan nuclear weapons also help Pakistan to make it difficult for the Indian military to initiate any such operation. Pakistan will make it difficult for Indian military to cross the LoC. Pakistan installed medium range air defense system it will detect and capture their commandos. Pakistan must get help from China and others like India. India has partnership with many states like Europe, Israel, United States of America and Russia India is increasing huge gap for Pakistan in the conventional domain. If India try to attack then Pakistan will use its nuclear weapons. Moreover if Pakistan keep the anti-missile abilities it would help in the security of the country and it can mitigate the threat of the nuclear submarine.

It is fact that keeping these modern weapon is so costly, complex and difficult. But Pakistan should build up its own nuclear and conventional capabilities. Pakistan should keep its navy and forces. Through these capabilities and abilities Pakistan will balance the gap and

maintain security to prevent Indian from any aggression. Pakistan and India should take some counter measures to avoid any war in south Asia. Pakistan and India should make sure the respect of each other. Both states Pakistan and India established norms and values which will control the actions and behavior of both states at the border and in the sea. Pakistan should avoid the conflicts with India and it should improve the security measures. Because Pakistan and China signed an agreement CPEC. This agreement help Pakistan economically and politically. So that the security is matter for Pakistan. Pakistan should avoid all the conflicts. The government of Pakistan and its forces must pay attention to this project. Pakistan and China both are close allies and perfect partners. If India try to harm the security of Pakistan, China help Pakistan because China also have its interest in Pakistan. China always help Pakistan in the development of defence system and it is good for the security of Pakistan. Pakistan should make alliances with other states

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