Ph.D. Thesis

Indian Military's Strategic Thinking Since 2001: Implications for the Deterrence Stability of South Asia

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Dedication

I dedicate this Ph.D. thesis to my beloved ***Parents*** *for their kindness, unparalleled inspiration and endless support throughout my studies.*
Dear Ami and Abu Ji, your selflessness will always be remembered.
Thank you for enabling me to achieve this feat.

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The thesis entitled **'Indian Military's Strategic Thinking Since 2001: Implications for the Deterrence Stability of South Asia'**, submitted by Masood Ur Rehman Khattak is partial fulfillment of Ph.D degree in Social Sciences with specialization in International Relations 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.

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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	Armour 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
BJP	Bhartiya Jannata Party
BJS	Bhartiya Jan Sangh
C4I	Command, Control, Communications, Computers, and Intelligence
CBG	Carrier Battle Group
CJCSC	Chairman Joint Chief of Staff Committee
CNS	Chief of Naval Staff
COAS	Chief of Army Staff
CPEC	China Pakistan Economic Corridor
CSD	Cold Start Doctrine
DRDO	Defence Research and Development Organisation
EEZ	Exclusive Economic Zone
ESM	Electronic Support Measures
EW	Electronic Warfare
FAS	Federation of American Scientists
FMCP	Force Multiplication Command Post
FPD	Fire Power Demonstration

GOC	General Officer Commanding
G-SAT	Geostationary Satellite
HeliNa	Helicopter-launched variant of Nag
HIMAD	High and Medium Altitude Air Defense System
HWS	Hybrid Warfare Strategy
IAC	Indigenous Aircraft Carrier
IAF	Indian Air Force
IAI	Israel Aerospace Industries
IBG	Integrated Battle Group
ICBM	Intercontinental Ballistic Missile
ICV	Infantry Combat Vehicle
IISS	International Institute for Strategic Studies
INS	Indian Naval Ship
IOR	Indian Ocean Region
ISI-D	Inter- Services Intelligence Directorate
ISRO	Indian Space Research Organisation
ITB	Integrated Theatre Battle
ITC	Integrated Theatre Concept
JeM	Jaish-e- Mohammed
JUD	Jamat-u-Dawa
LCA	Light Combat Aircraft
LET	Lashkar-I-Tayyaba
LoC	Line of Control
LOMADS	Low to Medium Range Air Defense system
LORROS	Long Range Reconnaissance and Observation System
LR-ADS	Long Range Air Defense System
LR-SAM	Long Range Surface to Air Missile
MBT	Main Battle Tanks
MDA	Maritime Domain Awareness
MIRV	Multiple Independently Targetable Reentry Vehicle

MPECI	Military Political Economic, Civilian and Informational
MR-SAM	Medium Range –Surface to Air Missile
NATO	North Atlantic Treaty Organisation
NBC	Nuclear Biological & Chemical
NCA	National Command Authority
NCW	Network Centric Warfare
NIA	National Investigation Agency
NSA	National Security Advisor
NSFC	Naval Strategic Force Command
NSG	Nuclear Suppliers Group
PAC	Pakistan Aeronautics Complex
R&AW	Research and Analysis Wing
RAPID	Reorganized Army Plains Division
RPA	Remotely Piloted Aircrafts
RSS	Rashtriya Swayamsevak Sangh
RUSI	Royal United Services Institute
SAARC	South Asian Association for Regional Cooperation
SAM	Surface to Air Missile
SAR	Synthetic Aperture Radar
SHBO	Special Heli-borne Operations
SHORADS	Short Range Air Defense System
SIPRI	Stockholm International Peace Research Institute
SLBM	Submarine Launched Ballistic Missile
SLOC	Sea Lanes of Communications
SPD	Strategic Plans Division
SPH	Self-Propelled Howitzer
SSN	Nuclear-Powered Submarine
SWAC	South Western Air Command
S-WLR	Swathi Weapon Locating Radars
TAI	Turkish Aerospace Industries

TNW	Tactical Nuclear Weapon
TROPEX	Theatre Readiness Operational Exercise
TSD	Technical Service Division
TTP	Tehrik-I-Taliban Pakistan
UAV	Unarmed Aerial Vehicle
UNSC	United Nation Security Council
UVLM	Universal Vertical Launcher Module
VHP	Vishwa Hindu Parishad
WAC	Western Air Command
WLR	Weapon Locating Radar

Figures

Abstract

The Indo-Pak relationship has always been marred by many conflicts and unresolved issues. Both states fought three major wars and a limited skirmish since their independence. The Indian strategic thinking during 1980s focused on deeper thrusts and aimed to cut Pakistan into two. But after the nuclearization of south Asia, India brought shift in their strategic thinking and employed aggressive policies. The study aims to highlight the post 2001 change in the Indian military's strategic thinking and its likely impact on the deterrence stability of South Asia. The study qualifies in the Descriptive, Exploratory and Predictive data analysis approaches. Both primary and secondary data was used to investigate and elaborate different aspects of the study. The study conducted in-depth interviews of Pakistani, Indian and Western retired military officers, diplomats, academicians with expertise in strategic studies. This thesis is divided in four parts. First part set the theoretical base of the study and focused on the realist school of thought and its relevance with the Indian strategic thinking. Second part of the study discussed the doctrinal shift from Sunderji doctrine to Cold Start Doctrine & proactive military operations after 2004, which forced Pakistan to develop battlefield nuclear weapons in 2011 to balance the conventional asymmetries and deter any shallow maneuvers by the Indian military. After their failure to execute CSD, the Indian military came up with the idea of sub- conventional warfare operations- (surgical strikes) in 2012 which later got an endorsement by the Joint Armed Forces Doctrine of 2017, to take out alleged militant groups and their sanctuaries behind the enemy lines. It appears that the Indian policy makers are convinced that the option of 'surgical strike' is acceptable at global level and good for local electorates. All these direct military operations entail dangerous implications for the regional security. Therefore, to avoid risk of escalation in case of any limited conventional war, the Indian military employed 'the hybrid warfare strategy' to tackle Pakistan problem. The

hybrid warfare entails regular and irregular covert operations in which the Indian military is capitalizing on Pakistan's socio-economic, ethno-religious and geo-political vulnerabilities. This mode of warfare has been very successful for India because Pakistan have suffered more losses than any direct armed conflict with India. Third, part of the study highlighted the Indian military's modernization and operationalization aspects. In this part, the study has discussed the Indian military's acquisition of sophisticated weaponry and how it is going to create conventional asymmetries in South Asia. The second part of this chapter dealt with the operational side, in which the study discussed the Indian military's several wargames since 2004 in which they practiced and validated their limited war concepts, cut short mobilization time, improved logistics, conducted joint operations for synergy & integration, offensive maneuvers and night vision capabilities in a Network Centric & Electronic Warfare environment. The last part of the dissertation highlighted the implications of the Indian military's strategic thinking on the deterrence stability of south Asia. This part of the study deliberated in detail on the issues of conventional disparity, possibility of a limited war/surgical strikes & escalation aspects. Moreover, the issue of battlefield nuclear weapons, associated risks of command & control, inadvertent use, accident, lose it or use it dilemma and the possibility of preemptive strike by the Indian military has been covered in detail. The study concludes on these findings that the Indian military's doctrinal shift and massive military modernization would force Pakistan to improve its own conventional and nuclear capabilities. However, the risk of limited war under the nuclear umbrella cannot be ruled out. Pakistan needs to improve its conventional deterrence to make it costly any misadventure by India. The prospects of direct military confrontation between India and Pakistan would decrease with an effective conventional answer by Pakistan. The study argues that, the hybrid warfare strategy has been more successful as compared to direct military engagement. Therefore, it is expected that this

trend would continue unless Pakistan overcomes its political, socio-economic and ethno-religious vulnerabilities. The study determines that India and Pakistan cannot win against each other in any direct or indirect military confrontation, however it is advisable that both states must overcome their differences, resolve outstanding issues through consistent dialogue process in an amicable way for the long term peace and stability of South Asia.

Introduction

The persistent doctrinal transformation by India coupled with massive military modernization has created security dilemma for Pakistan. Conventional asymmetries between India and Pakistan, lingering disputes including Kashmir, distribution of water, Siachen, Sir Creek, hybrid warfare/covert operations and terrorism have further complicated strategic stability in south Asia. Though, the presence of nuclear weapons deterred India and Pakistan from any direct conventional war but the possibility of limited war under Cold Start Doctrine- (CSD), proactive military operations, surgical strikes across the Line of Control- (LoC), and operationalization of hybrid warfare through covert operations, terrorist financing, psychological warfare through media, diplomatic isolation at regional and global political arena have seriously challenged the very existence of Pakistan. The study is mainly divided in four parts, the first part would discuss about the strategic and ideological base for the transformation in the overall strategic outlook of the Indian military. This part of the study would set the theoretical base for further discussion on the subject matter which is going to revolve around the realist school of thought and its relevance with the Indian strategic thinking. The second part of the dissertation would discuss the doctrinal shift in the Indian military. In which, the study would critically analyze the shift from Sunderji doctrine of deep incursions to 'limited war under the nuclear overhang', Cold Start Doctrine/Proactive military operations, surgical strikes and hybrid warfare strategy. The third part of the thesis would discuss the operationalization aspects of the Indian military's strategic thinking. In this part, the study would focus on the Indian military's modernization plans and numerous wargames since 2004 in which they regularly practiced all those concepts/elements which are required in the operationalization of limited war doctrines. The fourth and last part of the study would highlight the implications of the Indian military's doctrinal transformation on the deterrence stability of

south Asia. This section of the study would analyze the different aspects of the strategic stability in south Asia and how the Indian military's aggressive approach has destabilized the deterrence stability vis-à-vis Pakistan. The main objective of the study is to highlight the shift in the Indian military's strategic thinking since 2001 and its implications for the strategic stability of south Asia especially Pakistan. Moreover, it seeks to answer Pakistan's conventional and non-conventional response to balance the Indian military's strategic shift coupled with massive modernization drive. Since, there is a huge knowledge gap and no major study has taken place on this issue in Pakistan, this particular study would fill that gap and add new knowledge in the existing literature.

a) -Research Questions

The study would answer four key research questions,

1. What is the strategic and ideological base for the doctrinal maneuvering by India?

2. How the Indian military's strategic thinking since 2001 altered the balance of power in the region and impacted the deterrence stability in South Asia?

3. What are the dynamics, scope and objectives of the Indian military's modernization drive? And what steps it has taken to operationalize its military doctrines?

4. What are the implications of the transformation in the Indian military's strategic thinking on deterrence stability of south Asia, particularly Pakistan?

b) -Statement of the Problem

The strategic stability of south Asia is in danger because of the consistent doctrinal change, rapid military modernization and aggressive behavior of the Indian military. It is imperative to understand the contemporary strategic thinking of the Indian military to understand the emerging

threats to the deterrence stability of south Asia. The Indian military's doctrinal shift coupled with massive military modernization would seriously create strategic disparity and force Pakistan for countermeasures which may undermine the deterrence stability in South Asia.

c) - Objectives of the Study

(i)- The study would highlight the change in the Indian military's strategic thinking since 2001 and its implications for the strategic stability of south Asia especially Pakistan.

(ii)- The study seeks to answer Pakistan's conventional and non-conventional response to balance Indian military's strategic shift coupled with massive modernization drive.

(iii)- There is a huge knowledge gap and no major study has taken place on this issue in Pakistan. Since this issue is directly linked with the south Asian security, there is an urgent need to investigate, analyze and come up with solid recommendations for the strategic stability of south Asia.

d) - Significance of the Study

The South Asian security is at risk because of the rapid military modernization and change in the Indian strategic thinking since 2001. The nuclear factor brought stability in south Asia but the Indian military's tenacity with CSD, Proactive military & sub-conventional warfare operations, surgical strikes and massive military buildup seriously disrupted peace in the region. It is obvious that Pakistan cannot compete with India in conventional arms race, subsequently it would rely on its battlefield and strategic nuclear weapons to deter any conventional military operation by the Indian armed forces. The risk of limited war and the threat of escalation would remain high because a limited war for India may not be limited for Pakistan. On the other hand, Pakistan has officially declared policy of full spectrum deterrence which covers all aspects of warfare with India. The

policy of full spectrum deterrence and Indian military's persistence with aggressive doctrines coupled with massive military modernization portray bleak picture of the deterrence stability in south Asia which makes this study significant for further investigation and analysis.

e) - Delimitation of the Study

The study face limitation in terms of official Indian documents as well as access to archives in India. Therefore, it would rely solely on open source material i.e. books, journals, online reports and published material related to Indian strategic thinking. Moreover, there would be a limitation to seek interviews of the retired Indian military or foreign office personnel. The study is bounded by an era which covers only developments since 2001, because doctrinal transformation took place after the overt nuclearization.

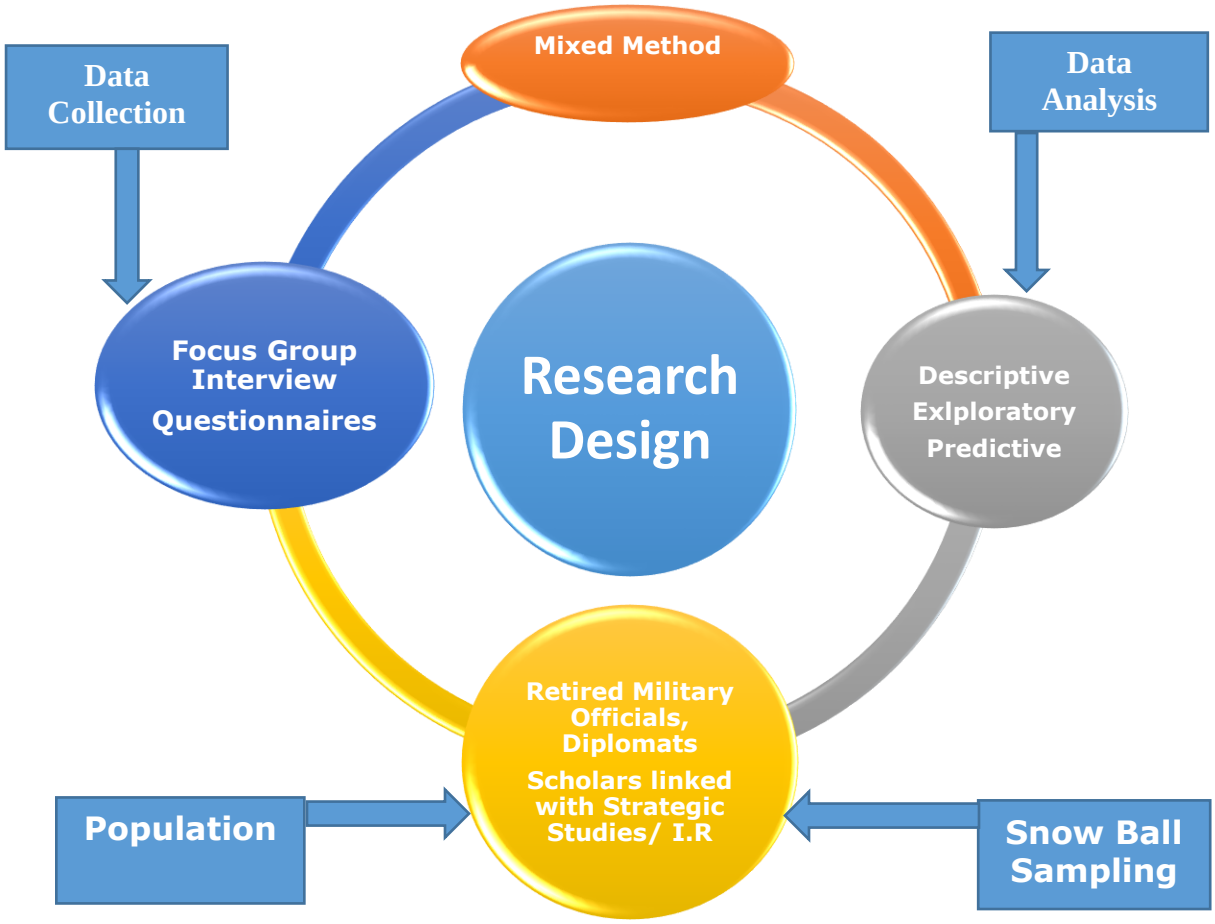
f) - Methodology

The study is based on a mixed method research and qualifies in the Descriptive, Exploratory and Predictive data analysis approaches. Both primary and secondary data was used to investigate and elaborate different aspects of the study. The methodology for this study involved in-depth interviews of retired Pakistan military officers, diplomats and researchers at different Think Tanks/Academicians linked with strategic studies and International Relations.

The study has also incorporated interviews of several former Indian military officers, scholars and Professors with expertise in the Indian strategic culture. The author has also interviewed several Western scholars and experts on the subject for alternate perspective on the issues under discussion. These interviews helped to elucidate the strategic issues and debate related to the strategic stability of south Asia. These interviews have also provided an opportunity to understand under lying problems, key concepts and helped in formulating a Pakistani perspective/narrative on

this issue which falls in the literature gap. Moreover, the researcher used Questionnaires to collect data and used snow ball sampling to collect further information.

Figure-1



Source: Authors own Description

Since this study was related to hardcore military issues, the snow ball sampling was helpful in locating people related to strategic community especially retired officials from military or foreign office because it is difficult to get their information online. The secondary data was also used which included the published official documents, books research article and reports.

g) -Background of the Study

India and Pakistan since their independence in 1947 are locked in relentless hostilities. Both states have fought many wars and the possibility of future (limited or total) war cannot be ignored because of the several unresolved issues, conventional asymmetries and promulgation of offensive strategies by the Indian military. The overt nuclearization proved to be a stabilizing factor in south Asia, because since 1998 both states have not fought any major war (except a small skirmish at Kargil in 1999). The threat of nuclear weapons deescalated an imminent war in 2001-02 and post 2008 Mumbai attacks.

The Indian strategic thinkers after the nuclearization of south Asia and subsequently 1999 Kargil operations came up with the idea of a limited war under the nuclear shadow, which was later transformed into CSD or proactive military operations. The idea of limited war entails serious implications for the strategic stability of south Asia. The Indian military is persistently working to operationalize this concept of shallow maneuvers thru regular military exercises close to the border with Pakistan. However, many neutral observers believe that the idea of CSD or limited war under the nuclear umbrella is just a myth. The Indian military lacks the required offensive punch to effectively execute such concepts against Pakistan.

That does not mean that India would never have such a capability. Thinking, motivation and political will is there to revamp military muscle and enable the Indian military for quick, swift and intense warfare under Network Centric and Electronic warfare environment. According to Defensive Realist school of thought, “if any state becomes too powerful, balancing will occur. Specifically, the other great powers will build up their militaries and form a balancing coalition that will leave the aspiring hegemon at least less secure, and maybe even destroy it” (Tim Dunne,

2013). In that context Pakistan is working according to defensive realism and trying to balance the Indian military modernization and doctrinal transformation by an effective conventional and nuclear counter measures. Though, Pakistan is effectively matching the conventional asymmetries to some extent but still there are certain areas where Pakistan military lags behind. The Indian military in future would have edge in many areas which includes, space/spy satellites, S-400 long range air defense systems, advance artillery, nuclear submarines, fifth generation aircraft, Network Centric & Electronic Warfare capabilities and long-range armed UAVs.

The defense collaboration of India with Russia, Israel and US/EU would revamp the indigenous defense industry of India and fill the operational gaps. The execution of any offensive strategy would require impeccable force backed by advance technology, weapon and equipment. For instance if India has to carry out limited incursions or surgical strikes across the international border or LoC, it requires specially trained forces, highly sophisticated gunship helicopters, close air support of the fifth generation aircraft to tackle Pakistan's air force, S-400 or Barak-8 type of advance medium and long range air defense systems to dissuade Pakistan from any counter strikes, spy satellites for real time information along with human intelligence on ground in an enemy area for precision strikes and of course political support at home and diplomatic backing by the International community.

As of today, the Indian military is far short of these capabilities or elements to operationalize any conventional limited operations against Pakistan. Pakistan's own conventional capabilities are quite effective which may perhaps make it costly for the Indian military to cross the LoC, working boundary or International border. In that context, the third chapter of the study deals with the Indian military modernization and its likely impact on Pakistan, because once these capabilities are acquired by the Indian military, it may resort to misadventure. But as far now, it is difficult for

the Indian military to carry out any conventional military operations under CSD or so-called surgical strikes because Pakistan has the ability to reply in the same fashion, which may exceed the cost of any misadventure. Another facet of the Indian strategic thinking is the execution of hybrid warfare strategy. The hybrid warfare is presumably adopted because of the threat of escalation in case of CSD or surgical strikes against Pakistan. The nuclear factor and lack of adequate offensive punch in the Indian military to carry out any swift conventional operations across the LoC compelled India to adopt a cost-effective approach through covert operations. The idea is to capitalize on Pakistan's political, social, economic, ethnic, sectarian, strategic and geographical vulnerabilities.

In this way, the Indian military will not carry out any arduous task of mobilization or take the risk of sending Special Forces across the border for surgical strikes. It appears that the best approach, according to the Indian policy makers is to carry out covert operations in areas of greater sensitivities especially in tribal areas and Balochistan province bordering Afghanistan, Iran and Arabian Sea. Both these areas were neglected due to the flawed policies of the state since independence. Which allowed the nefarious elements to take advantage of the socio-economic backwardness of this area. The strategy of hybrid warfare helped India a great deal. Subsequently, the state of Pakistan faced huge civil- military casualties, gigantic economic losses, and diplomatic isolation at regional and global level. However, as of today Pakistan has established its writ in most parts of tribal areas and Balochistan but still a long way to go for structural peace in these areas. Instability and turmoil in Afghanistan and the Indian presence would have direct bearing on the security situation of Pakistan. It is argued that, the Indian presence in Afghanistan and Iran is a source of concern for Pakistan, because from these two sanctuaries it has been financing problems for Pakistan. The Indian government has categorically expressed its displeasure over the

multi-billion-dollar project China Pakistan Economic Corridor- (CPEC). To disrupt CPEC and to create subversion in Balochistan, the Indian government has allocated millions of dollars and deployed high ranking intelligence operatives. However, Pakistan has also beefed up security in and around Balochistan to protect Gawadar port from any internal or external subversion. The Indian military's strategic thinking portrays aggressive mindset to deal with issues in Indian Held Kashmir- (IHK), LoC or Pakistan. Such an approach is dangerous and would plunge the region into further instability and turmoil. The last part of the study discussed in detail the implications of the Indian military's doctrinal transformation for the strategic stability of south Asia.

The Indian military's strategic thinking since 2001 is primarily focusing on limited incursions or shallow maneuvers. They have discarded the idea of total war because of the nuclear deterrence. To fight a quick limited war or to carryout surgical strikes, the Indian military would require agile force. To overcome shortcomings in the overall operational capabilities of the Indian military, it has launched a massive modernization program. In which the Indian military is working to equip its triad forces with modern weapon and equipment, network centric and electronic warfare capabilities. The Induction of highly sophisticated weaponry would create conventional disparity in south Asia.

There is balance at strategic level but at the conventional level there is imbalance. Pakistan's economy does not allow arms race with India. But despite economic fragility, Pakistan's indigenous defense industry is quite good and fulfilling the operational requirements of the military. But there are certain weak areas which needs special attention. The conventional asymmetries would push Pakistan into an arms race which is not at all suitable for a country like Pakistan. Most of the population in India and Pakistan are living below the poverty line. Instead of engaging in arms race both states can spend that money on the socio-economic and human

resource development of the people living in their respective countries. But the Indian military's aggressive thinking has forced Pakistan to maintain conventional parity vis-à-vis India to counter any limited incursions or surgical strikes. Due to economic constraints Pakistan may not maintain conventional parity with India in future. To fill that gap, Pakistan developed the battle field nuclear weapons with low yield and short range to deter any armour incursions or shallow maneuvers by the Indian mechanized forces. Many observers in the West and India believe that the Tactical Nuclear Weapons- (TNWs) would destabilize the nuclear deterrence in south Asia.

They argue that the deployment of TNWs in the battlefield would expose them to theft, sabotage, inadvertent accidental launch and preemptive strike by India. There is a perception that connecting TNWs with conventional warfare is risky. The deployment of nuclear weapons in the battlefield itself means that they are going to be used at some later stage of war, which creates anxiety in the neutral observers. However, Pakistan believe that the sole purpose of the battlefield nuclear weapon is to deter conventional attack by the Indian military. Pakistani perspective revolves around three main arguments. First the TNWs will be controlled by the central command, which is National Command Authority- (NCA). Secondly, the TNWs are not offensive weapons, Pakistan has no intention of attacking India and lastly these weapons will be used in response to the Indian conventional limited incursions.

At what stage the TNWs will come into practice, it has been kept intentionally ambiguous by the Pakistani policy makers. The motive behind the development and deployment of TNWs is to fill the gap in the conventional capabilities which India may exploit in future. According to Pakistani perspective the development of TNWs and adoption of full spectrum deterrence strategy has filled the vacuum in Pakistan's conventional capabilities. Pakistan has linked its conventional and nuclear strategy to deter any misadventure by the Indian military. The Indian government must

realize this fact that ‘the era of hot wars is over’. Aggressive doctrines like CSD, proactive military Ops, Surgical strikes, and continuous hostilities on the LoC, execution of Hybrid Warfare Strategy-(HWS), covert operations and diplomatic onslaught & boycott will never help either party. India and Pakistan cannot subdue each other after the nuclearization of south Asia. It is better that both states must show some maturity and resolve their outstanding issues with consistent dialogue and reconciliation process.

Chapter-1

Strategic and Ideological Base for Doctrinal Maneuvering by the Indian Military

1. Introduction

The relationship between India and Pakistan is complex and fragile. Both states consider each other as enemies because of many unresolved issues including Kashmir, water distribution, Siachen, Sir Creek and Terrorism. India and Pakistan fought three major wars in 1948, 1965, 1971 and a limited conflict in 1999. The unresolved disputes and heightened tensions on the Line of Control- (LoC) and change in the government in India brought shift in their overall strategic thinking vis-à-vis Pakistan. This chapter primarily evaluates the impact of Hindutva ideology on the doctrinal transformation and military modernization in India.

India aspire for a global power status and that could only be achieved through economic and military muscle. The Indian economy is doing well, and it has economic partnership with leading countries. The second aspect is the military muscle on which the Indian government is pouring billions of dollars. The incumbent government in India is believed to be influenced by the *Hindutva* ideology, which played a great role in their electoral victory in the Indian politics. It is likely that this trend would continue in the next general elections in India. Anti-Pakistan rhetoric has been central part of the PM Modi led Bhartiya Jannata Party- (BJP) government, which has also brought dramatic shift in the overall Indian strategic thinking. It is noteworthy that the study under investigation focusses on the post 2001 change in the Indian military's strategic thinking. Initially, the Indian military came up with the idea of limited war under the nuclear overhang in 2000. Later, this idea was transformed into Cold Start Doctrine in 2004 under the leadership of Indian Prime

Minister Manmohan Singh, who ruled India from 2004 to 2014 (Dutta D. , 2018). During these years major shift in the Indian strategic thinking has been observed, when the Indian military introduced CSD in 2004, launched massive military modernization drive, initiated Hybrid warfare, established Technical Service Division- (TSD) a secret Unit in the Indian army in the post 2008 situation, carried out numerous military exercises close to the border to practice and validate their limited war concepts to carry out quick and swift shallow thrusts within 48-96 hours after any alleged terrorist attack by Kashmir based fighters having links with Pakistan's intelligence agencies.

The influence of *Hindutva* was non-existent on the congress party of India, but it is clearly visible in the BJP's incumbent government. It is also considered as the political wing of the Hindu extremist organisation, Rashtriya Swayamsevak Sangh- (RSS). After their massive win in 2014 elections, the Modi government decided to deal with Pakistan in a hawkish manner. Since then the Indian government led by BJP had taken few aggressive steps which has created unease in Pakistan. The Indian strategic approach in the Modi administration has focused on six major areas; first to speed up military modernization drive to fill the gaps in overall war fighting capabilities of the Indian armed forces.

Secondly, focused on indigenization under the slogan of *make in India,* which has attracted many foreign defense companies to not only share their weapon systems but also transfer technology to the Indian government and private sector defense firms. In this way, India would achieve the goal of indigenization and reduce their dependence on the foreign partners. Thirdly, the Indian government has improved their strategic partnership with the US, Israel, Russia and Europe. Though, they already purchased most of their weapon systems from Russia, but in recent times both countries have increased their defense collaboration under the BJP government. Fourth, Modi

regime have adopted a policy of non-cooperation and pre-conditioned the dialogue process with Pakistan's assurance to cease any alleged support to Kashmir based militant groups. Fifthly, the Indian government has also launched a massive campaign to diplomatically isolate Pakistan at regional and global level. Sixth, the Indian strategic thinking has also focused on Afghanistan and Iran, improved its political, economic and strategic ties to reduce Pakistan's influence.

According to Pakistani perspective the Indians have launched hybrid warfare against Pakistan. They are using the Afghan soil for funding/nurturing and training militant groups in Federally Administered Tribal Areas- (FATA) (now part of Khyber Pakhtunkhwa province) and Balochistan. With this background, the first chapter focuses on the theoretical approaches that influence the transformation of the Indian strategic thinking since 2001.

1.1. Theoretical Framework

The nuclear factor and hardcore strategic competition between India and Pakistan, potentially invite theoretical approaches envisioning the classical concepts of power politics. Though, the concept itself has philosophical endeavors that creates challenges for both states to classify the traditional connotations of power politics mainly because of their regional conflictual approach. Therefore, the available theoretical literature which explains the broader and narrow aspects of power politics highlights the application of classical realism along with the concepts of offensive and defensive realism, security dilemma, and conventional deterrence. The realist school of thought predominantly holds an important place in the historical as well as in the modern hemispheres of power politics. The topic under investigation has its limitations when it comes to involve the greater explanations of realistic phenomenon. The literature identifies both classical and neo-realistic approaches to deal with the concept of power between traditional and modern

states. Scholars that has been given weightage and recognized as the pioneers of the realist school of thought can be classified as Chankya Kautilya, John J Mearsheimer and Kenneth Waltz.

Strategic thinking of the state is always a product of strategic environment of the state. At the same time, it is blend of realistic tangible and intangible factors of the strategic environment. India is aspiring for a great power stature and it realizes without military muscle acquiring stature of a great power is not possible. So, it goes for military buildup, the military buildup has its own dynamics which have been adequately explained by the various paradigms. Especially offensive and defense realists. The Indian strategic thinking in the historical context is very much a reflection of Chankya Kautilya's perception about the state's defense apparatus. However, in the modern times the Indians strategic policy is reflection of offensive and defensive realists. Within south Asia, the Indian policies are very much a replica of the offensive realism.

The main proponent of offensive realism John Mearsheimer believe that a country's power is measured through the 'material capabilities' that a state possesses. He denotes a country's military muscle is measured through its conventional and nuclear forces. Apart from military muscle a state must also build its economic clout to maintain its dominance in international politics (Hua, 2007). The study emphasized on the Indian military's thinking and modernization aspects, which comes under the purview of offensive realism. The Indian military buildup depicts that India is aiming for a global power status.

The concept of blue water navy, induction of aircraft carriers, nuclear submarines, fifth generation aircraft, long range missiles, huge civil-military nuclear program, defense collaborations with major powers, struggle to get a place in Nuclear Suppliers Group-(NSG) and a veto power status in the United Nation Security Council- (UNSC), portrays that India is aiming for a global power status. In that context, the conventional and nuclear military buildup creates security dilemma for

the regional states especially Pakistan. John J Mearsheimer further argues "that great powers fear each other. They worry about the intentions of other states, in large part because they are so hard to divine. Their greatest fear is that another state might have the capability as well as the motive to attack them. This danger is compounded by the fact that states operate in an anarchic system, which means that there is no night watchman who can rescue them if they are threatened by another country. When a state dials the emergency services for help, there is nobody in the international system to answer the call" (Mearsheimer, 2006).

In these circumstances, Pakistan also fears that India may achieve capabilities to harm the national security and territorial integrity of the state. The historical baggage of 1971 humiliating defeat is still fresh in the memories of the political and military elite in Pakistan. They believe that continuous shift in the Indian strategic thinking along with massive military modernization would jeopardize the strategic balance in south Asia, opening the avenues for a limited conflict which may not remain limited for the longer period of time and result in the devastation of both states.

According to offensive realists, status quo powers are seldom found in world politics, because the international system creates great enticements for states to look for prospects to increase power at the cost of adversaries, and to take benefit of those circumstances when the benefits outweigh the costs. A state's ultimate goal is to be the hegemon in the system (Snyder, 2002). The Indian military's approach is in line with the offensive realists. The Indian strategic thinkers believe it must become a hegemon in south Asia. India wants to maximize its political, military and economic influence in south Asia to an extent where no other power in the region question or challenge its influence and hegemony. However, on the other hand Pakistan is struggling to maintain balance of power with India in south Asian setting. Pakistan is working under the defensive realism paradigm. The defensive realists never go for power maximization. But they

maintain their position in the system. Kenneth Waltz call it "survival" (sufficient security) can be secured with power well short of the "hegemonic" extent proposed by Mearsheimer in offensive realism (Snyder, 2002). This is the reason that we don't see power maximization by Pakistan in the context of establishing hegemony in the region. The acquisition of nuclear technology and conventional power is the result of continuous threats by the Indian military since 1947. The Indian military buildup has created security dilemma for Pakistan. The concept of security dilemma was coined by John H. Herz in 1950, since then this concept has become part of the debate whenever we discuss security maximization of one state leads to the insecurity of other state (Dowding, 2011).

The essence of security dilemma is that, steps a country takes to augment its own security undermine the security of neighboring state. In such a situation a state suffering from security dilemma take all necessary steps to ensure territorial integrity and sovereignty of that particular state. In the south Asian context, Pakistan is facing security dilemma because of the Indian military's maximization of power in the region. The conventional asymmetries would create a gap which may be exploited by the Indian military at some stage. The security dilemma pushed Pakistan towards arms race.

According to the former Director General of Arms Control and Disarmament Agency- (ACDA), Strategic Plans Division, Pakistan, Air Commodore (retd) Khalid Banuri, "the Indian military modernization would create security dilemma for Pakistan and it will have to do whatever it is possible to defend itself" (Banuri, 2018). This is the reason that, to offset Indian military's conventional superiority Pakistan military came up with battlefield nuclear weapons to deter any aggressive maneuvers by the Indian armed forces under their proclaimed CSD or proactive military operations. The Indian approach to the school of realism is little different from the explanations of

power by the above-mentioned scholars. Both traditional and modern outlook of the Indian power politics gets its strength from its own strategic thinker, Chankya Kautilya also known as Brahman Kautilya- (Chanakya-Vishnugupta). It is believed that Kautilya played an important role in the debacle of Nanda dynasty and established the kingdom of Chandragupta Maurya in 321 B.C. He wrote a book *Arthashastra*, which is a detailed work of statecraft, military strategy and diplomacy. The *Arthashastra* is divided into fifteen books. Ten out of fifteen books are devoted to diplomacy and war (Chaliand, 1994). This is the reason that the study under investigation has considered this masterpiece to understand the historical significance of *Arthashastra* and its relevance with the modern strategic thinking of India.

If we analyze the same strategy with the modern strategic thinking of India, we may conclude that this is the true reflection of Kautilyan six-fold policy. Though, as part of theoretical framework the relevant parts of Kautilyan theory will be discussed. The relevant portions of Kautilya's six-fold policy are *war and marching.*

i) -Vigrha - (War)

By war Kautilya means that, "When a king is in a superior position compared to his enemy, he will attack and wage war" (Boesche, 2002). To explain this concept Kautilya mentioned three types of war in his book.

(a)- First is ***Open War***, which is a declared total war against an enemy, in which whole military machine, Air Force, Army, Navy, and Intelligence in conjunction with grand strategy is involved (Boesche, 2002). The application of this strategy can be seen during the 1965 and 1971 Indo-Pak wars, respectively (Robinson, Greg Cashman and Leonard C., 2007). The clear manifestation of the ***'Open War'*** strategy by India during the 1971 Indo-Pak war suggest its execution through the

application of ***'Undeclared War'*** strategy (explained in Part-C). In other words, India initiated the war in Bangladesh through hybrid warfare strategy by raising Mukti Bahini insurgent group (Haqqani, 2015) and after successful execution of it; New Delhi transferred the military strategy from undeclared to Open War strategy and attacked East Pakistan (now Bangladesh) with its regular military (Olusanya, 2006). Which resulted in the dismemberment of Pakistan. Though, there were other political and socio- economic factors also which alienated the East Pakistan population and resulted in chaos, but the Indian military's direct involvement played a vital role in the fall of Dhaka. India effectively utilized the opportunity born out of Pakistan's internal political crisis and also successfully capitalized the geographical vulnerabilities of Pakistan and ultimately imposed demeaning defeat on Pakistan military in 1971. Brigadier (retd) Feroz Hassan Khan explained the impact of Kautilya on the modern strategic thinking of India, he said,

> *……. the Indian strategic thinking has strong roots from that time of Chankya Kautilya, which is the time of Chandra Gupta Maurya. That Kautilyan thinking always existed in the strategic thinking of India……Yes, I do find relevance between the Hindutva ideology and the Indian strategic thinking* (Khan B. F., 2017).

Such a baggage of history is still evident in the modern strategic thinking of Pakistan. This is the reason that Pakistan has always feared India's greater involvement in Afghanistan, because the ghosts of East Pakistan still haunt Pakistani policy makers. Pakistan don't want to see same situation in its tribal belt or in Balochistan. Thus, the modern strategic thinking of India is hawkish and working on the military muscle and hybrid warfare strategy which will be explained in later part of the study.

(b)- The Second concept is a *Secret War*, a sudden attack, terrorizing from one side and attacking from another side (Black, 2016). Now this concept is also relevant with the Indian Army's CSD or proactive military operations which aims at quick and swift multiple thrusts into Pakistan, which

may include surgical strikes, use of Special Forces, making it difficult for Pakistan army to engage India on multiple fronts. India is effectively pursuing this strategy and working hard to operationalize these doctrines against Pakistan (Rees, Pauline Eadie and Wyn, 2015). Kautilya advocated the role of Special Forces for cross border raids to carry out assassinations and terrorize the civilians (Daniel Coetzee and Lee W. Eysturlid, 2013). With this background, the contemporary Indian policy makers are formulating policies according to the Kautilyan philosophy. The Indian military in the post 2008 situation established a secret unit with code name Technical Service Division- (TSD) to carry out subversive activities in IHK and Pakistan. Apart from this the Indian government has also launched hybrid warfare that has threatened the internal security, national cohesion and territorial integrity of Pakistan.

Furthermore, the Indian Air Force introduced the concept of sub-conventional warfare in 2012 which aims at quick and swift operations against suspected militants across the LoC. To operationalize such a concept, the IAF would require highly sophisticated aircraft with modern avionics and lethal firepower to maintain air superiority and to provide close air support to its ground forces for any specialized joint quick and intense military operations. The Indian military would also need long range air defense capabilities to counter any attack by Pakistani aircraft F-16s or JF-Thunders, ballistic, cruise missiles or armed Unarmed Aerial Vehicles- (UAVs). To fill this gap the Indian military has inked several defense deals with Israel and Russia for the induction of Barak-8 and S-400 Long range highly advanced air defense systems (Pocock, 2017).

All these developments in doctrine and military modernization suggest, that the Indian military is planning to fight a short but intense conflict with Pakistan. These attacks would be under the recently published *Joint Indian Armed Forces Doctrine of 2017.* In which, the Indian government has envisaged that the Indian military may carry out surgical strikes or sub-conventional warfare

operations in case of any alleged terrorist attack on the Indian soil (Joint Indian armed forces doctrine of 2017, 2017). The Indian military is working on the second approach of Chankya Kautilya's *Secret war* strategy, which involves quick and swift operations to get element of surprise against enemy. These types of operations are risky and carry seeds of instability and turmoil. Such quick operations against a nuclear weapon state would create uncertainty in the region and any response by Pakistan would seriously challenge the delicate nuclear deterrence in the region.

c. The third category of war according to Chankya Kautilya is ***Undeclared War***. This entails the use of secret agents, religion or superstition, and women against the enemies (Rangarajan, 1992). India has already waged such type of war against Pakistan since the establishment of Research and Analysis Wing- (R&AW) in 1968 (Stanley A. Kochanek and Robert L. Hardgrave, 2008). The first job for R&AW was to create Mukti Bahini a terrorist organisation that played crucial role in the dismemberment of Pakistan. Mukti Bahini was trained, funded and nurtured by the Indian Army and R&AW. They were involved in heinous crimes against Pakistan Army, their families, and loyal to Pakistan Biharis (Kasturi, 1995).

India has been actively carrying out subversive activities against Pakistan and many of their high-profile agents were captured in Pakistan since 1970s. Most notable were Surjeet Singh, Sarabjit Singh, Kashmir Singh, Ravinder Kaushak recently held Kulbushan Yadav and many others (Shah S. , 2016). The Indian military follows undeclared war as an official policy. In the post 2008 Mumbai attacks and due to their failure to operationalize CSD/proactive military Ops against Pakistan, the Indian Army's Former Chief General V.K Singh formed a special unit with the name TSD in the Indian Army to carry out terrorist activities in Pakistan, target Hafiz Saeed, Chief of Jamat-u-Dawa- (JUD) and buy the loyalties of Kashmiri leaders in Indian Held Kashmir- (IHK)

(Baweja, 2013). Vice Admiral (retd) Muhammad Haroon believe that the Indians through covert operations wants to "……. ensure chaos, anarchy, stupidity in Pakistan. Economically bring down Pakistan. Project Pakistan as a country sponsoring terrorism" (Haroon, 2017). The undeclared war strategy has been effectively operationalized in the recent times. In this study this aspect has been referred as the hybrid warfare strategy of India. India has been using the Iranian and Afghan soil to flare-up insurgency in Balochistan and terrorism in the tribal areas of Pakistan. The confession of former Tehrik-I-Taliban Pakistan- (TTP) leader Latif Mehsud exposed the Indian activities in Afghanistan. He was nabbed by the US forces in Afghanistan and later on handed over to Pakistan. In his confession he declared that the Indian R&AW is using different militant organisations to create disturbance in Pakistan ("When terror speaks! Taliban leader confesses", 2016).

Later, the surrender and confession of former TTP spokesman Ehsan Ullah Ehsan – (real name Liaquat Ali) substantiated that India is funding, training and nurturing militant organizations in Afghanistan to create large scale subversion in Pakistan ("Ehsanullah Ehsan's confession", 2017). All these destabilizing activities by the Indian intelligence agencies created serious security challenges for Pakistan. Chankya Kautilya in ***Arthashastra*** emphasized on the use of spies for internal and external surveillance. Kautilya also suggested to use businessman or traders as secret agents for spying in other states (Daniel Coetzee and Lee W. Eysturlid, 2013). The pertinent example in the modern times is the Indian Spy Kulbushan Yadav, who disguised himself in Iran and as a businessman for spying in Pakistan (Gopal, 2017). Though, the official Indian narrative is opposite to Pakistan.

The Indian government has denied all these allegations by Pakistan. The Indian official narrative consider Kulbushan Yadav as an Indian national 'son of soil'("Sushma warns Pakistan of impact on ties after Kulbhushan Jadhav death sentence", 2017) he was in Iran for business purposes, he

was kidnapped by the Pakistani security forces, and he is long retired from service and has nothing to do with the government of India ("Kulbhushan Jadhav death sentence: Pak should keep in mind consequences, says Sushma Swaraj", 2017). But there are many unanswered questions which could be asked by the Indian government. First, why he was carrying fake passport? Why he was kidnaped by Pakistan security forces from Iran, what makes him so special that other 4,000 Indians living in Iran were unscathed and he was abducted? The mystery around Kulbushan Yadav is growing because the Indian government is unable to answer these questions (Thapar, 2017). This is how the intelligence games are played, if a spy is caught by the adversary, the government and relevant security agencies would show plausible deniability and rebuff any association with that particular spy or his activities.

According to Pakistan's perspective Kulbushan Yadav is an Indian intelligence high ranking operative (Shah S. A., 2016). He was involved in the subverting activities to create widespread instability and turmoil in Balochistan province and other parts of country to disrupt China Pakistan Economic Corridor- (CPEC) mega project and undermine geo-economic value of Gawadar port, destabilize the economic hub of Pakistan (Karachi) to interrupt economic growth of the country. In addition, India is actively using the Afghan soil to create instability in Pakistan through large scale terrorist activities, funding, training and providing crucial intelligence support to the militants hiding in Afghanistan ("Pakistan makes details of Kulbhushan Jadhav trial public, rubbishes Indian allegations" , 2017).

Such activities would create serious fissures between both states. Pakistan may also do the same in IHK and Afghanistan and may increase its political, diplomatic and strategic support to the Kashmiri fighters and Afghan Taliban to create troubles for India. Both countries would remain indulged in this covert war unless, they come up with amicable solution to all their bilateral

disputes. The *undeclared war* strategy of India proven to be more successful than any direct attack by the Indian military under CSD or proactive military operations. Pakistan faced thousands of civil- military casualties and gigantic economic losses (Sabri, 2017). The other relevant approach from Kautilya's six-fold policy is *marching,* which is discussed in next part of the study.

ii) -Yana- (Preparation for War/Marching/Military Modernization)

Chankya Kautilya represented true picture of statehood, military strategy and techniques to win over enemies. By Yana- (Marching) Kautilya meant making preparation for attack without actually declaring a war (Urmila Sharma and S.K. Sharma, 1996). The relevance of the *marching* is with modernization of the Indian military and operationalization of its offensive doctrines through regular wargames on border with Pakistan. The next part of the study would enlist the Indian military's modernization drive and its impact on strategic stability of south Asia. India wants to become a great power keeping in mind its economic pace, population boom and military might (McKercher, 2012).

The Indian military is considered as the third largest force in the world and largest military in south Asia. The total size of the Indian military is close to 1,346,000 ("The Military Balance: Chapter-Six-Asia" , 2015). The Indian Army is the largest branch of Indian military, with about 1,150,900 men whereas the Indian Air force- (IAF) and its Navy stands at 127,200 and 58,350 respectively. India is aspirant of global power status but also wants to preserve balance of power with superior China and strategically compatible Pakistan. Since independence the Indian military's strategic thinking and military modernization has been focused on Pakistan (Blumenthal, 2012). This is the reason that India is pouring billions of dollars to revamp its ageing military machine and fill the gaps in its overall war fighting capabilities. To achieve this goal the Indian military has launched

a massive transformation program. Over the period of time India has increased its defense budget to overcome operational gaps. According to Stockholm International Peace Research Institute-(SIPRI), India has been the largest importer of arms during the period of 2013-2017 which accounted for 12% of the global arms purchases. The Indian arms imports increased by 24% between 2008-2012 and 2013-2017. Major defense imports came from Russia (62%), the arms imports from the US increased 557% making it the second largest arms supplier to India after Russia ("Asia and the Middle East lead rising trend in arms imports, US exports grow significantly, says SIPRI", 2018). In addition, the defense budget for the fiscal year 2017-18 also reached to $53.5 billion (Behera, 2017).

India is in close strategic partnership with the US, Russia, France and Israel to improve its obsolescent military capabilities, induct force multipliers and fill the operational gaps in its overall war fighting capabilities. The Indian Military is revamping its capabilities with modern T-90S MBTs, APCs, spike and Nag anti-Tank missiles attack helicopters, long range artillery guns, weapon locating radars, S-400 and Barak-8 Air defense systems. In addition, the IAF is adding Rafale and advance version of Sukhoi aircraft to fill the gaps in their operational capabilities to maintain air superiority and fight along ground forces to achieve synergy and integration.

The Indian military's space program is making headways with designated Spy satellites for Army, Air Force and Navy. The induction of aircraft carriers, nuclear submarines, Anti-submarine warfare aircraft, corvettes, frigates and other warships would enable the Indian Navy to dominate the Indian Ocean region and challenge Pakistan's maritime interests in the Arabian Sea. The Indian military's overall modernization and its preparation is actually resurrection of Chankya Kautilya's policy of Marching- Yana. The Indian military's enormous modernization drive is considered as a threat to the national security of Pakistan and this issue needs an urgent attention and adequate

conventional and non-conventional response. The Indian military modernization at rapid scale is a real and pertinent challenge to the deterrence stability of south Asia. The conventional balance of power in south Asia would dangerously tilt in favor of India and seriously challenge the sovereignty and territorial integrity of Pakistan. Such a development would compel Pakistan to rely on its nuclear weapons to deny any conventional or technological edge to India. Pakistan must keep nuclear weapons as last option and develop its conventional deterrence vis-à-vis India. Pakistan needs to overhaul its indigenous defense industry to enhance its potential to help its military to overcome operational gaps in its overall warfighting capabilities. Pakistan needs to incorporate network centric and electronic warfare capabilities to meet challenges imposed by the modern warfare.

It must focus on its surveillance and reconnaissance capabilities, add new long range and long endurance armed UAVs, AWACS and other radars to maintain perpetual vigilance at the borders to deny element of surprise to the enemy forces without any time barrier in all weather conditions and terrain. These conventional capabilities of Pakistan would make the adventurism by India costly and least effective. In addition, Pakistan Army must modernize its infantry, improve the battlefield command and control structure, equip MBTs with greater firepower, range and maneuverability.

Pakistan military needs to identify its weak areas in its overall warfighting capabilities and to work on its operational preparedness to meet the emerging threats from India at LoC and regular border. Pakistan must also enhance night vision capabilities in its military because future wars would be limited, intense, quick and swift without any time barrier. Pakistan military must be ready for prompt response to any misadventure by the Indian armed forces, for that matter Pakistan must also improve its human intelligence to know about enemy plans in advance and take

countermeasures to prevent any surgical strikes or proactive military operations. The next part of the study would discuss the impact of Hindutva ideology on the overall strategic thinking of India.

1.2. Hindutva Ideology: A Driving Force for the Doctrinal Shift

The impact of Hindutva ideology on the strategic outlook or decision making of the Indian military is debatable. Most of the scholars from Pakistan believe that Hindutva does impact the Indian strategic thinking whereas the Indian and Western perspective nullify the Pakistani perspective and argue that Hindutva ideology has limited influence over the Indian strategic thinking. However, the incumbent Bhartiya Janata Party- (BJP) government in India derive its ideological base from the radical Hindu organisation, the Rashtriya Swayamsevak Sangh- (RSS). The RSS ideology of Hindu dominance through violence and radicalization is embedded in the leaders of BJP.

The study under investigation raised a question that what ideological formations drive military modernization and strategic thinking that requires doctrinal maneuverability of a state like India? The BJP derives its directives from RSS based on its Hindutva ideology which is a driving force for India to deal aggressively with Pakistan over the lingering issues. It is imperative to understand the origin and influence of Hindutva ideology, which is a motivating force behind the incumbent BJP government's hawkish policies towards Pakistan. However, this part of the study would assess the influence of Hindutva ideology on the Indian strategic culture.

a) -The Emergence of Rashtriya Swayamsevak Sangh- (RSS)

The Hindu religion is centuries old, but the extreme version of Hinduism was presented by Vinayak Damodhar Savarkar in 1923, in his book, *Hindutva: who is a Hindu?* And discussed the glorious Hindu civilization and emphasized on the need of self-defense for the Hindu nation. In 1925, the

followers of Hindutva established an extremist organisation-(RSS) to safeguard Hindu identity, promote the Hinduism in masses and bring the Hindu nation in limelight. Later, just before the independence of subcontinent, the RSS leaders Keshav Bali Ram Hedgewar and Golwalker emphasized on the point that India is a Hindu Nation. Golwalker became the leader of RSS in 1940 (Singh S. , 2013). In his work, *we, or Our Nationhood Defined,* he presents the idea of Hindu nation in these words,

> *The foreign races in Hindustan must either adopt the Hindu culture and language, must learn to respect and hold in reverence Hindu religion, must entertain no ideas but those of glorification of the Hindu race and culture (…….) or may stay in the country, wholly subordinated to the Hindu nation, claiming nothing, deserving no privileges, far less any preferential treatment- not even citizen's right* (Singh S. , 2013).

Since then, the RSS has been great proponent of Hindutva ideology and most of the BJP leaders are inspired and influenced by the RSS philosophy. According to Vice Admiral (retd) Muhammad Haroon, "The influence of the society does trickle down on the military forces. The thinking of RSS goes back to 1923 when they were formed. Hindutva is their main focus and that has also influenced on their military as well. On many occasions they have tried to be overzealous and over courageous……the Hindutva influence is there yes" (Haroon, 2017). In last few decades Hindutva characterized by a forceful, communal and dictatorial line has got a central place in the Indian politics (Puniyani, 2005).

It is considered as a driving force behind BJP and RSS to establish a strong Hindu empire. Savarkar says that India must be a Hindu land, reserved for the Hindus only (Aditya Mukherjee, Mridula Mukherjee and Sucheta Mahajan, 2008). He said that Hindus should be masters in their own house 'Hindusthan', the land of Hindus. Savarkar believe, a Hindu is one who regards this land Bharat-Varsha from the Indus to seas as his fatherland as well as his Holyland that is the cradle land of his religion (Aditya Mukherjee, Mridula Mukherjee and Sucheta Mahajan, 2008). According to

Savarkar, a common nation- (Rashtra), Common Race- (Jati) and Common Civilization-(Sanskriti) are the prerequisites for Hindutva (Aditya Mukherjee, Mridula Mukherjee and Sucheta Mahajan, 2008). The proponents of Hindutva believe that India (Hindustan) belongs to Hindus only, and there is no place for other religious minorities and ethnicities. The protagonists of RSS consider Hindustan as a Hindu Nation- (Hindu Rashtra) where 85% of the population is Hindu. The RSS believe that in 1947 they not only got independence from a 200 years rule of a colonial power (Great Britain) but also from the 700 years of non-Hindu rule especially by the Muslim rulers from Afghanistan and Central Asia (Aiyar, 2006). The RSS is working hard to strengthen Hindu society with imbued qualities of Hindu culture.

The RSS wanted to Hindu-ize India with their own ideology and this is the reason they considered Muslims of India as greater threat than the Britishers. During that period the RSS established a paramilitary wing called Shakas (Boyd, 2010). This group was actively involved in the communal violence soon after 1947 and community building in Hindu society so they can defend themselves from Muslim, Christian, Communist and materialistic influences. During the partition riots, the RSS worked as a volunteer force to defend Hindus.

Both Muslims and Hindus were responsible for the massacre of the minorities living in their respective areas, but the role of RSS was much more destructive and violent which fueled anger in the Muslim society that led to chaos in both Muslim and Hindu dominated areas. Even today the RSS leaders claim Pakistan to be part of Hindustan and call it a temporary state which may join them soon. In one such instance, Former RSS Chief Mohan Bhagwat said that,

> *……Pakistan is the result of partition in 1947, it is temporary not permanent. (Pakistan Toh Bharat Bhoomi Hi Hai Na, Yeh Tau 1947 Mein Kuch Hua Iskay Liye Abhi Wahan Gayee Hai, Permanent Thora hi Hai)* ("Pakistan Is Temporary Says RSS Chief" NNIS – News, 2014).

Former Ambassador to India, Ashraf Jahangir Qazi, articulate the general psyche of the Indians about Pakistan, "the fact however is that the Indians, especially northern Indians, of all political persuasions believe in India's entitlement to Great Power status, regional hegemony, and they view Pakistan as a major obstacle made worse by the fact that it was born from India's womb. That makes it unforgivably illegitimate in the eyes of many Indians. In this attitude the RSS is an important but just one factor" (Qazi, 2017). The RSS ideology from beginning focused on strong, united and purely Hindu dominated society. To achieve this goal, it was necessary to establish a strong force of ideologues who can defend and promote RSS philosophy in India.

After the assassination of Indian leader Mohandas Karamchand Gandhi by an RSS member Naturam Godse, more than 20,000 RSS members were arrested, and RSS was banned temporarily. But soon after a short pause RSS re-emerged in 1951, when the ban was lifted, and again membership grew to 600,000 (Jaffrelot, 2010). As of today, the RSS membership has reached 2 million which is further divided in 25000 branches (*shakhas*) and 31000 sub-branches (*upshakhas*) (Gutiérrez, Alain Dieckhoff and Natividad, 2017). Since the BJP won elections in 2014 the RSS membership of shakhas has grown exponentially. In 2015, the strength of RSS *Shakhas* was 51,335 (Mukherji, 2015) but in 2017 their number reached at 57, 233 (Ramachandran, 2017). The RSS realized in the 1950s that without a political face it would be difficult for them to establish their foothold against secular forces led by congress party. To achieve this aim, the RSS came up with a political face in 1951 called Bhartiya Jan Sangh- (BJS).

b) - Bhartiya Jan Sangh- 1951: (Indian People's Party)

The murder of Gandhi by an RSS member seriously tarnished their image, which led them to establish a political wing which may work as their front face for their struggle to establish a pure Hindu society without any role or influence of other minorities in India. Most of the people in BJS were from RSS. The purpose was to politically get elected and then work for the *Hindu Rashtra*- (Hindu state). Though, initially it represented a secular image, but their base was highly influenced by the *Hindutva* ideology (Singh S. , 2013).

c) - BJP in Modern Times and RSS Influence

In 1977, the BJS joined with other parties and formed a coalition against Indra Gandhi and won general elections. But soon after, in fighting and race for the seat of Prime Minister led to the dissolution of the coalition government. Later, the congress under Indra Gandhi won elections in 1980s and after that loss the emergence of BJP took place with a new face and orientation. Atal Bihari Vajpayee became its first President (Singh S. , 2013). Former Ambassador to India, Ashraf Jahangir Qazi, viewed Atal Bihari Vajpayee as a balanced man as compared to Prime Minister Modi, he said, "Vajpayee had the same background as Modi. He was pracharak of the RSS. But as a person he was different. He was more cultured, a Hindi poet, a great orator, mild mannered and apparently a much wiser and moderate person in his views. Both as Foreign Minister and as Prime Minister he visited Pakistan and made a positive impression" (Qazi, 2017). Since the emergence of BJP in 1980s, it has always banked on the ***Hindutva*** ideology which helped them to politically manipulate Hindus majority in the name of religion, cast and creed. In 1984, the BJP miserably lost election against Congress and could only grab two seats and 7.4% of the votes. Later, BJP used Rajiv Gandhi's move to open the locks at the gates of Babri Masjid in February

1986 for its political maneuvering. The BJP portrayed this action by Rajiv Gandhi as a step to undermine Hindu sentiments. On June 11, 1989, BJP's national executive committee adopted a resolution at Palampur on Ayodhya as a stunt to be used in the next elections. The resolution emphasized that the Hindu majority's sentiments must be kept in mind and a disputed site should be handed over to Hindus and Mosque built at some other place (Manjari, 2003). Due to these political maneuverings, the BJP improved its political clout in the country and in 1989 won 85 seats and in 1991, it garnered 120 seats along with 20.1% of the popular votes. In 1996, the BJP's political standing further improved, and they got 161 seats and 21.34% votes. In 1998, the BJP consolidated its position and secured 181 seats and 25% popular votes. The architect of the BJP's political victory was L.K Advani who reiterated on many occasions that his stunt to use the Ram Mandir issue played a great role in securing votes of the Hindu majority. The BJP's senior leader L. K Advani once said that,

> *Hindutva is not mere slogan for us. It is the BJP's ideological mascot- the most distinctive feature of its identity and approach (…….) the hallmark of the party well before Ayodhya and will continue to be so even after a Ram temple at the birthplace in Ayodhya becomes a fact of life……*(Singh S. , 2013).

The BJP leaders in their manifesto of 1996 declared that after winning the elections the BJP government would facilitate the construction of Ram Mandir at his birth place in Ayodhya ("BJP Election Manifesto-1996" , 1996). The slogan of Ram Mandir helped the BJP to garner support of the Hindu population in India. In 2014, the BJP again in their Manifesto declared that it would explore all the possibilities to construct Ram Mandir in Ayodhya ("BJP Election Manifesto-2014" , 2014). Recently, President of the Vishwa Hindu Parishad- (VHP) Pravin Togadia said that the Modi government must carry out legislation to construct Ram Mandir ("Pravin Togadia asks Modi Govt to make a law for Ram Mandir", 2017).

The Hindutva rhetoric by the BJP brought Modi in limelight and he won 2014 elections with considerable majority. The Hindutva inspired vision is still part of the BJP and plays an important role in politico-ideological debate in the Indian politics. Modi is totally different person from his predecessors- (Atal Bihari Vajpayee). He believes in power politics and adopted hawkish approach towards issues concerning India, whether it was renewed insurgency in IHK, LoC situation or cessation of dialogue with Pakistan. Former Ambassador to India, Ashraf Jahangir Qazi, portrays the Indian Prime Minister Modi in these words,

> ……. *Modi is more puritan, less cultured, an effective but inferior speaker, and politically much narrower minded and communal than Vajpayee. As the presider over the Gujrat massacre he committed an atrocity that Vajpayee may not have done. So, yes, his RSS background plays a role in his aggressiveness in general and towards Pakistan*……(Qazi, 2017).

The Indian Prime Minister Narender Modi's political journey started in 1967 when he was just 17 years old. He was picked by RSS leaders Lakshmanrao Inamdar and Nathal Jhagda. Soon he became the Jan Sangh's ward President. Later, he joined the BJP because of his organizational skills. During 1984 elections he was tasked to organize former Prime Minister Atal Bihari Vajpayee's public meetings and L.K Advani's Rathyatra. On October 7, 2001, Modi became the Chief Minister of Gujrat (Chitkara, 2003). After victory in Gujrat elections Modi was hailed as modern-day Hindu warrior Shivaji, who is fighting enemies of India. To capitalize on these emotions the BJP orchestrated a strategy in which they bashed Pakistan to secure Hindu vote bank (Chitkara, 2003). During the Modi regime extremist Hindus linked with RSS got free hand to establish dominance of Hinduism and undermine other religious minorities in India. The RSS now enjoys backing of the Indian government and now they are free to create a *Hindu Rashtra* in India. The RSS people are involved in many terrorist activities in India. Same mentality is there in the

incumbent Indian government. Professor Dr Parvez Iqbal Cheema believe that the RSS is the brain of BJP, he explained his view point in these words,

> *……at the moment the Indian PM actually belongs to the RSS originally and have been very active member of BJP. There is a certain amount of what I call hardline streak reflex basically in BJP thinking which you find in Modi. Although Modi won the election with the help of obviously what they call it Sangh Parivar. The Sangh Parivar actually consist of five organisations, their head is RSS, and BJP is their political wing, VHP, Bajrang Dal and Shiv Sena……. The RSS is their (BJP) brain actually* (Cheema, 2017).

However, major transformation in the Indian strategic thinking took place in the post 2001 situation. The influence of Hindutva ideology is visible on BJP but from 2004-2014, the congress government led by Manmohan Singh ruled India (J. Barkley Rosser Jr. and Marina V. Rosser, 2018). During that period, the Indian military brought a sea change in their strategic philosophy vis-à-vis Pakistan and many military modernization plans were initiated which continued later under the BJP government. According to the former Director of School of Politics and International Relations, Quaid-I-Azam University, Islamabad, Professor Dr Zafar Nawaz Jaspal, the influence of RSS on the Indian military's strategic thinking is there. He was of the view that,

> *There is very much influence of the RSS on the modern Indian strategic thinking. Because the RSS is encouraging supra- nationalism, which focuses on ethno-centrism. When you divide the society, definitely it influences your military capability because when you start thinking that you are superior, and you have to regain your lost glory then naturally your superiority required military capability* (Jaspal P. D., 2017).

However, some scholars believe that RSS has no influence on the strategic culture of India. On the question of Hindutva's influence over the Indian strategic thinking, Dr Walter C Ladwig-III of the Kings College London replied that, 'No. I don't see evidence that the RSS has affected India's contemporary strategy or its defense posture' (Ladwig, 2017). The Hindutva ideology cannot be linked with secular congress party, but the impact of Hindutva on the incumbent BJP government

cannot be ruled out. Former Indian Naval Officer C. Uday Bhaskar (retd) Commodore believe that the current BJP leadership is influenced by the RSS ideology of Hindutva. He was of the view that, "current strategic thought in India is shaped to a certain extent by the RSS-Hindutva ideology. This is more due to the Modi led BJP victory of 2014. However, there is a basic continuity with earlier security policies and strategic orientation" (Bhaskar, 2017). The Modi government inspired and influenced by the RSS ideology has carried out many terrorist activities inside Pakistan as discussed in the first chapter. There are many dissenting voices in India about the terrorist activities of RSS. One such voice is Justice P Venugopal who was part of the fact-finding commission which investigated the communal violence in Kanyakumari District in March 1982. He was of the view that the RSS implements an aggressive and violent approach and sets itself as the defender of what it ponders to be the rights of Hindus against minorities, it has taken upon itself the mission to instill the minority their place and if they are not ready to get their place, impart them a punishment, the RSS has given uprightness to communalism and communal riots and undermined the administration. He further said that the RSS approach for infuriating communal violence is

> *"Provoking the communal feelings in the Hindu mainstream population that Christians are not faithful citizens of India, Creating propaganda that minorities' population is increasing as compare to that of Hindus, Penetrating into the government machinery and inducting RSS people in the civil and police by espousing and developing communal insolences; RSS is also involved in the training of Hindu youngsters to use weapons like dagger, sword and spear for violent activities against minorities. They are also involved in dissemination of rumors to create communal gap and flare-up the situation using trivial incidents"*(Noorani, 2000).

The RSS trains its members with the use of the light weapons in the garb of physical exercise. The aim of such training might be to establish a force for any civil strife of communal riots against minorities (Noorani, 2000). The RSS was largely considered as a communal force but after winning the elections in 2014, the BJP has in fact reinvigorated the role of RSS in the strategic

maneuvering. The Indian PM Modi and many other decision makers in the hierarchy of BJP are directly or indirectly influenced by the RSS- Hindutva ideology. The incumbent Indian decision makers believe that RSS ideology played as a driving force for their aggressive action against Pakistan after Uri attack. Although, that particular alleged surgical strike is questionable and has been rejected by Pakistan but still the former Indian defense minister acknowledged that, the RSS teachings and ideology played an important role for such a bold and audacious move against Pakistan. He said, "I wonder that a Prime Minister from land of Mahatma Gandhi and a Defence minister from Goa and surgical strikes… maybe the RSS teachings was there, but this was very different kind of a combination" (Nair, 2016). The former defense minister also got nod from BJP-Goa's spokesperson Kiran Kandolkar that alleged surgical strikes against Pakistan needed a "director" who would stand by the Indian Army after the strikes. He said, PM Modi and Defence Minister has taken training from RSS. If they have learnt something from RSS and have used it for surgical strikes, we do not see anything wrong in it ("RSS-trained PM Narendra Modi and Manohar Parrikar inspired Indian Army for surgical strikes, claims Goa BJP", 2016).

In addition, the RSS chief Mohan Bhagwat also appreciated alleged surgical strikes by the Indian Army. He appreciated the Indian PM Modi and army for conducting alleged surgical strikes against Pakistan. He said, "Those creating trouble in Kashmir got a befitting reply that there is a limit to tolerance. Now, we hope there is consistency in such actions and no laxity when it comes to securing our borders" ("RSS chief Mohan Bhagwat lauds Army for surgical strikes", 2016). The RSS inspired Modi government has not only created problems for Pakistan but also for the Muslim population and other minorities in India. The RSS mob killed many Muslims for allegedly eating or carrying beef. Such intolerance is increasing day by day in Modi's India (Seervai, 2016).

The Indian PM Modi's close ties to the radical RSS is worrisome not only for the religious minorities in India but also for the neighboring Pakistan. The aggressive attitude by the Indian government and military has a tacit support of the radical RSS. It is expected that in near future the Indian army with the support of BJP government may resort to more aggressive moves against Pakistan. Former Ambassador to India and the existing President of Islamabad Policy Research Institute- (IPRI) explained the influence of RSS on BJP in these words,

> ……. *obviously, it goes without saying that BJP is under the influence of RSS. The question is how far BJP government's policies are affected or persuaded by the Hindutva ideology that we have to be slightly cautious. There are issues on which you do see Hindutva's signature especially in terms of their socio-economic and cultural policies but when it comes to foreign policy it is very difficult to identify whether or not any particular policy is being influenced or not* (Basit, 2017).

However, Senior Fellow at the Carnegie Endowment for International Peace, Ashley J Tellis believe that RSS has minimal impact on BJP strategic thinking, he said that,

> ……*I don't think the RSS factor was significant even though the RSS cheered the surgical strikes. Former NSA Shivshankar Menon, for example, has written that any future Indian government, including a Congress government, would find it very difficult to stay restrained in the event of another major terrorist attack. So, one can conclude that the RSS factor does not have significant impact* (Tellis, 2017).

Another expert on south Asian security, Bharath Karnard said that the Hindutva's impact on Indian strategic thinking is "No, other than the resonance between the expansive ambit of 'Akhand Bharat' and the Indian military's aims to be the dominant force in South Asia and the Indian Ocean Region" (Karnad, 2017). However, the difference of opinion does exist among Pakistani, Western and Indian scholars. The Indian and Western academics are of the opinion that RSS/Hindutva's linkage is there with BJP or Modi but that does not impact on the strategic thinking of India.

Conversely, most of the Pakistani scholars believe that RSS or Hindutva ideology do have great amount of influence on the strategic outlook of India. Pakistani academics are of the opinion that, the Hindutva ideology is more for domestic politics to secure majority Hindu votes but manipulation of belief for an elongated period could ultimately reinforce the sensitivities that may impact the strategic thinking of India in distant future. According to Pakistani perspective the BJP and RSS ideology is considered to be pretty close and in same direction always. The Indian Prime Minister Narender Modi's hawkish attitude towards Pakistan, support to the ideology or the rise of Hindutva fundamentalism in India is clearly visible. It seems that RSS through BJP wants to enforce its Hindutva ideology that could only be achieved through supra-Ethnic nationalism which may impact the modern strategic thinking of India. It is expected that that next general elections in India may again bring BJP in power, so it is imperative that the influence of Hindutva on BJP policy making must be investigated. On the question of Hindutva influence on the Indian strategic thinking, former General (retd) Ehsan Ul Haq replied, "……absolutely, in fact it dominates the Indian strategic thinking. It is not the current Indian thinking this has actually impacted the evolution, and practice of Indian strategic thinking. Yes, what has happened in the recent past is the impact of Hindutva (Haq, 2018). The BJP under Modi regime has toughened the anti-Pakistan rhetoric.

The anti-Muslim and anti-Pakistan flare during elections was used to secure majority Hindu votes ("India's Modi pledges tough stand against Pakistan", 2013). He kept his promise and after coming into power cut all dialogue with Pakistan, used brutal force in IHK to suppress Kashmiris, strengthen strategic ties with Afghanistan and launched efforts to isolate Pakistan at regional and global diplomatic forums. The hardline was taken because of the anti-Pakistan rhetoric by Modi during election campaigns. If Modi goes soft with Pakistan, then he may lose political support at

home. This is the reason that Modi administration adopted hardline vis-à-vis Pakistan to secure maximum support in the next general elections. Former Ambassador to India, Mr. Abdul Basit predicted that despite shortcomings PM Modi may win the next elections in 2019. He said,

> *……I was one of the persons who always thought that given the fact the congress is in disarray, there is no opposition to PM Modi as such, and in all likelihood the BJP under Modi will win the 2019 elections. But since the BJP government has terribly failed and it has not been able to deliver economically, that may cause some problems for them in the next elections. As of today, PM Modi is well settled to win 2019 elections* (Basit, 2017).

Another expert on south Asia Professor Dr Parvez Iqbal Cheema also endorsed the views of Ambassador Basit. Dr Cheema foresee, Modi government may come in power again but with reduced majority. He was of the view, that

> *…… there is very good chance that they (BJP) may win the next elections but with reduced majority. One of the reasons is that Modi won the election on the basis of having economically developed Gujrat state and he was thinking of converting India to a similar kind of miracle which he introduced in Gujrat. Now he is having a problem……. Secondly, he has not been able to provide the jobs to the youth in India which he promised. And thirdly, the demonetization has also hurt many people in India and lastly the irrational attitude towards the minorities will also contribute against that, so my perception is that these all will contribute, so BJP might win the next election but with considerably reduced majority* (Cheema, 2017).

It is expected that after winning the next general elections the BJP may start new series of dialogue process with Pakistan because boycott or war is not the solution to any problem. The south Asian region is blessed with great potential and immense opportunities. After reconciliation India and Pakistan can benefit from those prospects for the welfare of the people of both states. However, the study concludes that Hindutva ideology played an important role in bringing the incumbent BJP government in power. When you use anti-Pakistan or anti-Muslim rhetoric to garner political support, then it is difficult to take a reverse gear. The heightened expectations and emotions of the people does impact the strategic outlook of a country. The influence of RSS or Hindutva is vivid

on the incumbent government in India, however other political parties linked with congress may be exempted from this influence. As far as BJP is in power the Hindutva ideology would remain a driving force behind their doctrinal maneuvering against Pakistan which require close assessment and apt response.

Chapter-2
The Indian Military's Doctrinal Transformation

2. Introduction

India and Pakistan share the most dangerous porous border in the world, because of many unresolved issues including Kashmir, water disputes, Siachen, Sir Creek, terrorism, conventional asymmetries, threat of a limited or nuclear war. This part of the study primarily focuses on transformation in the Indian military's strategic thinking since 2001 and examines the implications of the doctrinal change coupled with rapid military modernization on the strategic stability of south Asia. The Indian military's strategic thinking has gone through many phases. After 1971 victory against Pakistan, the Indian military brought shift in their overall military thinking to focus on offensive capabilities to carry out deep thrusts inside Pakistani territory. Former Director ACDA-SPD, Brigadier (retd) Feroz Hassan Khan evaluates the Indian strategic thinking in the post 1971 situation in these words;

> *…… when you look at India's strategic thinking, the fall of Dhaka, has a huge impact on India's thinking. It reinforced India's thinking that they can muscle their way. If you analyze India's history from 1947 to 1971, India muscled through its way, for example, Haiderabad, Kashmir, Goa, Sikkim, what did they do, use of force to establish their predominance. Not just geographical dominance but to enforce power dominance. In India's mind it was an ideological victory against partition. The creation of Bangladesh, exploiting the weakness of neighbor, there cannot be more Kautilyan or hardcore realist than this* (Khan B. F., 2017).

To develop a new warfighting strategy for the Indian Army in the post 1971 situation for next 20 years, the Indian government appointed a three members committee in 1975 to come up with recommendations to devise an offensive strategy to tackle Pakistan problem. The committee was comprised of three senior Generals, who advised for a force advantage of two Strike Corps against

Pakistan. They proposed to increase the number of tank regiments from 27 to 58, and also advised to establish two mechanized infantry divisions to add agility and offensive power in the land forces (Jo Inge Bekkevold, Ian Bowers and Michael Raska, 2015). In the meanwhile, during 1980s the Indian military focused on the reformation of its armour capabilities and introduced the Sunderji doctrine to carry out deep armored thrusts, with an objective to cut Pakistan into two and completely annihilate it again (Jo Inge Bekkevold, Ian Bowers and Michael Raska, 2015).

The Indian military rationalized the Sunderji doctrine with an assumption, that the Indian Army would operationalize this doctrine to curb Pakistan's alleged role in prompting Kashmir and Sikh insurgencies in IHK and the Indian Punjab (Jo Inge Bekkevold, Ian Bowers and Michael Raska, 2015). The Sunderji doctrine had two elements, first to carry out land incursions and cut Pakistan into two and second element was to destroy Pakistan's nuclear capacity. In 1986-87, the Indian military wanted to operationalize this doctrine and for that purpose conducted large scale military exercise with code name Brass-tacks close to the border with Pakistan with an objective to dissect the country into two (Singh M. G., 2001).

Almost 340,000 troops by India and Pakistan were facing each other by the end of January 1987. By December 1986 to January 1987 the Indian military deployed two armored divisions, one mechanized division and six infantry divisions in Rajasthan, close to the border with Pakistan (Perkovich, 1999). There was a fear in Pakistan that India may cross the border and carry out deep thrusts into Pakistan (Weisman, 1987). The Indian military's plan was to provoke Pakistan for action and after that, the Indian military would have an excuse to launch land and air attack to further weaken Pakistan and take out its nuclear program to get rid of a nuclear Pakistan (Khan B. F., 2017). The Indian Army's senior officer, Lt General (retd) PN Hoon explains the Brass-tacks crisis in these words, "Brass-tacks was no military exercise, it was a plan to build up a situation

for a fourth war with Pakistan. And what is even more shocking is that the then Prime Minister, Rajiv Gandhi, was not aware of these plans of a war" (Robert J. Art and Kenneth Neal Waltz, 2004). The deployment of such a huge force with offensive elements raised alarm bells in Pakistan. From the Indian point of view, it was a great strategy. In this way it would further weaken Pakistan, and with the destruction of their nuclear capability, India would emerge as a regional hegemon in real sense and spirit. But because of the nuclear signaling through General Zia's cricket diplomacy (Cohen, 2001) and A.Q.Khan's interview in which he declared that Pakistan possess nuclear capability (Weisman, 1987), the Indian military could not execute their Sunderji doctrine. This was the first time in south Asia that nuclear deterrence played a role and prevented the Indian military from any aggressive large-scale incursions and air strikes against Pakistan's nuclear installations. The overt nuclearization of south Asia in 1998 changed the strategic outlook of the region (Chakma B. , 2015). In 1999, Pakistan's Kargil operations introduced the possibility of limited war in south Asia under the nuclear overhang. A thinking emerged in the Indian strategic circles that if Pakistan can do tactical operations without escalating it to strategic level, why not us (Sagan, 2009). According to Brigadier Feroz Hassan Khan, the Indian strategic thinking revolved around three main objectives after the overt nuclearization of South Asia,

> ***First,*** *to fail Pakistan's nuclear deterrence by shallow maneuvers, declaring victory. The Idea of limited war was to start a war and terminate the war in your own terms and conditions.* ***Secondly****: In the process, inflict sufficient damage to the Pakistan military which is one that holds the country together.* ***Thirdly:*** *Discredit the Pakistan military in such a way that it become a weak Bhutanish, Sikkmish or West Bengal. They don't want to destroy Pakistan, but they want a Pakistan which is weak, turbulent, and indulged in its internal ethnic turmoil* (Khan B. F., 2017).

Later in 2000, former Indian Army Chief General V.P. Malik, introduced a strategy of a 'limited war under the nuclear overhang', which was later transformed into CSD in 2004 (Malik G. V., 2010). The failure of the operation Parakram compelled India to revisit its previous strategy of relying on Strike Corps to retaliate against alleged terrorist attack. In the post 2001 parliament

attack the Indian military mobilized about 800,000 troops to the border (Todd S. Sechser and Matthew Fuhrmann, 2017). The Indian Strike Corps were deep inside India in Mathura, Bhopal and Ambala (Lal, 2012) which took almost three weeks to reach at the border (Yoshihara, 2012), whereas on the other side Pakistan quickly stationed its forces within few days (Sumit Ganguly and S. Paul Kapur, 2012).

That frustrated the Indian side, because the element of surprise had gone, and Pakistan carried out effective defensive measures to counter the Indian advance. The nuclear factor and interference of the international community prevented India from any aggressive moves against Pakistan. The US played an active role in the de-escalation of the military standoff between India and Pakistan. Frequent visits of the US defense secretary Richard Armitage played an important role in defusing tensions. But despite the US diplomatic maneuvering the most decisive thing was nuclear deterrence. Pakistan's quick mobilization backed by nuclear weapons prevented India from any aggressive maneuvers. Moreover, the Indian military lost element of surprise, and lack of major conventional superiority vis-à-vis Pakistan made war nonexistent.

2.1. From Total War to Shallow Maneuvers-CSD 2004

The Indian military after the failure of the Operation Parakram brought change in its military thinking and later they focused on limited war under the nuclear umbrella. Former Pakistan's Ambassador to India, China and the US, Ashraf Jahangir Qazi discussed the transformation in the Indian military strategy after 2001 in these words,

> *India has been trying to figure out a military way to restrain this alleged Pakistani aggression and terrorism. It cannot militarily defeat Pakistan without risking nuclear war which would be mutual suicide. Border clashes, even if India has the upper hand, do not have much deterrence value. So, it believes a third middle way needs to be developed. This has been called by many names: Limited War, Cold Start, Surgical Strikes etc. The essence is to inflict military and political humiliation but not military defeat; to capture territory*

> *maybe temporarily but not to capture cities or major communications networks; to take out selected sensitive military targets but not to inflict substantial civilian casualties, etc* (Qazi, 2017).

The failure of operation Parakram exposed the Indian military's operational weaknesses to fight a quick conventional war against a nuclear weapon state. The Indian military took almost three weeks in mobilization and deployment of their strike formations, which gave enough time to Pakistan for countermeasures (Sirrs, 2017). To overcome mobilization time and nuclear threshold of Pakistan, the Indian military initially came up with the idea of 'limited war under the nuclear overhang' which was later reformed into CSD in 2004 (Malik V. P., 2010). The Indian military's rationale for CSD was to; cut short mobilization time and carry out quick, swift operations within 48-96 hours in case of any alleged terrorist attack on India.

The objectives under CSD would be limited, below the nuclear red-lines of Pakistan. Former Director Arms Control Disarmament Agency-(ACDA), Strategic Plans Division- (SPD), Brigadier (retd) Feroz Hassan Khan explained the Indian military's CSD in these words,

> *After 2001 change in the International mood, India brought shift in its doctrine from Sunderji to Cold Start and carried out military modernization at rapid scale. India realized that maneuver and slice Pakistan into two may not be possible now……because of the nuclear deterrence now the Indian military focused on shallow maneuvers under the nuclear overhang. So, they realized that Sunderji is not feasible, so they changed it to the shallow maneuvers which means short, aggressive, more firepower, less space, very intense and fast operations* (Khan B. F., 2017).

Therefore, to operationalize CSD, the Indian military has carried out several military exercises close to the border with Pakistan since 2004, in which they practiced joint operations, synergy & integration between air and ground forces, latest aircraft and tanks, Long Range Reconnaissance and Observation System- (LORROS), Risaat-II- Spy Satellite, Battle Field Surveillance Radars- (BFSR), Weapon Locating Radars- (WLR) and advanced UAVs for surveillance and

reconnaissance (Khattak, 2011). Despite all these developments, it is difficult for the Indian military to execute CSD against Pakistan because of many reasons which may include; the Indian military's lack of synergy, coordination and offensive fire power, Pakistan's conventional and nuclear response (lowering the nuclear threshold- development and deployment of lower yield battlefield TNWs). Many Western analysts doubt the Indian army's ability to operationalize CSD against Pakistan. According to Mark Fitzpatrick the CSD is just a desire of the Indian military, he said,

> ……. *Cold Start remains an aspiration by the Indian Army. I have heard several times in the past the Indian current and former COAS referred to the CSD, it is always the Indian army that refers to this, not the Indian combined command not the Indian government so yes, the Indian army would like this capability, I do not see this capability as yet operationalized and I also think by the way that Pakistan's response has neutralized this idea already* (Fitzpatrick, 2017).

Dr Vipin Narang of MIT and Dr Walter C. Ladwig-III of Kings College London also believe that CSD is just a myth. Another expert on South Asia, Professor Bharat Karnard argued that,

> *Cold Start' I have argued since that unfortunate doctrine was initiated, is "No start" because it is not an implementable or practicable strategy, forming eight integrated armored/mechanized battle groups while advancing into Pakistan is doable more on paper than in the field, as repeated war exercises have shown over the years* (Karnad, 2017).

Pakistan has also taken serious counter measures to neutralize the Indian military's CSD. First step was the initiation of Azm-I-Nau large scale military exercises in which Pakistan Army practiced the synergy, integration and offensive-defense concepts to counter any aggressive maneuvers by the Indian military (Jamal, 2010). Secondly, Pakistan developed Al-Nasr-Hatf- IX nuclear tipped battle field missile to deter rapid thrusts by the Indian mechanized forces. The development and deployment of TNWs aimed to avoid any limited or total war with India. According to the Pakistani perspective so far, they have been successful in preventing India from any incursions

inside Pakistani territory. Former Chief of General Staff, Lieutenant General (retd) Muhammad Mustafa Khan, rationalized the induction of TNWs by Pakistan in these words,

> *India thinks they can fight a short term/ limited war under the nuclear umbrella. But we say, we have developed TNWs and conveyed to the Indians if you impose conventional war on us or cross the border we will use TNWs to deter them. I think TNWs are stabilizing factor in south Asia with the sole purpose to deter a conventional war"*(Khan L. r., 2017).

Pakistan is unable to compete India in conventional arms race, especially in the domain of long range air defense, fifth generation aircraft, nuclear submarines, space-based surveillance assets/spy satellites etc. The technological edge in the conventional capabilities of India would increase with the passage of time. Though, Pakistan's indigenous defense industry is doing a great job and its collaboration with China is filling the gaps but despite that there will be implications of the bigger, superior military of India for Pakistan.

The only stabilizer in the region is the nuclear capability of Pakistan. This is the reason that Pakistan military is heavily relying on its strategic and battlefield nuclear weapons to deter any war with India. Former Director General Strategic Plans Division- (SPD) Lt General (retd) Khalid Kidwai said, "……I believe the time of hot wars even limited war is out, because of the mutual nuclear deterrence, because of all this balance of terror. I said the hot wars as a policy are out, it would be madness to go for hot wars. So, we will define the concept of MAD by becoming mad" (Kidwai, 2017). Whenever, Indian military makes a shift in their strategic thinking, Pakistan comes up with adequate answers. The Indian strategic thinkers must understand that such operations (CSD, proactive military Ops, Surgical strikes) would plunge the region into further instability and turmoil because Pakistan's response would be uncertain, and threat of escalation would deteriorate the security situation. Since Pakistan has weak economy and it is overwhelmingly engaged in tribal areas against terror groups, the ultimate response would be to rely on tactical or strategic nuclear weapons to counter the Indian military's conventional

superiority and aggressive moves on the border or LoC. After 2011, the Indian military realized that the idea of CSD has become redundant and risky because of the development of TNWs by Pakistan. Therefore, the IAF came up with the idea of sub-conventional warfare operations-(surgical strikes) in 2012.

2.2. The IAF Doctrine of 2012: Sub-conventional Warfare

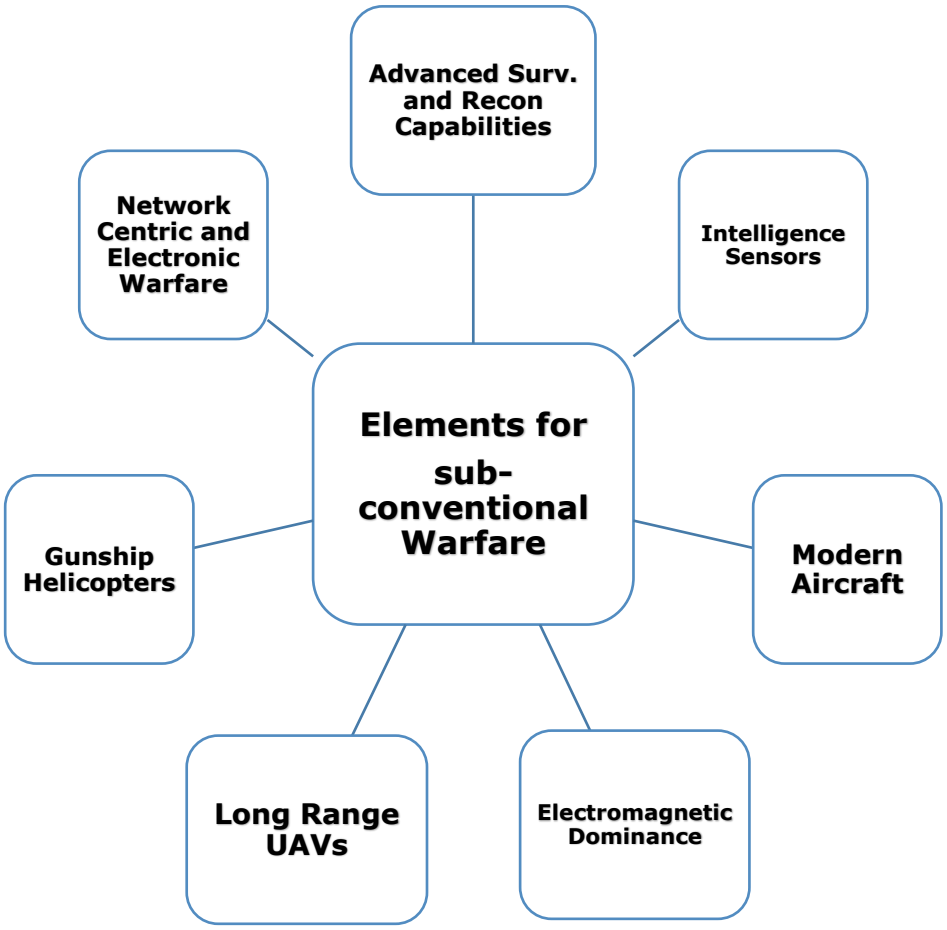
The Indian military is in continuation to revamp its strategic thinking which is now focusing on fighting a limited war with Pakistan. In 2012, the IAF brought change in their war fighting approach vis-à-vis Pakistan. The IAF doctrine of 2012, introduced "***Sub-conventional warfare"*** strategy (Air vice Marshal Arjun Subramaniam AVSM et al, 2012) which means that the IAF will synergize its efforts with the Indian Army to carry out sub-conventional operations inside Pakistani territory. The Indian policy makers believe that air force plays an important role in strike, back up, transportation, logistics and close air support to the ground forces (Air vice Marshal Arjun Subramaniam AVSM et al, 2012).

The Indian military is convinced that the nature of warfare has changed, and now sub- conventional warfare is a reality, in which air power would play a decisive role against alleged militant hideouts and training centers (Air vice Marshal Arjun Subramaniam AVSM et al, 2012). It appears that India may employ its air force for surgical strikes, which may take place in near future. However, in 2016, the Indian military claimed to have carried out alleged surgical strikes in AJK, which were negated by the Pakistan military (Singh R. , 2016).

Carrying out concentrated artillery fire close to LoC does not mean it is surgical strike. Surgical strike entails modern aircraft, Gunship Helicopters, Special Forces, modern technologies for real time intelligence about the intended targets. But in this case the Indians did not come up with any concrete evidence of surgical strike against Pakistan. Former Air Chief of Pakistan, Air Chief

Marshal (retd) Tahir Rafique Butt defined the concept of surgical strike in these words, "Surgical strike is a term used by the air force, where you go into an area which could be an enemy area and you precisely take out the targets in a precise manner without causing any collateral damage to achieve your objectives and come back. They may come in and able to hit but in reply what if they are all taken care of and then it may escalate" (Butt, 2017).

Figure-2



Source: (Air vice Marshal Arjun Subramaniam AVSM et al, 2012)

To operationalize this concept, the IAF would require advance aircraft, surveillance & reconnaissance capabilities, and deep assets across LoC for real time human intelligence and exact

location of the targets. Despite all these elements in place, the Indians cannot cross the LoC, working boundary or international border because of the 24/7 vigilance by Pakistan Army, and its ability to carry out counter surgical strikes. Moreover, the Indian military lack the required human intelligence to execute covert operations on Pakistani soil (George Perkovich and Toby Dalton, 2016). On the issue of surgical strikes, ACM (retd) Tahir Rafique Butt said Pakistan will carry out counter strikes within 4 to 6 hours, he was of the view that,

> *…….we have conveyed the message to the Indians that the moment you cross LoC, working boundary or international border, for us you have initiated this and we will retaliate immediately within 4 to 6 hours at the time, place and quantum of our choosing……absolutely fool-proof detailed plans are ready……*(Butt, 2017).

However, India is already in deal with French defense firms for the procurement of Dassault Rafale Aircraft (Singh R. , 2017) and with Russians for Sukhoi SU-30MKI aircraft (Pandit, 2017). Both these aircraft are highly advanced equipped with modern avionics and lethal fire power. These inductions would fill the operational gaps in the IAF to carry out surgical strikes against Pakistan.

To counter this move Pakistan has already inducted LY-80 air Defence system to shoot down these aircraft before they cross the LoC or International border. Former Commander of Pakistan Army Air Defense, Lt General (retd) Zahid Latif Mirza said that, recently inducted "LY80 air defense has a potent range and it is "deadly accurate" air defense system. We can engage the Indian SU-30 MKI and Rafale aircraft with LY-80 air defense system" (Mirza, 2018). Moreover, Pakistan Air Force is under continuous upgradation. Pakistan's JF-17 Thunder aircraft has witnessed upgrades in its avionics and it is likely that China would also share its advance fifth generation aircraft in future to cater the needs of Pakistan in the air domain vis-à-vis India. In addition, the IAF doctrine of 2012 also discussed the limitations of fighting in thick forests and rugged terrain, because these areas impede counter insurgency efforts of the Indian military but the induction of

NCW and EW capabilities, the IAF would overcome these operational gaps (Air vice Marshal Arjun Subramaniam AVSM et al, 2012). The IAF may use Electronic Support Measures- (ESM) to trace the alleged sanctuaries, logistical lines and operational bases of the insurgents. Highly sophisticated technologies would help the IAF to enhance their recon capabilities to intercept the communication of the alleged militants.

The Indian policy makers believe that the air force in sub-conventional warfare would play a crucial role by providing, real time aerial intelligence of the enemy location and hideouts (Air vice Marshal Arjun Subramaniam AVSM et al, 2012). Pakistan needs to assess the capabilities of the Indian military. These capabilities in place may give confidence to the Indian military to carry out adventurism against Pakistan. Former Ambassador to India, Ambassador (retd) Abdul Basit explained the issue of surgical strike in these words,

> *India is capable of becoming irrational, but the question is that what they are going to achieve by carrying out surgical strike. That would be stupidity of the highest order in my view. By carrying out surgical strike inside Pakistan what are they going to achieve, as they claimed so called surgical strike in 2016, what did they achieve nothing, so first of all one has to be clear about that what are the objectives. If the objectives are limited to just get Hindu votes in elections they can always claim but as far as I think overall strategic environment is concerned I firstly do not see that happening in reality……if they go ahead and carry out preemptive strikes, killing our soldiers and escalating the situation that should be worrisome at some level, but Pakistan is capable of responding to such a strike……..*(Basit, 2017).

The IAF doctrine of 2012 also emphasized on the gunship logistical and transport helicopters for future sub-conventional conflicts (Air vice Marshal Arjun Subramaniam AVSM et al, 2012). These helicopters would provide close air support, quick reinforcements, lethal fire power, and supply of arms and ammunition during conflict. The Indian military has inked many deals with the US to induct highly sophisticated aircraft and helicopters to operationalize its doctrine of sub-conventional warfare (Singh S. , 2015). The sub-conventional Operations would require greater

maneuverability, synergy and integration between the air and ground forces. To fill this gap India has procured 22 highly sophisticated Apache Helicopters (Here is why Apache and Chinook helicopters are game changers for India, 2017). This helicopter is equipped with superior technology and lethal weaponry which is considered as a force multiplier in case of any limited conflict between India and Pakistan.

Such a possibility would entail dangerous implications for the strategic stability of South Asia. As far as special operations or surgical strikes are concerned the Indian Air Force can cross and take out targets in Pakistan, but after that there will be a response and that response will not be quid pro que, but it would be massive which may undermine the Indian military's gains in any surgical strike (Lodhi, 2017). Any adventurism under CSD, Proactive military Ops or surgical strike would bring instability and turmoil.

The Indian and Pakistani policy makers must sit together, carry out continuous dialogue and resolve their disputes amicably. Use of force or coercion would have wide range of implications for the regional and global security. To support their conventional strategies the Indian military is also gearing up for assured second strike capability at sea. Though, it would take several years to get fully operational nuclear submarines, but the efforts are underway. The next part of the study deals with the Indian maritime strategy of 2015 and its implications for Pakistan.

2.3. The Indian Maritime Strategy- 2015

India possesses a huge maritime boundary of about 7500 km (Lawrence W et al, 2006) and a vast Exclusive Economic Zone- (EEZ) of two million sq. km (Address at the foundation day of the department of the ocean development , 2004). The Indian maritime trade is 42% which may grow in coming years (Mohan D. S., 2017). It is largely dependent on seas, because 90% of its

global trade by volume and 70% by value is through the Indian Ocean, Arabian Sea and Bay of Bengal (Commodore Sanjay J Singh et al, 2015). This is the reason that India wants an impeccable Naval force with greater outreach, maneuverability and enhanced firepower (Commodore Sanjay J Singh et al, 2015).

The objective is to secure key lanes of communication in the Indian Ocean, Arabian Sea and Bay of Bengal. Such a huge force would seriously challenge, Pakistan's maritime interests in the Indian Ocean and Arabian Sea. A closer look at the Indian maritime strategy of 2015 gives us an idea about the future composition of the Indian Navy, strategy, policy guidelines and development programs. The most threatening thing for Pakistan in the Indian maritime strategy of 2015 is the Indian Navy's aspiration to procure five nuclear submarines, anti-submarine aircraft, corvettes, stealth frigates, warships, designated spy satellites, advance Air defense system for their warships and aircraft carrier which may undermine Pakistan's maritime interests in the region.

In future, Pakistan would face the challenge of Indian nuclear submarines, because of their range, endurance, strategic outreach and lethal firepower. Currently, the Indian Navy operates two nuclear powered submarines, INS Arihant and INS Chakra-II (Pandit, 2017). In December 2017, The Indian Naval Chief Admiral Sunil Lanba during a press conference said that, "We have launched the project to make six SSNs- (nuclear-powered submarines) ("India launches project to make six nuclear submarines: Navy chief", 2017).

These inductions would enhance the strategic outreach of the Indian navy in the Indian Ocean, Arabian Sea and Bay of Bengal (Pant, 2016). The induction of nuclear submarines would seriously create strategic disparity in south Asia, because of their long endurance, stealth capabilities, subtleness and ability to carry long range nuclear warheads. The Nuclear subs would provide the Indian Navy with greater outreach, firepower and assured second strike capability at

sea. The induction of nuclear submarines would deter Pakistan from employing its tactical or strategic nuclear warheads against India, creating a room for the Indian military to carry out conventional operations against Pakistan without actually indulging in a major conflict.

According to Pakistani perspective these submarines would be a threat for Pakistan's maritime interests but at the same time Pakistan has the ability to respond. Former Vice Admiral Muhammad Haroon said,

> *"It is bit dicey for them, one action by their submarine against our system against our ships against our maritime interests would obviously indicate their position. The moment that happens an aggressive act has occurred so there will be a retaliation…'a bloody nose for a bloody nose can be done……when the Indians think they think about the entire Indian Ocean, when we think, we think power projection within the littorals and the activity that could happen in the Arabian Sea (Haroon, 2017).*

In addition, the Indian Navy has also inducted Long Range Surveillance-Anti submarine warfare aircraft P8-I (George J. Gilboy and Eric Heginbotham, 2012). The procurement of P8-I aircraft would be a grave threat for Pakistan's conventional submarines operating in the Arabian Sea or Indian Ocean Region- (IOR). The Indian Navy's aspirations for blue water navy has threatened the strategic stability in south Asia. The deployment of aircraft carriers, nuclear submarines, long range P8-I maritime surveillance aircraft, stealth frigate, destroyers, and anti-submarine warfare corvettes have seriously compelled Pakistan to re-think about the protection of its maritime interests in the IOR and Arabian sea. Pakistan operate a small navy which has no parallel with the massive 200+ ship Indian Navy. Pakistan has launched a massive CPEC project with the help of China. The economic activity at Gawadar port would be crucial for Pakistan's development in future. The Indian Navy's nuclear submarines, their deployment and operations from Mumbai and Karwar bases in the Arabian Sea and IORs would seriously threaten Pakistan's maritime economic and strategic interests.

To counter such a development, Pakistan and China needs to improve their defenses around the Gawadar port, increase joint patrol in the Arabian Sea and beyond, induct modern surveillance and anti-submarine warfare aircraft/warships to detect and destroy enemy submarines before they could strike. According to former CJCSC General (retd) Ehsan Ul Haq, "we have developed some air bases in Gawadar, Pasni, Ormara, Masroor and Bolari, they are all facing the sea front and they are backed up by Turbat, Khushab and others" (Haq, 2018). Pakistan must improve its anti-submarine and maritime surveillance capabilities to detect and eliminate any Indian nuclear or conventional submarines in proximity to its premier assets in Karachi, Gawadar or elsewhere. Former vice Admiral (retd) Muhammad Haroon has emphasized that Pakistan must also go for nuclear submarines to achieve assured second-strike capability. He said,

> *We need to induct a nuclear submarine because a conventional submarine has to come up to charge its battery, to freshen the air quite often, while a nuclear submarine is powered by nuclear systems, it doesn't have to come up for days. So, it stays down, remain hidden. In a submarine warfare 90% of the submarines are gone when they are carrying out snorkeling or they are on surface or they carried out a transmission. If you don't do any of these three, you are down and low at your station, quietly working and observing everything in a range of about 300 nautical miles radius, it makes lots of difference. You are depending on your detection and engagement systems* (Haroon, 2017).

Though, Pakistan tested Babur-III from a conventional submarine but that could not be termed as assured second strike capability that would only provide temporary solution to our long-term issues. Pakistan must induct nuclear submarine along with missiles with greater speed, range and precision to take out premium assets of India. In this way Pakistan will not only ensure its second-strike capability vis-à-vis India but would also extend support to its 'first use option' and policy of 'full spectrum deterrence' to ensure deterrence stability in south Asia. The next part of the study would deal with the 'Joint Indian Armed Forces Doctrine of 2017', which entails the Indian military's aspiration for 'surgical strike' because the Indian military was unable to operationalize their previous doctrines.

2.4. The Joint Indian Armed Forces Doctrine - 2017

The Indian military is seeking a gap for short, limited and intense warfare with greater speed, maneuverability and strategic outreach. After learning from previous Army, Air Force and Naval doctrines, the Indian military has announced a Joint Warfare Doctrine in 2017. The most threatening thing in the new joint warfare doctrine is the possibility of a Surgical Strike against Pakistan ("Joint Doctrine Indian Armed Forces-2017" , 2017).

Initially, the idea of surgical strike was coined in the IAF doctrine of 2012. After years of assessment and ground work the Indian policy makers are convinced that they can carry out surgical strike against Pakistan in case, any militant attack takes place in IHK or in India with the alleged connivance of Pakistan Army or Inter-Services Intelligence Directorate- (ISI-D). The incumbent Indian Army Chief has categorically declared that they would cross again (Pandit, 2018).

Whether it is for the public consumption or electoral support, such a proactive strategy would put the security of south Asia at greater risk. The Indian military's insistence with surgical strikes or special ops would further complicate the security situation in the region. The operationalization of the proactive military operations, sub-conventional warfare ops or surgical strikes would require political will and predetermined limited objectives. The incumbent political and military leadership in India has shown its desire to carry out surgical strikes inside Pakistani territory to take out alleged sanctuaries of the militants (Raj, 2017). The Modi government has created war hysteria in India and labeled each and every attack in IHK with Pakistan, which shows their offensive approach towards Pakistan and intentional move to label the legitimate freedom struggle with that of militancy. Apart from the Modi government, the Indian Army Chief has also

threatened Pakistan that they will avenge the attack on their security forces with time and place of their choosing (Jose, 2017).

Such a statement by an Army Chief, without any investigation and proof is considered as aggressive and insane. Use of force against a nuclear weapon state is madness. It would be devastating and push Pakistan for countermeasures. According to an Indian perspective, there is a possibility of surgical strike in case of any terrorist incident in India. According to Bharat Karnard, Indian military may carry out, "Deeper surgical strikes in case of egregious terrorist actions against India and Indian targets" (Karnad, 2017). Former Brigadier of the Indian Army, Gurmeet Kanwal also endorsed Bharath Karnard's point of view and said that "……. In India we believe there is space for conventional conflict below the nuclear threshold" (Kanwal B, 2017). Another expert of South Asia, Professor Harsh V Pant of the Kings College London believe that, "there is possibility of limited war, CSD or surgical strikes" (Pant, 2017). However, Rajesh Basrur was of the opinion that, "Yes, it (surgical strike) is possible; but such strikes will remain very limited in scope" (Basrur, 2017). Research Fellow at the Royal United Services Institute- (RUSI), Shashank Joshi was of the view that, "I would suggest repeat (surgical) strikes are not only possible, but also quite likely within the next few years. They have proven possible, politically successful, and internationally accepted" (Joshi, 2017).

The Indian perspective revolves around a thinking that India is a major power and it must go for surgical strikes in future. However, Pakistani perspective totally shrug off the idea of surgical strikes. Surgical strike in its true meaning and spirit would entail the use of aircraft, gunship helicopters and Special Forces, you go to a certain area, achieve your specified targets and come back unhurt. Keeping in mind the geographical proximity, Pakistan's air defense capabilities, heavily militarized LoC and round the clock vigilance it seems unlikely that India would ever be

able to achieve capability to successfully carry out surgical strikes inside Pakistani territory. Former CJCSC General (retd) Ehsan Ul Haq believe that slogan of surgical strike is more for their domestic electoral politics, he was of the view that,

> *I still think that there is more talk than their actual ability to carry out operations, that is not to say that we should not be prepared, that's a different thing altogether. But in my view the Indian military leadership very categorically know this if they were to carry out the surgical strike or any incursion across the LoC or across the international border or the working boundary, Pakistan will retaliate, they are very clear on this* (Haq, 2018).

The Indian military's doctrinal shift entails serious implications for the south Asian security. They assume that they would carry out surgical strike because they got strategic alliance and diplomatic support of the US, Russia and Europe. But they ignore this fact that Pakistan's conventional capabilities will make it expensive for India. The response to any surgical strike would be massive which may push India to escalate the conflict to avoid embarrassment back home and ultimately limited war may escalate into a major war.

Both countries can sustain limited conventional war, but the cost would be great for both. It is imperative that India must realize this fact that any operation sub-conventional, limited or total would invite aggressive response from Pakistan. This is the reason that the Indians after 9/11 moved to Afghanistan and established their network and launched hybrid warfare against Pakistan. The next part of the study deals with the changing nature of hybrid warfare and its impact on Pakistan.

2.5. The Execution of Hybrid Warfare Strategy by India

The Hybrid warfare strategy is not new to the world. Since ages states have been employing covert operations against their enemies to create subversion, get intelligence, destroy adversary without actually directly engaging in any war. Classical realist, Chankya Kautilya gave the concept of

undeclared war or covert operations in his book *Arthashastra*, in which, he advised the king to use the secret agents, religion or superstition, and women against the enemies (Rangarajan, 1992).

Chankya Kautilya was great proponent of irregular warfare- (hybrid warfare). In *Arthashastra*, Kautilya has advised the king to execute covert operations or launch psychological warfare to gain advantage over enemy. Kautilya also advised "unjust" techniques, a form of irregular warfare to incite troubles in enemy kingdom by bribing officials, initiating intrigues, kidnapping relatives of the enemy rulers, and hiring assassins (Daniel Coetzee and Lee W. Eysturlid, 2013).

a) - Defining the Concept of Hybrid Warfare

The hybrid warfare strategy is considered as irregular warfare which is blend of many aggressive steps by a state or non-state actors against a country to achieve strategically motivated political goals. This type of warfare pose serious challenge in the modern times, because the adversary has no face, it uses complex stratagems to make its inroads, the targets are not confined to conventional or hardcore military but the ambit of hybrid warfare also includes cultural sensitivities in a particular society, ethno-centrism, propaganda, fake news, covert operations, staged agitations and engineered campaigns to undermine country's independent stature, global image, territorial integrity, national cohesion and socio-economic progress. Sometimes the perpetrators of hybrid warfare are state actors which may include spy agencies of a particular state to create mayhem and turmoil in other country, fund militants and insurgents to create large scale political subversion, offensive diplomacy to undermine country's soft image at global forums and effectively employing fake media campaign for propaganda to create confusion in the masses of the targeted country. There is no universally accepted definition of hybrid warfare strategy however in contemporary literature hybrid warfare is explained as irregular strategies or tactics, and according

to some scholars it is mixture of asymmetrical and conventional strategies used in a particular battlespace, however some describe it as a New Generation Warfare doctrine. Most of the western scholars link the hybrid warfare strategy with the Russian covert operations in Ukraine and Georgia. The aim of such covert operations is to politically influence the respective country (Radin, 2017).

The term hybrid warfare was first coined by the US military officers General James Mattis and Frank Hoffman in 2005, "Irregular challengers seek to exploit tactical advantages at a time and place of their own choosing, rather than playing by our rules. They seek to accumulate a series of small tactical effects, magnify them through the media and by information warfare……"(Sadik, 2017). The International Institute for Strategic Studies- (IISS) consider the "merger of different modes and means of war as hybrid warfare strategy" (Sadik, 2017).

In modern times the hybrid warfare has shrank the difference between regular and irregular operations. Now it is blend of both strategies. Though such type of multifaceted covert operations existed in the ancient times. In modern history some analyst believe that Mao Zedong of China is considered as the first to emphasize on the importance of fluctuating between regular and irregular warfare methods. Mao contended that the struggle is mainly a political one and not military, that the first phase of the struggle would always include asymmetrical warfare techniques, but the victory would only be conceivable through regular warfare with conventional forces. Thus, without coining the term the concept of hybrid warfare was born and later used by many (Julian Lindley-French and Yves Boye, 2012). According to North Atlantic Treaty Organisation- (NATO), the hybrid warfare strategy is not new, it has always been existed in the international system where one state exploit the weaknesses of the other by using irregular methods and

techniques. However, the hybrid warfare is widely understood as "blend of conventional/unconventional, regular/irregular, information and cyber warfare tactics……complex set of interconnected threats and forceful means waged to further political motives"(Puyvelde, 2018).

However, the US military defined the hybrid warfare strategy in these words, "conflict executed by either state and/or non-state threats that employs multiple modes of warfare to include conventional capabilities, irregular tactics, and criminal disorder" is called as hybrid warfare (D'Agostino, 2010). In Addition, another term 'the hybrid threat' is also considered as the same concept. The US Marine Corps officials believe that hybrid warfare is no different from full spectrum warfare. It encompasses over conventional and unconventional warfare. However, the US air force officials believe,

> *"the hybrid warfare is more complex than regular warfare because of increased tempo, complexity, diversity, and wider orchestration across national borders which are all exacerbated by the ease with which adversaries can communicate, access international sources and funding and acquire more lethal and sophisticated weaponry"*(D'Agostino, 2010).

Another definition of the hybrid warfare explains the concept of hybrid warfare in these words.

> *"An enemy that concurrently adopt and employ amalgamation of (1) political, military, economic, social and information means and (2) conventional irregular terrorism and disruptive/criminal conflict methods. It may include combination of state and non-state actors"*(D'Agostino, 2010).

It could be argued that the superposition of conventional and unconventional sphere has given birth to hybrid warfare strategy. The convergence of regular and irregular tactics poses a multifaceted threat to a state for politically motivated objectives. Therefore, it could be summed up that any threat, which involves multiple tactics and strategies and are not confined by a single dimension of warfare against a particular country is called 'hybrid warfare (A. Niglia, 2016). In another description, the hybrid force could may not involve conventional forces such as main battle

tanks, mechanized forces, bombers, warships, etc., but still be hybrid because it contains the irregular forces, guerillas, partisans, convicts and unconventional weapons. The conglomeration of all these irregular actors may also be regarded as a hybrid force (Lovelace, 2016).

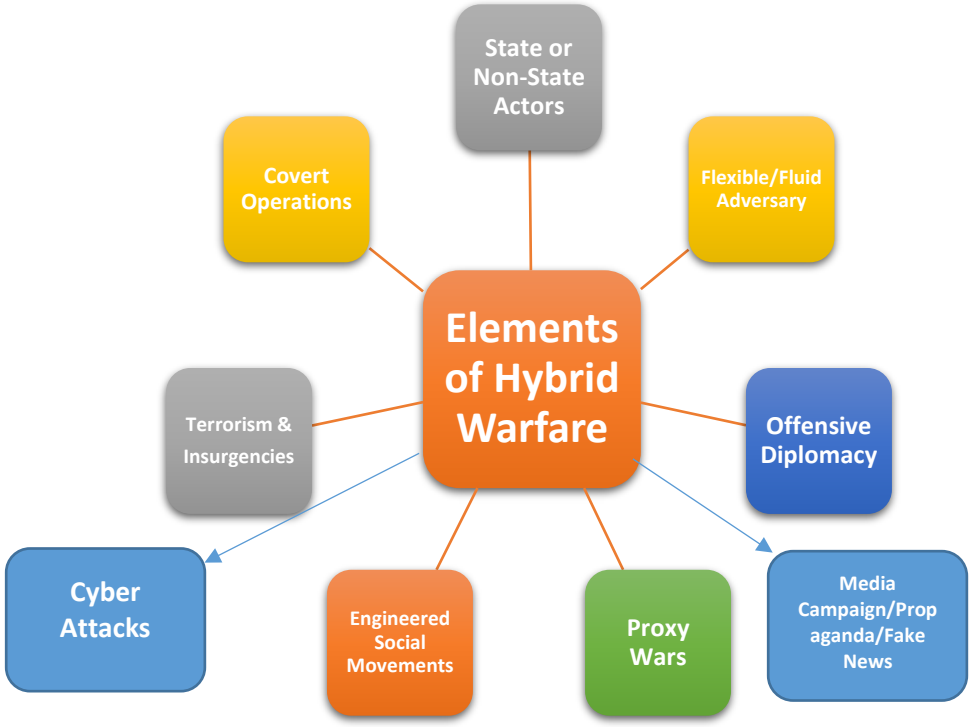
The distinguishing aspect of the hybrid warfare is that, it is being wrestled in a truly global, practically borderless milieu. Global interface has become easier, it is beyond any border or restriction. The hybrid warfare fighters contain state and non-state actors, multinational organizations to NGOs and even mercenaries (Trenin, 2018). The hybrid warfare is meant to capitalize on the vulnerabilities of a targeted state. The actors involved in this type of warfare open multi-front attack against a state to create direct and indirect effects (Dr. Patrick J. Cullen and Erik Reichborn-Kjennerud, 2017). The hybrid warfare players coordinate their military, political, economic, civilian, and informational- (MPECI) tools of power to launch series of activities to create an impact which may seriously pose political and strategic threats to a country (Dr. Patrick J. Cullen and Erik Reichborn-Kjennerud, 2017).

b) - The Application of Hybrid Warfare on Pakistan

In India-Pakistan framework, covert operations are not new. Since independence both states viewed each other with suspicion and mistrust. The Indian policy makers believe that Pakistan played a negative role in IHK and Sikh Khalistan insurgencies, whereas Pakistan accused India of meddling in East Pakistan (Now Bangladesh), Balochistan and FATA. Pakistan is facing multiple threats by India's hybrid warfare strategy. India has launched political, military, economic, diplomatic and social onslaught against Pakistan and trying to capitalize on the vulnerabilities of the state of Pakistan. Pakistan Army Chief General Bajwa has recently referred to this phenomenon of hybrid warfare in his speech at Kakul (Syed, 2018). He was of the view that, "Our enemies

know that they cannot beat us fair and square and have thus subjected us to a cruel, evil and protracted hybrid war. They are trying to weaken our resolve by weakening us from within" (Syed, 2018).

Figure- 3



Source: Author's Own

The Indian military has tried to subdue Pakistan through different military strategies, but after the overt nuclearization conventional military operations are no longer viable options for the Indian military. The CSD, Proactive military operations or surgical strikes lost their significance because of Pakistan's conventional and nuclear response. However, the execution of hybrid warfare strategy entails no such risks of escalation or nuclear exchange. This is the reason that the Indian policy makers are now focusing more on the application of hybrid warfare strategy instead of direct military engagement with Pakistan. According to Professor Zafar Nawaz Jaspal, "the gist

of the fact is that India and its like-minded states make use of conventional/unconventional, regular/irregular, overt/covert tools, and exploit all the dimensions of war to undermine Pakistan's national security" (Jaspal D. Z., 2017).

However, it is noteworthy that the execution of hybrid warfare strategy is not new in south Asian context. Both states have been employing such strategies against each other since independence. As far as India is concerned it has already waged such type of war against Pakistan since the establishment of Research and Analysis Wing- (R&AW) in 1968 (Stanley A. Kochanek and Robert L. Hardgrave, 2008). The first classical example of the successful application of hybrid warfare strategy was the formation of Mukti Bahini guerrilla force in East Pakistan (now Bangladesh) that played crucial role in the dismemberment of Pakistan.

The Indian decision makers efficaciously exploited the ethno-political divide/vulnerabilities of Pakistan in 1971. Mukti Bahini was exclusively trained, funded and nurtured by the Indian Army and R&AW and later on unleashed on the Eastern Wing of Pakistan resulted in humiliating defeat for Pakistan military. They were involved in heinous crimes against Pakistan Army, their families, and loyal to Pakistan Bengalis and Biharis (Kasturi, 1995).

India has been actively carrying out subversive activities against Pakistan and many of their high-profile agents were captured in Pakistan since 1970s. Most notable were Surjeet Singh, Sarabjit Singh, and Kashmir Singh, Ravinder Kaushak and recently held Kulbushan Yadav and many others (Shah S. , 2016). Former Director General of ISI and Military Intelligence, General (retd) Ehsan Ul Haq explained the Indian covert operations in Pakistan in these words,

> *The Indians have been trying to destabilize us internally. We have been subjected to an invasion that is something which is being happening since 1947……those elements of the hybrid warfare have been at work for a very very long time. We saw its manifestation in 1971 in the East Pakistan……they have accordingly enhanced into all these facets whether it is psychological, information, media, cultural, economic, military,*

> *diplomatic all these things have been at work against Pakistan and it will continue to be so* (Haq, 2018).

The Indian policy makers after the Mumbai attacks in 2008 launched renewed covert operations against Pakistan to curtail its support for Kashmir cause. India's subversive activities against Pakistan have a long history but after 2008, it gained momentum.

c) - The Establishment of Technical Service Division- (TSD) - 2008

The Indian military's incapacity to execute CSD against Pakistan after the 2008 Mumbai attacks prompted the Indian policy makers to employ covert means to avenge the Mumbai attacks. In that context, former Indian Army Chief, General (retd) V.K Singh formed a secret unit in the Indian Army called Technical Services Division- (TSD), to buy the loyalties of Kashmiri leaders in the IHK, target Lashkar-I-Tayyaba-(LET) leadership in Pakistan and to carry out terrorist activities inside Pakistan ("Ex-Indian Army chief admits sponsoring terrorism in Baluchistan" , 2013).

An Indian Army official, privy to the TSD's activities said that "Our main task was to combat the rising trend of state-sponsored terrorism by the ISI and we had developed contacts across the LoC in a bid to infiltrate Hafiz Saeed's inner circle" (Baweja, 2013). This unit had endorsement of the Indian DG Military Intelligence, Vice Chief and COAS General V.K Singh (Baweja, 2013). Under TSD, the Indian Army carried out three covert operations in the post 2008 period. ***Operation Rehbar I-II-III*** was launched in IHK, ***Operation Seven Sisters*** in Northeast of India and ***Operation Deep Strike*** was carried out inside Pakistan (Baweja, 2013). Since, these operations were highly secretive in nature, this is the reason no details are available in the open media, but reportedly, the TSD Unit carried out eight covert operations in a foreign country-

(probably Pakistan), and paid money from "secret service funds to try and enroll the secessionist chief in a province of a neighboring country" (Singh S. , 2015). Here it is noteworthy that India and Pakistan have been blaming each other for provoking militancy in their respective countries.

The evidence on ground suggest that TSD unit played its role in creating subversion in Pakistani province of Balochistan. The arrest of Indian Spy Kulbushan Yadav is the evidence of Indian covert operations inside Pakistan. It is also reported in the Indian media that Kulbushan Yadav in 2012 tried to join TSD. It is in the offing that he might be part of TSD unit to create instability in Pakistan (Thapar, 2017).

According to Pakistan's incumbent Chairman Joint Chief of Staff Committee- (CJCSC), General Zubair Mahmood Hayat, "Indian spy agency Research and Analysis Wing- (R&AW) had established a cell in 2015 dedicated to sabotage China-Pakistan Economic Corridor- (CPEC) projects in Pakistan ("RAW running $500 million cell to sabotage CPEC,' says Gen Zubair Hayat" , 2017). Kulbushan Yadav, in his confession accepted that he was involved in the subversive activities in Karachi and Baluchistan in which many Pakistanis lost their lives ("Indian spy Kulbhushan Yadav confesses to spying in Pakistan in video.", 2016). He was tasked to create uncertainty in Pakistan, disrupt CPEC and target Gawadar port ("Indian spy Kulbhushan Yadav confesses to spying in Pakistan in video.", 2016). According to former Corps Commander- (XXXI Corps), Lt General (retd) Naeem Khalid Lodhi,

> *Kulbushan Yadav and other network which has been caught are a proof that they are actually pursuing this doctrine of* ***hybrid warfare****. It is not that they have to wage a war, we are already in the middle of a war. They have already waged hybrid war against us. They will undermine us especially in the field of economy that is the reason that they are so much against CPEC* (Lodhi, 2017).

This is one of the reasons that, Pakistan has witnessed renewed terrorist attacks in Baluchistan, Karachi and other parts of the country. Later, General (retd) V.K Singh after

retirement from the service joined BJP and won election from Ghaziabad with a huge lead (Aradhak, 2014). Such a hawkish individual with an anti-Pakistan rhetoric, in the incumbent BJP government would be troublesome for Pakistan. It is obvious when it comes to strategic issues especially dealing with Pakistan, he would advise the BJP leadership with his pugnacious thinking for some offensive moves against Pakistan, which could be proactive military operations or surgical strikes.

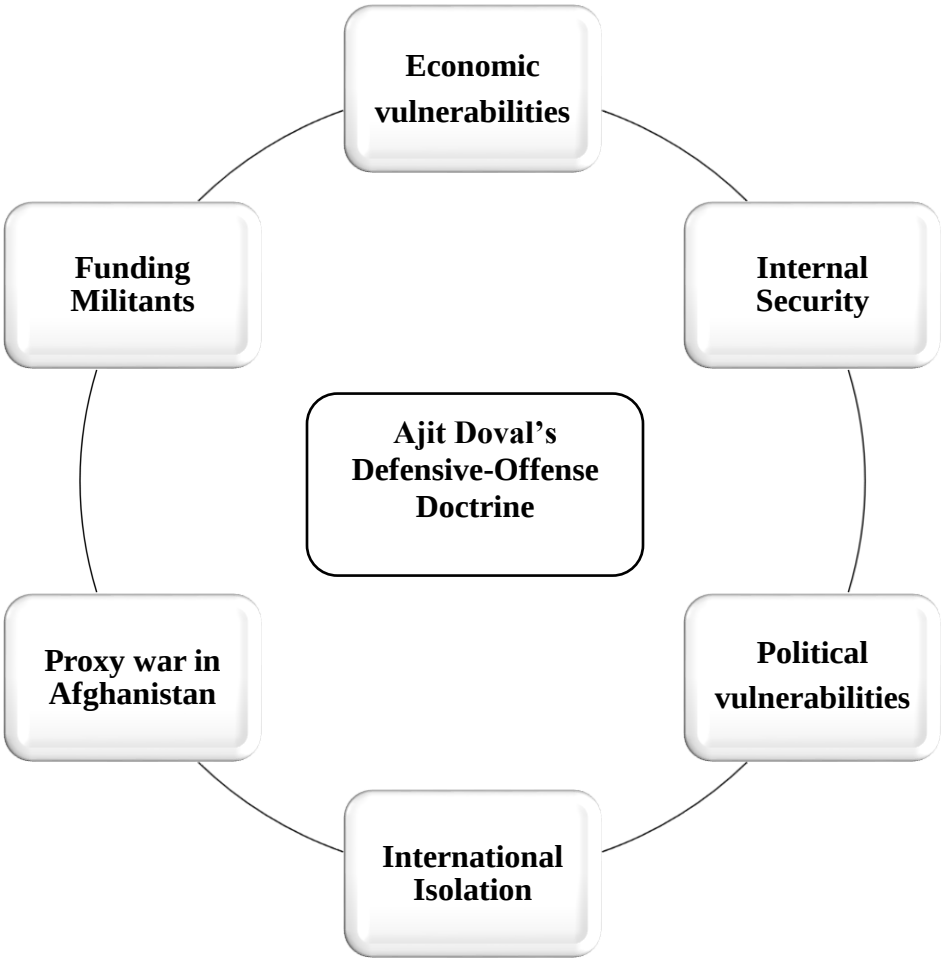
d) - Ajit Doval - Defensive-Offense Doctrine

The appointment of Ajit Doval as National Security Advisor- (NSA) by the BJP government was another step to deal aggressively with insurgency in Kashmir and curb its alleged support from Pakistan. Former Director General Air Force Strategic Command-(PAF) and Air Attaché in India, Air Marshal (retd) Muhammad Ashfaque Arain discussed the Indian covert operations in Pakistan in these words, "Since India cannot achieve its objectives with military force, covert operations to weaken Pakistan are the best option. While policy of covert operations by India was already in place and functional, Ajit Doval with his RAW background has given it further impetus" (Arain, 2018).

Ajit Doval while describing his approach in dealing with threats to the Indian National Security said that 'we deal with enemy at three levels. First is ***defensive mode***, in which he said, 'we improve our defenses at home and deal with it on our own soil'. Second mode is ***defensive-offense***, in which 'you have to proactively go to the area from where threat is coming and neutralize it there'. And third is ***offensive mode*** which implies that 'you go for offensive out rightly'. When it comes to dealing with Pakistan, he was of the view that nuclear weapons prevent India from offensive mode, but it does not cross threshold in ***defensive-offense*** approach. He

emphasized on ***defensive-offence* strategy** which aims at exploiting the vulnerabilities of Pakistan, which could be economic, internal security, political, its isolation internationally, proxy war in Afghanistan and making it difficult for Pakistan to manage its internal security" (Nithesh, 2016).

Figure- 4



Source: (Nithesh, 2016).

Chankya Kautilya in ***Arthashastra*** did not urge the ethical deliberations against adversary when it comes to covert operations, but rather prudent and careful calculations. He said……"if the subjects, harassed by (an enemy's king) own army or disaffected with him, are easy to entice, being weakened, without energy or divided among themselves…….then he should make

war and March" (Boesche, 2002). This is actually true manifestation of hybrid warfare strategy, in which India aims to exploit Pakistan's political, socio-economic, strategic, ethnic and religious susceptibilities. This is what India did in East Pakistan (now Bangladesh) and this is what the Indian government is instigating in Balochistan and tribal areas of Pakistan.

Another senior official of the Modi government, former defense minister Manohar Parrikar has also openly declared that India will pro-actively deal with Pakistan. He said, "We have to neutralize terrorists through terrorists only…....kaante se kaanta nikalta hai (you remove a thorn with the help of a thorn)" (Singh R. , 2015). However, Pakistan got clean chit in Pathankot terrorist attack investigation in IHK. Initially, the Indian government claimed that Pakistan was involved in the attack, but after the investigation, Director General National Investigation Agency- (NIA) of India, Mr. Sharad Kumar said that, "No evidence to show that Pakistan government or Pakistani government agency was helping Jaish-e-Mohammed- (JeM) or Masood Azhar or his aides carried out the Pathankot attack"(Arunima, 2016).

However, it appears that the BJP government has already made up their mind that any alleged terrorist attack in IHK or Indian soil would be orchestrated by Pakistan Army or ISI. Such an approach is threatening for the peace and stability of South Asia. The Indian government's aggressive thinking to use militants and spies to destabilize Pakistan has already taken place. Since 9/11, Pakistan has faced serious issue of militancy and terrorism in tribal areas, in which it has suffered $118 billion economic losses ("War on terror' has cost Pakistan $118bn: SBP" , 2016) casualties of over 80,000 civilians and 5,498 military personnel ("Body Count: Casualty Figures after 10 Years of the "War on Terror" , 2015). In addition, Pakistan has deployed over 200,000 troops in FATA (Gul, 2016) to curb terrorist networks, supported, funded and nurtured by India from across the border. Their activities were disclosed by ex-TTP commander Latif Mehsud who

was nabbed in Afghanistan by the US forces and later handed over to Pakistan. He was there in Afghanistan to collect funds and instructions by R&AW and Afghan authorities ("Striking revelations: Hakimullah Mehsud's top aide in US custody", 2013).

Another major achievement in 2017 was the surrender of an ex-TTP Spokesman Ehsan Ullah Ehsan. In his confessionary statement he revealed that Afghan soil is being used by the TTP and other militant organizations against Pakistan. His claim was verified by Kulbushan Yadav in his confession, that India is creating problems for Pakistan from their consulates in Afghanistan (Yousaf, 2017). India through Afghanistan wants to engage Pakistan internally, so it could not raise its voice for Kashmir cause. The incumbent Indian policy makers are making all efforts to isolate Pakistan regionally and globally using diplomatic offensive.

Chankya Kautilya in ***Arthashastra*** has also mentioned that a country must use offensive diplomacy to defeat an enemy. Chankya Kautilya believed diplomacy is a 'subtle act of war, a series of action taken to weaken an enemy and gain advantages for oneself, all with an eye towards eventual conquest' (Keith Hamilton and Prof. Richard Langhorne, 2011). In that context, this is what we have observed in the recent past when India without any concrete evidence blamed Pakistan for alleged terrorist attacks in IHK. India's boycott of South Asian Association for Regional Cooperation- (SAARC) meeting along with Bangladesh, Afghanistan and Bhutan was part of their diplomatic offensive to isolate Pakistan regionally (Sansanwal, 2016). However, the Indian leaders categorically declared that they will isolate Pakistan globally (Bokhari, 2016).

Such a thinking is destructive for the regional peace, stability and development. Without Pakistan, it is impossible for south Asia to constructively connect with Central Asia, West Asia or rest of the world. India through hybrid warfare strategy achieved three main objectives, first they imposed heavy economic losses on Pakistan, secondly, Pakistan army was compelled to deploy

major chunk of its armed forces on the Afghan border and now it is facing two front war dilemma, third, through this strategy Pakistan lost more civil and military casualties than in any direct wars with India since 1947. However, Pakistan has bounced back and achieved phenomenal success in FATA against TTP, Al-Qaeda and other affiliated militant groups. Now they are enjoying sanctuaries in Afghanistan under the patronage of India. Security situation in Balochistan and Karachi has also improved with consistent intelligence-based operations, development projects-(CPEC) and reintegration of the disgruntled Baloch rebels.

The doctrinal change and rapid military modernization drive by India would create security dilemma for Pakistan. The conventional asymmetries would create strategic disparity in south Asia, allowing India to carry out limited ops under the nuclear threshold. Such a thinking is aggressive and would plunge the region into further mayhem and turmoil. Pakistan would also speed up work on the induction of modern weapon and equipment to fill the gaps in its conventional deterrence vis-à-vis India to maintain strategic parity in south Asia. The doctrinal transformation in the Indian military suggest that, there is a possibility of limited, intense conflict between India and Pakistan.

After the induction of nuclear weapons, the possibility of total war has diminished but now it seems that the Indian military is aiming to fight a sub- conventional warfare or planning to carry out surgical strikes with its Special Forces, advanced helicopters, UAVs and highly sophisticated aircraft. All these eventualities would lead to a clash between India and Pakistan, which may escalate into a full fledge conflict. According to Pakistani perspective, there will be a retaliation to any adventurism by India, which may escalate into a full-blown war. Pakistan's economic conditions does not allow to indulge in costly arms race with India. It would try to fill the gaps with its indigenous defense industry but in reality, it has to go a long way to achieve capabilities

to counter the Indian military's force multipliers i.e. long-range air defense systems (S-400 and Barak-8), Long endurance UAVs, P8I Anti-Submarine-Surveillance and Reconnaissance Aircraft, Nuclear Submarines, Fifth Generation aircraft and spy satellites. To counter the Indian military's conventional capabilities Pakistan would ultimately rely on its nuclear assets, especially tactical nuclear weapons with small yield and shorter range to deter any advance of the Indian Army's Integrated Battle Groups- (IBGs).

Most of the scholars in the West believe that Pakistan's TNWs are source of instability. According to Ashley J Tellis, "TNWs are unlikely to be effective as nuclear deterrents, except for strategic signaling. Their value operationally is modest, and the risks associated with their deployment are considerable" (Tellis, 2017). Another expert of south Asia, Dr. Toby Dalton, Co-Director, Nuclear Policy Program of the Carnegie Endowment for International Peace, shared the same views that "TNWs may contribute marginally to deterrence stability in some contexts, but at considerable cost and risk of accident and inadvertent escalation" (Dalton, 2017). Another expert on south Asian politics and nuclear issues, Michael Krepon, from Stimson Center discussed the associated risks with the deployment of TNWs, in these words,

> *Tactical nuclear weapons are the least safe and secure nuclear weapons in any country's arsenal, in large measure because they must be deployed near the battlefield, where they are susceptible to accidents and being overrun, or hit by airpower. Any mushroom cloud is a threat to uncontrolled escalation* (Krepon, 2017).

However, Pakistani perspective is different from the Indian or Western perspective. Pakistani policy makers and experts believe that the sole purpose of the TNW is to deter the Indian military's limited conventional war strategy- (CSD or proactive military Ops). It has no aggressive intent or designs. The command & control, safety & security issues could be addressed effectively. If Pakistan can develop these weapons, it can also certainly provide foolproof security to these

assets. Former Director General of the SPD, Lt General (retd) Khalid Kidwai rationalized the development and deployment of TNWs in these words,

> *As far as Pakistan is concerned it is well within our sovereign right to find an answer to the cold start doctrine, so at the conventional level, at the nuclear level we have tried to find answers to how to neutralize the cold start doctrine, which takes care of the mobilization time, the exercises, cutting down of the reaction time etc. it is the kind of a doctrinal game that goes on between any two adversaries. An adversary when develops a new doctrine the other side tries to find answers to that, we have also found the answers to cold stat doctrine, because of which I feel confident enough to say that the era of hot wars is over* (Kidwai, 2017).

The overwhelming reliance of Pakistan military on nuclear weapons would be a dangerous development in south Asia. It would put the nuclear deterrence at greater risk. The Indian nuclear doctrine does not clearly differentiate between tactical or strategic nuclear warheads. It generally talks about massive retaliation in case of any WMD threat or use against the Indian forces anywhere in the world.

Such an ambiguity put a question mark on Pakistan's rationale behind the induction and use of tactical nuclear weapons. What if India respond Pakistan's tactical nuclear weapons with its strategic nuclear warhead? The doctrinal shift, massive Indian military modernization programs and Pakistan's full spectrum deterrence strategy along with the induction of battle-field nuclear weapons portrays a bleak picture of deterrence stability in south Asia. It appears that a small incident may embroil India and Pakistan in an unending spiral of conflict which may lead towards irreversible situation and end up in a nuclear exchange. It is imperative for both nuclear belligerents in south Asia to show restraint and work together to resolve their issues bilaterally in harmonious environment. The road to confrontation would seriously disrupt the progress and development of both nations. Any conflict in south Asia limited or total would have far reaching implications for the regional and global security.

Chapter-3

Indian Military Modernization and Operationalization of the Doctrines

3. Introduction

The Indian military's modernization and doctrinal shift has threatened the strategic stability of South Asia. This chapter deals with primarily two major issues. First the doctrinal shift in the Indian military and second, the massive military build-up which is taking place in India. Since independence the Indian military's strategy and modernization has been Pakistan specific. Though, the Indian strategic thinkers are of the view that Indian military's buildup is China specific, but the facts on ground negate that assumption. Most of the Indian military's deployments are against Pakistan, and for China India has allocated only two mountain divisions.

The acquisition of many force multipliers in the Indian military has Pakistan specific orientation i.e. T-90 MBT has no meaningful efficacy against China and most of the Indian Air bases are Pakistan specific. The study would discuss in detail the Indian military's strategic thinking and massive military modernization and its implications for the strategic stability of south Asia. Pakistan and India since their independence fought three wars and a limited conflict at Kargil in 1999. The hostilities between two states are deep rooted and now seriously undermining the strategic stability of south Asia.

There are many unresolved issues between India and Pakistan including Kashmir, Siachen, Sir Creek, conventional arms race, distribution of water under Indus water treaty and hybrid warfare etc. The ingredients for another war are there which makes this region the most dangerous place in the world because of unresolved issues, hostile borders and presence of credible nuclear

arsenals along with potent delivery means, which has the potential to create havoc in the region and beyond.

3.1. Modernization of the Indian Army

The Indian Army is the largest branch of the Indian military, which consists of about 11, 94,864 men (Rana, 2017). In current situation the Indian Army lacks the ability to launch any offensive operations under Cold Start Doctrine or any other proactive military strategy (Roemer, 2010).

To operationalize these strategies the Indian Army must improve its overall warfighting capabilities. Any offensive operation would require synergy and integration between air & land forces, highly mobile modern MBTs with greater firepower and outreach, modern helicopters for close air support & firepower, impeccable air defense system, long range artillery, Network Centric and Electronic warfare capabilities. The next part of the study would assess the Indian military's current and future inductions and their implications for Pakistan.

a) - Procurement of the T-90- MBTs- Quick Maneuvers

The efficacy of advance Main Battle Tanks cannot be ignored in the modern warfare. If a country is planning quick offensive maneuvers, shallow or deep thrusts inside enemy territory, it must acquire advance tanks equipped with strong armor, high speed, greater firepower and enhanced maneuverability in plain & desert areas. In that perspective, the T-90 MBT is the backbone of the Indian Army for any aggressive maneuvers against Pakistan. The failure of indigenous Arjun tank compelled India to look for superior MBTs to add greater firepower and agility in its ground forces (Stephen P. Cohen and Sunil Dasgupta, 2009). The T-90 is a potent machine with advance features and superior maneuverability. After the Operation Parakram in 2001-02, the Indian military realized that all-out war in south Asia is a thing of past, future wars would be limited, intense and under the nuclear shadow. To fight such quick wars the Indian military would require mechanized

infantry along with modern tanks to win impending wars. The Indo-Russian strategic ties flourished after 2000 when the Russian President Vladimir Putin visited India and carried out many defense deals with the Indian government. The Indo-Russian defense deal included an aircraft carrier, SU-30 MKI Aircraft and 320 T-90 MBTs (Rekha, 2017). The T90 MBTs possess greater mobility, superior firepower, night vision/thermal imaging, and better communication system (Rekha, 2017). Therefore, the Indian government finalized a deal with Russia in 2001 to induct 310 T-90 MBTs to add offensive punch in the Indian Army. This MBT is highly sophisticated with an estimated range of about 650km and a speed of about 65km. India later upgraded the T-90 MBT into T-90S, which is also known as Bhishma (Jackson, 2010). The Indian Army has recently equipped its T-90 MBTs with third generation missiles which can take out targets at a range of about 8km without any time barrier.

The upgradation would improve the range and depth of penetration- (DoP) of the missile ("After this upgrade, India's main battle tank will become more lethal", 2017). So far the Indian Army has inducted about 1,450 T-90 MBTs from Russia since 2001 and this MBT has been mainstay of the Indian Army's Armour regiments. Mainly, the Indians have deployed these tanks against Pakistan in Rajasthan dessert, Punjab, Jammu and Kashmir plains. India and Russia are negotiating the upgradation of these MBTs to improve the accuracy and lethality of missiles, enhance the range and maneuverability (Bipindra, 2017). With these attributes the T-90 MBTs would be a grave threat for Pakistan's land forces. To counter such a highly advanced Tank, Pakistan must upgrade existing anti-tank missiles and upgrade its own Al Khalid and Al-Zarrar MBTs.

b) -Long Range Artillery Guns: Offensive Fire Power

Artillery plays an important role in country's offensive firepower on the border. The Indian artillery suffered setbacks in modernization because of 1980s corruption scandals. Since then India

relied on Bofor Guns which had a range of about 27km. But now the Indian Army is in advance stage to induct long range, highly sophisticated, advanced artillery guns. Once these guns are deployed on the international border, working boundary or LoC, it would be a dangerous development for Pakistani forces deployed on the border. On February 6, 2018, the Indian military has finalized a deal to induct indigenously developed 40 Advance Towed Artillery Gun System-(ATAGS) by the DRDO. The ATAGS are 155 mm, 52-calibre gun ("Army to get 40 artillery guns made by DRDO", 2018).

The ATAGS can hit target at a distance of about 48km with ability to fire 3 rounds in mere 15 seconds, which is going to boost the Indian Army's firepower against China and Pakistan ("Let China hear: Indian Army to test 'Made in India' howitzer in Sikkim", 2018). The DRDO is also developing another indigenously made Dhanush Artillery which has undergone trials in 2017 and met two accidents in muzzle brake. After the upgradation, the manufacturer would get bulk production clearance.

The Indian Army has placed an order of about 114 Dhanush guns in the initial phase and 400 guns at the later stage. The Dhanush Artillery is 155mm, 45 calibre gun which has a potent range of about 40km. This gun would provide the Indian Army an offensive punch in Dessert, plain and mountainous areas along with Pakistan and China border (Peri, 2017). The Indian government has also carried out a deal with the US to induct M777 ultra-light howitzers (Kumar S. , 2015). The M777 is 155-mm, 39 calibre gun (Dan Blumenthal et al, 2012) with a maximum range of about 24.7km with unassisted rounds and 30km with assisted rounds ("M777 155mm Ultra lightweight Field Howitzer", 2018).

Though, this gun has met an accident recently during a test fire but according to the Indian military, it would not delay the induction of this gun into Army. The Indian government is in deal

with the US to procure 145- M777 guns to establish seven new regiments to add lethal firepower on its border areas with Pakistan. According to the plans, the Indian Army would get fully assembled 25- M777 guns and remaining 120 will be manufactured under ***make in India*** program of the Modi government, which is going to boost the indigenous defense industry of India (Singh R. , 2017). The Indian government has also inked a $720 million deal for the K9 Vajra155mm/52-Calibre guns. Which has a range of about 40 km. The K9 Vajra has passed its trials in the dessert areas and it is considered a weapon of choice for the Indian Army's firepower in dessert against Pakistan. It would provide cover fire to the advancing T-90 MBTs in case of any blitz maneuvers against Pakistan. It is a joint venture between the Indian Private Defence firm Larsen & Toubro and South Korean defense firm Hanwha Techwin- (HTW).

Under the contract the Indian Army would receive 100- K9 VAJRA-T guns. It is expected that the Indian Army would start receiving these guns by 2020 (Singh R. , 2017). The K-9 Vajra would boost the Indian Army's mobile tank warfare capabilities in the dessert areas. This particular gun would be inducted in the mechanized strike Corps of the Indian Army to provide close lethal fire support during any offensive maneuvers inside enemy territory (Gady, 2015).

These capabilities are essential element of any quick and swift operations under CSD or proactive military operations. These guns would fill the operational gaps and create serious security challenges for Pakistan. Pakistan would have to look for counter measures by deploying anti-weapons to maintain balance of power in the region.

c) -The S-400: Long Range Air Defense System

The Indian military is moving towards an aggressive mindset and adding highly advanced weapon and equipment to create security dilemma for Pakistan. To control the air space in the region, India is in deal with Russia to procure highly sophisticated S-400 Long Range Air Defense System-

(LR-ADS) (Cross, 2018). This LR-ADS would provide the Indian military with an impeccable protection from any aerial threat from Pakistan or China. The negotiation between both states is at advance stage for a deal of about $5.5 billion for five S-400 LR-ADS. The S-400 would provide India with an option to take out targets at a range of about 40-400km. Normally, the S-400 regiment is separated into two smaller battalions along with tracking systems, 8- launchers, 112 missiles, and command & control vehicles ("S-400 missile deal being negotiated, don't rush it: Russian official Sergey Chemezov", 2018). According to Shashank Joshi of RUSI, "The S-400 can detect 100 targets and engage 12 simultaneously at a distance of about 30 to 400km"(Joshi, 2015).

The S-400 has the ability to take out targets with a blazing speed of 17,000 km/h- (Mach-14), which is greater than the speed of any known aircraft in the modern times. The S-400 can detect and destroy any strategic aircraft/bombers, surveillance & reconnaissance aircraft, cruise missiles and ballistic missiles ("This Rs 39,000 crore India-Russia missile deal could help corner Pakistan", 2018). India is going to deploy three S-400 systems against Pakistan and two against China.

Virtually, it is going to cover the airspace of Pakistan. Any aircraft, cruise or ballistic missile would be under threat of early detection and obliteration (Mehra, 2017). Though, the S-400 is no doubt a force multiplier but still it has got limitations. The geographical vulnerabilities of India are much greater than Pakistan. It would be difficult for India to cover its whole territory with S-400 from Pakistani missiles or aircraft.

There will always be many unprotected areas in India which may come under the range of Pakistani missiles. The dangerous aspect of the S-400 is the confidence, which the Indian military would get after the induction. The Indian military may think that now they have got S-400,

controlled the air space of Pakistan, let's go for misadventure under CSD or proactive military strategy. Such a thinking is dangerous and would invite strong response from Pakistan.

d) - Barak-8 Medium Range –Surface to Air Missile- (MR-SAM)

Other important induction in this category is Barak-8 MR-SAM. This particular air defense system is highly advanced and has the ability to track and shoot down enemy aircraft, UAVs, missiles etc. The Indo-Israel strategic partnership is exemplary, though both sates are collaborating in many areas, but the most significant aspect of their defense collaboration is the development of Barak-8 Air defense system for the Indian Army, Air Force and Navy.

The Indian Navy is going to equip its newly inducted warship INS Kolkatta with Barak-8 SAMs (Katoch L. G., 2014). These Barak-8 missiles will be of extended range of about 100km ("Naval Barak-8 Missiles, Israel", 2018). In addition to that the Indian Navy has also planned to equip their aircraft carrier INS Vikramaditya with 32 or 48 Barak-8 MR-SAMs to protect it from any aerial threat (Singh D. A., 2014). The Barak-8 is a joint development of DRDO and Israel Aerospace Industries- **(**IAI).

The Barak-8 provides ultimate protection from different kinds of aerial threats. It consists of highly sophisticated phased array digital radar, command and control, vertical launchers and missiles carrying a highly-advanced seeker (Weiss, 2015). Which provides impeccable defense against aircraft, helicopters, anti-ship missiles, UAVs, and cruise missiles (Saxena, 2016). The Indian Army would get this system by 2020. After the induction of Barak-8, the Indian Army would be able to shoot down Pakistan's missiles, Aircraft, UAVs, Helicopters and AWACS etc ("Army to get medium range Indo-Israeli missile by 2020 for air defence", 2017).

The Induction of S-400 and Barak-8 would create false sense of invincibility in the minds of the Indian strategic thinkers. These air defense capabilities would undermine the strategic

stability in south Asia and push Pakistan for countermeasures. Pakistan may develop more nuclear warheads in future, add more Multiple Independently Targetable Reentry Vehicles- (MIRVs), and develop cruise missiles with superior range, precision and speed to balance conventional asymmetries vis-à-vis India.

e) - The Swathi Weapon Locating Radars: A Threat to Artillery

The Indian Army has been involved in numerous ceasefire violations at the Line of Control- (LoC) in last few years. The LoC has become a battleground where both states exchange artillery fire, mortars and heavy machine gun fire on daily basis. 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).

The Indian Army has deployed 30 S-WLRs on the LoC. The Indian Army Chief said that, "WLR is being used extensively along the LoC by us". The former Indian defense minister Mr. Parrikar said that, "Swathi could be a great equipment to ensure adversaries do not use artillery fire" ("Army gets weapon locating radar from DRDO" , 2017). 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).

Another significant feature of Swathi-WLR is that, it can store and track 99 different weapon locations at once and quickly transmit that information to the central command (Katoch L. G., 2017). The procurement of S-WLR would help the Indian Armed Forces in a great deal at

the LoC. Pakistan's artillery, mortar and rocket sites at a range of about 50km would face serious threat from the Indian Artillery fire.

f) - The Procurement of Anti-Tank Guided Missiles-(ATGMs): Threat to Armour

The Indian border with Pakistan is mainly consists of plains and dessert areas where obviously advance tanks would play greater role for quick maneuvers and deep thrusts against adversary. Pakistan's Al-Khalid and Al-Zarrar Tanks would challenge the advancing Indian troops. To cater that threat the Indian military has indigenously developed Nag: Anti-Tank Guided Missile-(ATGM) and also in talks with Israel for the induction of Spike-ATGMs.

i) -Nag: Anti-Tank Guided Missile-(ATGM)

The Nag- ATGM has been developed by DRDO and comes under the category of 3rd generation weapons. It was successfully tested in Rajasthan on August 09, 2017 and now it is ready to be inducted in the Indian Army ("Successful Flight Test of 3rd Generation Anti- Tank Guided Missile – NAG", 2017). The Nag-ATGM has fire-and-forget attributes with an effective range of about 4 kms (Singh R. , 2017).

The Indian Army is also working on the helicopter-launched variant of Nag- (HeliNa), which has a range of about 8 km. The HeliNa would be placed on indigenously developed attack helicopters (Shukla, 2017). The Nag missile travels at a speed of 230m/s and has the ability to take out moving and static targets without any hitch even at night. Moreover, the NAMICA Vehicle can carry 8 missiles. Each launcher installed on NAMICA vehicle can launch 4 missiles in one minute, which makes it a lethal anti-tank weapon in the modern times ("Nag Anti-Tank Guided Missile", 2018).

It would provide the Indian Armour with greater firepower and required capabilities to carry out a quick, swift and intense offensive against Pakistan. Such a capability would be a grave

threat to Pakistani MBTs Al-Khalid, Al-Zarrar, Armour Personnel Carriers- (APCs) and C4I vehicles in the battlefield.

ii) -The Israeli Spike-ATGM

India and Israel signed a deal for the third generation Spike ATGMs. Both countries carried out a deal of about $500 million for the induction of 8,000 Spike Anti-Tank missiles along with 300 launchers to equip about 382 infantry battalions and mechanized forces deployed on the border with Pakistan (Kumar S. , 2015). On January 2018, the Indian defense ministry scraped the deal with Israeli firm without giving any substantial reasons ("India has cancelled $500 million defence deal, says Israeli arms firm" , 2018).

But after the recent visit of the Israeli PM Netanyahu, the Indian government has revived the talks to purchase about 3,000 Spike Anti-tank missiles. The Israeli PM said on his return from India, that, "they are reauthorizing the Spike deal" (Davidovich, 2018). The Spike Anti-Tank missile is highly sophisticated and has the ability to take out modern MBTs and APCs with greater accuracy at a distance of about 2.5 km. It can pierce a 700mm thick Armour and has the ability to reload in 15 seconds and ready to fire in 30seconds which makes it a lethal weapon in modern armour warfare where speed, greater maneuverability, precision and intensity matters a lot ("Spike anti-tank anti-armour guided missile", 2018).

The Indian military requires such capabilities to neutralize Pakistan's MBTs and mechanized forces in case of any limited conflict on the border under CSD or proactive military operations. Since India and Pakistan share a huge border in plains and desert areas where MBTs, mechanized forces and C4I vehicles would be an essential part of any conflict, in such a situation Pakistani tanks and other mechanized forces on ground would face serious threat of obliteration.

Pakistan also needs to invest in the same area to counter the Indian Army's lead in anti-tank weaponry to maintain balance of power at conventional level.

g) -The Induction of AH-64E Apache Helicopter: Flying Tank

The efficacy of attack and transport helicopters cannot be ignored in the modern warfare where quick mobility of logistics, weapon & equipment, troops, greater fire power and close air support to the ground forces plays a crucial role in the outcome of any limited or total war. The Indian strategic thinkers have developed offensive doctrines after 2001- (CSD-Proactive military Ops), to effectively implement these doctrines the Indian military would require an impeccable force equipped with modern weapon and equipment.

Since 2004, the Indian military is in process of acquiring these capabilities. In 2015, the Indian government placed an order for 22 Apache and 15 Chinook Helicopters to augment the offensive fire power of the IAF ("Boeing Receives Order from India for 22 Apache and 15 Chinook Helicopters", 2015). The Indian cabinet approved a deal worth $2.5 billion to acquire 37 helicopters from the US ("India to buy Boeing Apache and Chinook helicopters", 2015). Later in 2017, the Indian Army also put forward request to induct 11 Apache helicopters in addition to the previous order of 22 helicopters. The already ordered 22 apache helicopters will be solely under the IAF command whereas the remaining 11 helicopters will be inducted by the Indian Army which are likely to be integrated in its Strike Corps (Peri, 2017).

Later, the Indian government has cut down the Army's demand of 11 attack helicopters to six on the pretext, that the IAF is also getting these helicopters, it would be "duplication of assets" (Peri, 2017). But in the long run, the Indian government has accepted the proposal of the Indian Army to induct three squadrons of 13 attack helicopters each for three Strike Corps of the Indian military deployed in I-Corps Mathura, II-Corps Ambala and III-Corps Bhopal (Pandit, 2017).

The AH-64E Apache helicopter is highly advanced machine with greater firepower, maneuverability and endurance. It has the ability to carry 16 AGM-114L hellfire air to ground missiles. This attack helicopter is also equipped with a M230 30mm chain gun which has the ability to fire 625 rounds per minute (Guez, 2017). The efficacy of attack helicopters with the Indian Army would come in play when the Indian Army operationalizes its offensive doctrines against Pakistan.

According to a senior Indian Army officer, Lt General (retd) BS Pawar, "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 Indian Army is now seriously pursuing its plans to not only induct attack helicopters from abroad but also to develop indigenous capabilities to fill the operational gaps and equip its land forces with adequate close air support in case of any swift operations against Pakistan.

3.2. Transformation in the Indian Air Force: Step towards Air Dominance

The IAF was established in 1933 and now it has become the fourth largest air force in the world (Kamath, 2009). Though, the IAF is facing challenge of aging fleet and desperately looking for replacement of the Soviet era aircraft, but that does not mean that the IAF is lagging behind. As of today, the IAF operates a good number of SU-30MKI aircraft and it is in process to induct more advance aircraft from other countries. The Indian Air Chief Marshal B S Dhanoa in an interview said that,

> *For carrying out full spectrum operations on both fronts (China and Pakistan) simultaneously, we need certain number of squadrons what we have been authorized and we are short of that. The government is aware of it that is why they have gone to purchase two squadrons of Rafale and we have the strategic partnership going, we will produce and acquire the single engine fighters and ultimately we will build up*

> *our strength to whatever is authorized, but that does not mean we don't have the ability to execute war on both the fronts* ("India Today Exclusive Interview: Air Chief Marshal B S Dhanoa", 2017).

Though, it looks ambitious when the IAF Chief claim to take on Pakistan and China simultaneously. The IAF's current strength and lukewarm modernization plans negate the claim of Indian Air Chief to fight a two-front war in contemporaneous environment. The next part of the study would gauge the IAF modernization plans for next decade and their likely impact on Pakistan security.

a) - The SU-30 MKI Aircraft: Air Superiority

The IAF is key element of the Indian military might for any offensive operations behind the enemy lines. Future wars would be intense, integrated and quick. In such warfare scenario a country must possess strong air force to maintain air dominance over enemy. In the South Asian strategic milieu, the IAF is striving to maintain air dominance vis-à-vis Pakistan. The Indian strategic thinking since 2001 has been focused on limited war options under CSD and modified its war fighting concepts accordingly.

Now the Indian military is focusing on quick, limited and tactical operations below the nuclear threshold of Pakistan. To operationalize these concepts the Indian military, require agile air force for air superiority against Pakistan. In that context, the IAF is largely relying on foreign partners especially Russia for SU-30 MKI joint project and France for Dassault Rafale aircraft to add offensive punch in the IAF and replace the ageing fleet. In 2002, the IAF got first batch of 40 SU-30 MKI aircraft (Rekha, 2017) for $1.8 billion, which paved the way for follow-up orders and joint production (Gary Bertsch, Seema Gahlaut and Anupam Srivastava, 2011). Russia gave India a license worth $3 billion to indigenously assemble 140 SU-30 MKI aircraft (Ali, 2012). The SU-30MKI with refueling can get a maximum range of about 8,000km which makes it suitable for

Pakistan and China (Joshi, 2015). In 2010, the Indian government inked a deal with Russia to procure 42 aircraft, in addition to already inducted 230 SU-30 MKI Aircraft (Scott, 2011). At the moment the IAF operates 34 squadrons whereas for air superiority in the region it must have 42 squadrons. India would be further short of 13 squadrons by 2027 because of the phasing out of the ageing fleet of MiGs and Jaguars. The IAF has recently ordered three more squadrons of SU-30 MKI, two squadrons of French Rafale and two squadrons of indigenous Tejas MK-1 aircraft ("Air Force Veteran Suggests India Should Go for More Russian Su-30MKI/Su-35", 2017). The air superiority fighter SU-30 MKI is being upgraded to have strategic weapons such as the BrahMos cruise missiles and nuclear-capable Nirbhay missiles.

Initially, 40 aircraft will be modernized and will include Active Electronically Scanned Array- (AESA) radar, more powerful onboard computers and a new Electronic Warfare suite. The first upgraded aircraft is expected by the end of 2018 (Chopra A. M., 2017). The SU-30 MKI is highly sophisticated aircraft with greater maneuverability, lethal fire power and advance avionics. In an interview with the author, Pakistan's former Air Chief Marshal (retd) Tahir Rafique Butt said that, "the SU-30 MKI has advantages on the range & endurance in the air, it has got good integration with ground forces, but missile wise we are better. The first shot capability of Pakistan is better than India" (Butt, 2017).

The IAF base in Halwara, Punjab near to Pakistan has inducted SU-30 MKI aircraft in its 221-Squadron ("Sukhois join frontline squadron in Punjab", 2017). The SU-30 MKI in forward positions would be an integral part of any future conflict with Pakistan. Such aircraft are used for air supremacy, close air support to the ground forces and greater fire power to create a devastating impact against enemy forces.

b) -French Dassault Rafale Aircraft

The IAF is also looking for highly advanced French Rafale aircraft to replace its ageing aircraft in next few years. Former Chief of the IAF was of the view 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). Therefore, the IAF would get the delivery of Rafale aircraft in about 66 months. Apart from this, the IAF is also upgrading Mirage-2000, MiG-29 and Jaguar aircraft with modern avionics, advance radar and immaculate NCW capabilities ("Interview: Air Chief Marshal Arup Raha", 2016).

The Rafale aircraft has a max speed of Mach 1.8- (1,381 miles per hour) and possess an operational range of about 1,941 miles (3,123km) (Andrew Barnett, 2016), which makes it a Pakistan specific aircraft. The IAF in next 10 years would face serious crisis because of the phasing out of the ageing MiG-21, 27 and 29 aircraft. It is estimated that the IAF would be left with only 300 operational aircraft by 2032 (Bhalla, 2017). To overcome this deficiency the Indian government is looking for partners to induct more aircraft under *make in India* initiative. The top contenders are, the US Lockheed martin's F16s, F/A-18s, French Dassault Rafale and Swedish Gripin aircraft.

All these foreign defense companies would partner with the Indian Defence companies to co-produce aircraft in India (Badri-Maharaj, 2017). The collaboration between the foreign giants and the Indian private sector would give boost to the indigenous defense industry of India. Such partnerships would have long term implications for the security of Pakistan, because in this way India would get firsthand experience in the aircraft industry and ultimately establish air dominance in the region. In that context, former CJCSC General (retd) Ehsan Ul Haq warned 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*

> *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).

To counter such threats Pakistan needs to improve its indigenous Defence industry and must enhance its strategic partnership with China in the field of fifth generation aircraft and long-range air defense systems. Pakistan must also seriously invest in the medium and long-range air Defence systems to counter the IAF's quantitative and qualitative edge in the air domain.

c) -The Logistics and Transport Aircraft

The Indian military has invested lot in the transport and logistics capabilities. These capabilities play crucial role during a conflict. It helps a country to quickly transport logistics, food, fuel, ammunition and reinforcements during any specialized operations. A country with greater mobility of its resources, logistics and soldiers always gets an upper hand in any war.

The IAF has in fact overcome several challenges in the past few years, particularly in the transport & logistics domain with the acquisition of Boeing C-17 and Lockheed Martin C-130J aircraft. Although very capable, but their numbers are few. However, the IAF needs to do something about the large number of aging An-32 aircraft, which are at the end of their lives ("Interview: Air Chief Marshal Arup Raha", 2016). India has inducted highly sophisticated C-130J Hercules aircraft from the US to enhance its strategic outreach (Stephen P. Cohen and Sunil Dasgupta, 2009). Currently, India operates five C-130Js and six more would be joining the IAF ("India to Get Six C-130J Transport Aircraft in 2017", 2016).

The C-130J is ideal choice for combat, logistics, special operations and rescue missions ("C-130J Super Hercules", 2017). This aircraft can fly up to 26,000ft along with 20,227kg cargo. The max speed and range of C-130J is 410 mph and 1,956 miles respectively (Kasper,

2015). The induction of C-130Js would augment the Indian military's outreach and operational capacity to carry out missions without any time constraint in any weather conditions. India has also inked a deal with the US for the procurement of C-17 Globemaster aircraft to uplift India's transport capabilities (Pant, 2016). India has acquired ten C-17 aircraft from Boeing at an estimated cost of $4.1 billion to improve its ability to supply logistics, men, weapon and equipment during a conflict ("India plans to acquire ten C-17 Globemaster III from Boeing", 2017). India has also ordered one more C-17 aircraft ("IAF to procure another Boeing C-17 transport aircraft", 2016).

This aircraft has the capacity to transport 80 tons of logistics and 150 soldiers with their weapon and equipment (Sen, 2013). India has also carried out a deal to buy 15 Chinook heavy-lift helicopters worth $833 million. These are multi-mission helicopters, used for heavy-lift transportation of troops and logistics (Shishir Gupta and Rahul Singh, 2015). This procurement would enhance the Indian military's ability to operate in harsh weather conditions with greater mobility and speed. This induction of highly sophisticated transport and logistics aircraft would equip the IAF with strategic capability and greater outreach to carry out special operations behind the enemy lines with greater ease.

3.3. Refurbishment of the Indian Navy: Sea Dominance

India is aiming for a blue water navy, which is capable enough to operate beyond its maritime domain in the deep seas to protect its maritime interests in the Indian Ocean region, South China Sea and look after Sea Lanes of Communications- (SLOC) in these areas. Professor Dr. Moonis Ahmar described the Indian Navy's ambitions in these words, "with its massive naval buildup in coming ten years, India hope to significantly influence the Indian Ocean, the Arabian Sea and counter the Chinese Naval ambitions in the region"(Ahmar, 2017).

India is aiming for a Naval force which could operate beyond its shores in deep seas with greater outreach and offensive power. According to the former Indian Naval Chief,

> *"……..we have a huge Navy, 140 ships, over 200 aircraft, several submarines and many warships and submarines under construction in the Indian naval shipyards because the blue print of the future in the Navy has been based on the self-reliance and indigenization"*("Walk the Talk with Navy Chief Admiral RK Dhowan", 2014).

The Indian Navy is the only maritime power in South Asia that operates Aircraft Carrier. India is aiming for three aircraft carriers to achieve a 'blue water navy' status. India is aiming for Carrier Battle Group- (CBG) capabilities that would comprise of an aircraft carrier, guided missile destroyers, cruisers, nuclear submarines and highly advanced frigates for anti-submarines warfare operations (Pant, 2016).

As far as aircraft carrier is concerned it has little implications for Pakistan's maritime security. The aircraft carrier in the Indian Navy would have efficacy beyond Pakistan's maritime boundaries'. The Indian Naval Chief rationalized the aircraft carrier in these words,

> *…… maneuverability and flexibility are most important in naval operations. The Navy if it needs to operate into the blue waters of the Indian Ocean, the aircraft carriers required both for the air defense of the fleet as well as for the strike components of the fighters. You cannot tether the Indian Navy range from the coastline you need to operate in the blue waters……..so when you have blue water operations requirements and to operate in the Indian ocean region you need to have the flexibility to operate in aircraft carrier both for the air defense of the fleet as well as to have the strike and punch to take on the enemy forces* ("Walk the Talk with Navy Chief Admiral RK Dhowan", 2014).

The Indian Navy is expected to induct Indigenous Aircraft Carrier- (IAC-1) Vikrant by October 2020. The sea trials of IAC-Vikrant would begin in December 2018 and after successful operational tests it would be inducted in the Indian Navy. The Indian Navy currently operates INS Vikramaditya purchased from Russia. The Indian Navy plans to deploy around 20 MiG-29k Aircraft along with 10 other fighters on IAC-1- Vikrant (Peri, 2018).

The Indian Chief of Naval Staff Admiral Sunil Lanba said that, The Indian Navy is also looking for its IAC-II by 2032. The IAC-II would be a non-nuclear aircraft carrier with modern technologies and systems. He said, the Indian Navy is aiming for three operational aircraft carriers, two for active service and other as back-up and periodic maintenance (Luthra, 2017). The IAC-II of the Indian Navy would be of 65,000 tons and would have the ability to carry 50 aircraft ("Design for second domestic aircraft carrier to be finalised by year-end", 2016). The induction of aircraft carriers in India-Pakistan setting has little value, because according to Rear Admiral (retd) Pervaiz Asghar, "they have got credible air bases here, they can approach us from the seaward side, they have got bases all along the frontier, from where they can go and carry out deep strikes inside Pakistan, and they have long range aircraft also (Asghar, 2017).

In that context, Air Marshal (retd) Muhammad Ashfaque Arain view the aircraft carrier in the Indian Navy as a burden, he was of the view that, "in a war with Pakistan, aircraft carriers will be more of a liability than an asset for the Indian Navy" (Arain, 2018). Because in Pakistan context, the Indians would have to mobilize the aircraft carrier closer to Pakistan, which would make it an easy target for Pakistan's conventional submarines and Airforce. Former Air Chief Marshal (retd) Tahir Rafique Butt believe that the Indian Aircraft Carrier in South Asian milieu has little significance, he said,

> *……to threaten Pakistan, India has to keep it (aircraft carrier) away 600 miles away from Pakistan, because we may kill it in two days. It would be a national mourning for them, their flag would be on half march 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* (Butt, 2017).

Another senior officer of Pakistan Navy takes the induction of aircraft carrier as a mere power projection which has little value against Pakistan. Vice Admiral (retd) Muhammad Haroon evaluates that, "It is just projection of power, now they put their nose into South China Sea where they think they will be able to dominate the Chinese, which I don't think so. As far as India and

China having a confrontation in South China Sea, the strategic orientation lies heavily with China not with India and that kind of power projection an aircraft carrier carrying 25 aircraft does not make any difference as far as power projection is concerned. However, in the Indian littoral it does make an impression. Fine, it would be a good target for our submarines" (Haroon, 2017).

Other important induction in the Indian Navy will be nuclear submarines, equipped with nuclear tipped missiles for assured second strike capability. So far India is in the process of acquiring nuclear subs, it would take several years to get fully operational second-strike capability at sea.

a) - Conventional and Nuclear Submarines: Assured Second Strike Capability

The Indian Navy is going to induct three conventional submarines in 2018. The INS Kalvari, INS Khanderi and INS Vela submarines are part of six French Scorpenes submarines being built in Mazagon Docks, India and likely to be inducted by 2020. The induction of these subs would add offensive punch in the sub water capabilities of the Indian Navy and help India to replace its aging fleet of submarines. The Indian Navy is also operating two nuclear powered submarines, INS Arihant and INS Chakra-II (Pandit, 2017).

The Indian Navy has plans to induct five nuclear submarines, two were leased from Russia and three to be built indigenously (Abraham, 2015). In December 2017, The Indian Naval Chief Admiral Sunil Lanba during a press conference revealed that, "We have launched the project to make six SSNs" ("India launches project to make six nuclear submarines: Navy chief", 2017). In late 2016, the INS Arihant met an accident at Vishakhapatnam Harbor when the hatch of the submarine left open and sea water entered the submarine and caused serious damage which left the INS Arihant out of service for almost a year. After months of repair the INS Arihant is back to sea. Other nuclear submarine of India, INS Aridhaman is experiencing sea trials which may take

few months for induction ("India's Nuclear Submarine INS Arihant Back in Service after Repairs", 2018). The INS Arihant would be equipped with twelve Sagarika K-15 Submarine-Launched Ballistic Missiles- (SLBMs) with a range of about 750 to 800 km (Rehman, 2015). To achieve deterrence against China, the Indian Navy is also aiming to equip its nuclear submarines with the K-4 SLBM missile, which has a range of about 3,500-kilometer (Alexei Arbatov, Anatoly Dyakov and Petr Topychkanov, 2014). In December 2017, the Indian Navy carried out a test of K-4 SLBM, but it was failed because of the problem in the missile's ignition following its ejection from the submerged platform"("Indian K-4 SLBM Test Fails" Missile Threat, 2018). The Indian Navy's submarines would be deployed in three main areas, first at Visakhapatnam to look after Bay of Bengal, second at Mumbai to check the Arabian Sea and the last one at Karwar around 650km away from Mumbai ("India Submarine Capabilities", 2015) which may also be a threat for Pakistan's maritime interests in the Arabian sea.

The last two bases would be Pakistan focused and pose serious threat to Pakistan's interests in the Arabian Sea and its adjacent areas. Pakistan Navy must induct sea skimming aircraft and other anti-submarine warfare capabilities to detect and neutralize the Indian nuclear submarines in future before they may cause damage to Pakistan's economic hub Karachi or strategically significant Gawadar port. Bharat Karnard foresee greater involvement of the Indian Navy in these words, "The Indian Navy plans to dominate the Indian Ocean even with a Chinese naval presence which logistically will be limited even with bases in Gawadar and Djibouti" (Karnad, 2017).

In this regard China's role would be of great importance. It is expected that China and Pakistan may raise more bases around Gawadar port, increase joint patrol of the area and deploy surveillance aircraft and Anti-submarine warfare- (ASW) ships to counter Indian Navy's increasing influence in the IORs and the Arabian Sea.

b) - The Acquisition of Highly Sophisticated Destroyers: Offensive Punch at Sea

The Indian Navy launched Kolkata Class Guided Missile Destroyers in May 2000 under the Project 15A. Under this project three warships were to be built. The first ship was commissioned in August 2014, second was delivered to the Indian Navy in September 2015 and the last one INS Chennai was inducted in November 2016 ("Kolkata Class Guided Missile Destroyers", 2018). In 2014, the Indian navy tested BrahMos supersonic cruise missile from the ship. The ship is mounted with two missile systems. The universal vertical launcher module- (UVLM) is installed for BrahMos Cruise missile and vertical launching system for Barak-8 SAMs. The INS Kolkata is fitted with 130mm gun along with AK-630 close in weapon systems for close air defence from anti-ship guided missiles and other aerial threats. This gun has the ability to fire 5000 rounds in one minute ("Kolkata Class Guided Missile Destroyers", 2018).

The Kolkata class destroyers are also equipped with high tech weapons including twin tube torpedo launchers and RBU-6000 smerch-2 ASW rocket launchers to destroy submarines within a range of about 6kms. The maximum speed of Kolkata Class guided missile destroyer is 31-knots ("Kolkata Class Guided Missile Destroyers", 2018). These destroyers are multi-mission ships which could be used for anti-submarine and anti-ship warfare, land attacks and air defense operations ("Indian Navy set to induct 'INS Chennai", 2016).

These advance ships are also equipped with Barak-8 LR-SAMs. In 2015, the Indian Navy during a naval exercise tested its LR-SAM to shoot down anti-ship missile at a distance of about 70km (Shukla, 2015). These capabilities at sea would add an offensive punch in the Indian Navy and pose a serious threat to Pakistan's conventional submarines and other warships in the Arabian Sea and beyond. To counter this threat, Pakistan must add advance anti-ship missiles with greater

precision and firepower to sink these ships before they pose any threat to Pakistan's maritime interests.

c) - The procurement of INS Kiltan: Anti-Submarine Warfare Corvette

The induction of INS Kiltan would work as a force multiplier in the Indian Navy. This warship comes in the category of Anti- submarine warfare corvette, which has an effective endurance of about 3,450 nautical miles. The INS Kiltan was inducted in 2017 and it would not only provide defense to the Indian warship in open seas but also has the ability to take out enemy surface and sub-surface vessels. The Indian Navy has already inducted two warships INS Kamorta and INS Kadmatt of the same category and attributes. The INS Kiltan is run by four diesel engines to achieve a top speed of 25 knots. It is operated by a crew of 13 officers and 178 sailors. The INS Kiltan is equipped with highly lethal weapons which includes, heavy weight torpedoes, anti-submarine warfare rockets, 76 mm caliber medium range gun and two multi-barrel 30 mm guns (Singh R. , 2017). With these capabilities, this Corvette pose real threat to Pakistani warships in the Arabian Sea and the IOR. Pakistan Navy must induct advance anti-ship missiles with the help of China and other European partners to effectively counter the Indian Navy's superiority in the IORs and Arabian Sea.

d) -The Induction of P8-I- Aircraft: Eyes at Sea

The Indian Navy has added advance weapon and equipment to maintain dominance in the IOR, Arabian Sea and Bay of Bengal. In line with its blue water navy aspirations, the Indian government inked a $2 billion deal with the US to procure eight highly sophisticated P8-I maritime surveillance, multi-mission aircraft to boost its reconnaissance capabilities at sea. India is the first international buyer of P8-I (George J. Gilboy and Eric Heginbotham, 2012). This aircraft would boost the Indian Navy's maritime surveillance and reconnaissance capabilities to enhance its

Maritime Domain Awareness- (MDA) throughout the IOR and beyond. The Indian Navy is planning to induct about 24 P8-I aircraft (Brewster, 2014). The executive of the Boeing Company believes that India may acquire more 25-35 such aircraft in future keeping in mind the Indian Navy's expansion and growing strategic requirements (Shukla, 2015). The P8-I has an effective range of about 1,200 nautical miles, which could be enhanced with mid-air refueling option (Thuy, 2016). The Indian Chief of the Naval Staff, Admiral Sunil Lanba in an interview explained the Strategic significance of the P8-I aircraft in these words,

> *The induction of the Boeing P8-I maritime patrol aircraft has been a force multiplier with the first lot of eight Boeings operational. We've signed the contract for the follow-up order for four more. With these eight aircraft, we would have total transparency in the Indian Ocean Region-(IOR) and the northern part of it* (Anandan, 2017).

The P8-I will enhance the Indian Navy's long-range maritime reconnaissance and anti-submarine warfare capabilities against Pakistan and China in the IOR, Bay of Bengal and Arabian Sea. According to Rear Admiral (retd) Pervaiz Asghar of Pakistan Navy, "the P8I is good for surveillance and it is also good for attacking targets. You don't even have to bring your fighter" (Asghar, 2017).

The P8-I's Synthetic Aperture Radar- (SAR) will help the Indian Navy to easily detect Pakistani diesel submarines. India has currently deployed P8-I at Rajali, Tamil Nadu but will also deploy P8-I at Eastern Naval command of India. It has the ability to remain in air for six hours to scan an area of about 600 nautical miles (Mohan A. M., 2016). The P8-I is equipped with Mk-54 light weight Torpedo and GPS guided drops. The external pylon of the aircraft carries AGM-84 Harpoon Block-11 missiles (Sharma G. C., 2012). The P8-I would augment the Indian Navy's maritime surveillance capabilities in the IOR and put Pakistan's submarines and other warships at greater risk of detection and destruction during any conflict.

3.4. Long Range/ Endurance UAVs in the Indian Military

The Indo-Israel strategic partnership is exceptional as both states are collaborating in many defense related ventures. Israel has been the main supplier of UAVs to India. Both countries have inked a deal to develop three types of drones, first was, Rustum Medium Altitude long endurance UAV, second, Pawan short range UAV, and Gagan tactical UAVs (Cordesman, 2006). The Indian military imported 176 UAVs, out of which 108 are Israeli made Searcher and 68 are Heron UAVs. The Indian government has also carried out a separate deal of $400 million to add 10 advance armed Heron- TP drones in 2015. The Heron TP is considered as one of the best UAV in the world with an effective range of about 7,400 km and an endurance of about 36 hours (Salhotra, 2017). The induction of Heron-TP would enable the Indian military to carry out cross-border strikes against Pakistan.

According to the former IAF Chief P.V. Naik, "It is very good if something like this is happening. Instead of sending a pilot in a high-risk area, it is best to use an armed drone. The system can also be used for a surprise, sneak attack (Pubby, 2015). The Indo-US strategic partnership is also gaining momentum with the passage of time. The Trump administration is broadening its strategic ties with New Delhi. In a recent move the US has agreed to sale 22 highly sophisticated MQ-9B maritime surveillance and reconnaissance UAVs to India under a deal of about $2 billion. The induction of such an advance UAV would enhance the Indian Navy's maritime domain awareness in the IOR and beyond (Anthony, 2017).

The Indian military has also requested the US for armed drones for its Air Force. According to reports the IAF may induct 80-100 units which may cost the Indian government $8 billion. This deal is not yet finalized but under consideration of the US government ("US considering India's request of armed drones for air force", 2017). The procurement of long range armed UAVs would

broaden the Indian military's strike options beyond its borders in IHK, across LoC (against the alleged hideouts of the Kashmir based fighters), Pakistan military's outposts in the vicinity of the working boundary or LoC, strategic installations, command and control centers etc. Pakistan needs to shore up its surface to air missile capabilities to shoot down UAVs at medium and high altitudes. In this regard Pakistan must get assistance from the Chinese and induct low, medium and high-altitude air defense capabilities to neutralize this threat in future.

3.5. The Indian Space Program: Military Application

The strategic significance of the military usage of space satellites cannot be ignored for obvious reasons. It provides real-time information about the adversary's location, size, deployment and movement of troops on the border and beyond. Space assets provide a country with information edge against the enemy and help the latter to impose heavy damages on the opponent forces with precision strikes. In addition, the spy satellites provide real-time communications between surface combatants, submarines, aircraft and land-based installations (Goshal, 2017).

The Indian military has taken some serious steps towards space program for military use and has been successful so far in launching a few designated satellites for communication and strategic purposes. India took a major step in 2008 by launching a spy satellite TecSAR for Israel. It was considered as a landmark event for Indo-Israel strategic partnership. After one-year India launched RISAT-II satellite built by Israel in the space. The RISAT-II satellite is considered as a surveillance and reconnaissance satellite.

The RISAT-II would give India the ability to monitor movement of the alleged militants as well as troop's movement in Pakistan and other neighboring countries in all weather conditions (Sharma G. C., 2011). Such capabilities are essential element of modern warfare. The RISAT-II satellite uses SAR which is important component to boost country's surveillance and recon

capabilities. India is also planning to inaugurate dedicated satellites for all branches of its military. According to V.K Saraswat Director General of DRDO, India could launch one or two satellite every year to boost its recon capabilities on and across its borders (Lele, 2013). He further said that, "Once these satellites are operational, we will be able to see troop movements along the borders, the key is high-resolution images with precision……Data and commands can be sent through these satellites to cruise missiles. These satellites in place would give India an edge in any future conflict with Pakistan" (Khattak, 2011). In 2013, the Indian Space Research Organisation- (ISRO) achieved another milestone and launched, GSAT-7- (Rukmini) satellite to improve its surveillance capabilities in the Indian Ocean and Bay of Bengal area. The GSAT-7 will help the Indian Navy to look beyond its maritime boundaries and become a blue water navy to look across deep seas and other regions without any foreign assistance.

The GSAT-7 would also help the Indian Navy to link the information flow among its warships, aircraft, submarines and land-based communication systems for better synergy and integration in any conflict situation. The induction of GSAT-7 satellite would improve, India's maritime security in the IOR ("What is GSAT-7 Rukmini?", 2017). The Indian Navy announced that the GSAT-7 satellite "seamlessly networked" around sixty warships and seventy-five aircraft during a month-long naval exercise Tropex in the Bay of Bengal (Denoon, 2017). The induction of GSAT-7 is a great step for India, using space for strategic and national security related operations (Aliberti, 2018). According to an expert on the Indian space program, Ajay Lele,

> *This dedicated satellite provides the Indian Navy a 3,500-4,000km footprint over the Indian Ocean region and enables real-time networking for its operational assets in water (and on land) ……it also helps the Navy to operate in a network-centric atmosphere. GSAT-7 is useful for gathering communications and electronic intelligence in respect to moving platforms in the sea, particular through its UHF facility. The GSAT-7 also helps the navy monitor activities over both the Arabian Sea and Bay of Bengal regions. Broadly, India's strategic area of interest extends from the Persian Gulf to the Strait of Malacca and now significant portion of this region is covered by this satellite* (Aliberti, 2018).

India launched another military satellite GSAT-6 in 2015. The GSAT-6 is designated satellite for the Indian Army and it is considered as utmost strategic importance, given that Indian soldiers operating in diverse terrain and topographic conditions (from the peninsular region to desert to snow-clad mountains), have on many occasions encountered breaks in communications. GSAT-6 provides quality and secure communications. The induction of GSAT-6 will free the Indian soldiers to carry bulky communication equipment in the battlefield (Aliberti, 2018). India's increasing investment in space for strategic purposes clearly indicates the growing application of space assets for the armed forces. Space technologies have been considered as a force multiplier for militaries around the globe. Now, space technologies are fast becoming integral part of war fighting itself. Various modern-day weapon systems and military platforms have significant dependence on satellite systems for their operations. Hence, limiting the adversary's access to its own satellite systems is fast becoming a critical component of the military strategy. Under such circumstances there is a need to look beyond merely developing a capability for Network Centric Warfare. The launch of satellites like GSAT-6 indicates that India has started factoring satellite technology as an important constituent for achieving net centricity (Lele, 2015).

Such a capability would enable the Indian military to improve their communication between command and deployed soldiers operating in the battlefield. It would also enhance the synergy and synchronization among armed forces of India in future conflicts with Pakistan. The Indian military modernization is taking place at a rapid pace which may create strategic imbalance in south Asia. India is in strategic alliance with the US, Russia, Israel and Europe, which is going to transform the overall war fighting capabilities of the Indian military.

In the current situation, the operational weaknesses, lack of adequate offensive punch in the Army, aging air defense capabilities, MBTs, and absence of formidable network centric and

electronic warfare capabilities prevented the Indian military from any aggressive moves against Pakistan under CSD or proactive military operation. But after the induction of highly sophisticated foreign weapon, equipment and technologies, the Indian military would fill the gap and get the confidence to operationalize its aggressive military doctrines against Pakistan. According to Ashley J. Tellis, "India's military modernization obviously gives New Delhi more military options, but whether these will be used still remains primarily a political decision" (Tellis, 2017). The Indian military has invested billions of dollars in the reformation of its overall capabilities. The procurement of modern weaponry would create security dilemma for Pakistan. Ultimately, Pakistan would also jump into an arms race to get sufficient weapon and equipment to maintain balance of power in south Asia vis-à-vis India. Though, Pakistan's indigenous defense industry is doing a great job as far as manufacturing of JF-17, Thunder aircraft, Al-Khalid- MBTs, APCs, or other light weapons are concerned.

But still there are many areas where Pakistan is lagging behind. These areas are space satellites for military usage/spying, long range/high altitude air defense systems to counter the IAF's air superiority aircraft, long range maritime surveillance, reconnaissance and anti-submarine warfare aircraft to detect the Indian Navy's conventional and nuclear submarines in future. Pakistan needs to focus on aforementioned areas to maintain deterrence stability workable in south Asia. In-case of overwhelming conventional disparity in south Asia, Pakistan would heavily rely on its nuclear weapons to deter any misadventure by the India under the 'nuclear overhang'.

Senior Fellow at the Carnegie Endowment for International Peace, Ashley J Tellis has addressed this issue in these words, "Pakistan cannot sustain any open-ended arms race with India. The risks of nuclear use are significant only in the context of a major conventional war that

threatens Pakistan with significant battlefield defeats. Pakistan could use TNW in the context of India's CSD, but the operational benefits are unclear" (Tellis, 2017).

The Indian Army is rapidly filling the operational gaps in its overall war fighting capabilities. The combination of T-90 MBTs, Apache helicopters, advance transport and logistics aircraft, long range artillery, weapon locating radars, spy satellites and night vision capabilities would enable the Indian Army to carry out quick and swift shallow incursions against Pakistan. These capabilities would add the offensive punch in the Indian military and it may create serious problems for Pakistan in near future. Pakistan Army must develop or procure modern anti-tank missiles, SAMs to shoot down Apache gunships and WLRs to detect and destroy the Indian artillery guns. The induction of highly advance aircraft, S-400 and Barak-8 long range air defense capabilities would undermine Pakistan's aircraft, ballistic and cruise missiles. Though, India cannot protect whole country with these air defense measures but still it would be confident enough to safeguard its capital, civil and military command and control centers, and strategic installations etc. The question is whether it is ready to face nuclear strike on unsafeguarded areas? The S-400 and Barak-8 cannot provide 100% protection from Pakistani missiles or aircraft. Pakistan's Former Air Chief Marshal (retd) Tahir Rafique Butt highlights India's geographical vulnerabilities in these words,

> ……. *So, the worry that we have is that these long-range air defense systems would pick us up and shoot us, they are being taken care of. The capability of these systems (S-400 and Barak-8) is yet to be tested under war like situations. At conventional and non-conventional level, it needs to be checked. What is their volume, length and ability to take out multiple missiles? Will these systems protect whole India? Our strength is now that we are a country with much wider and longer-range weapons, with refueling option we can carry out deep strikes anywhere in India, which means entire length of our border and Indian border down the sea you cannot protect that* (Butt, 2017).

The false sense of unassailability in the Indian decision makers would be disastrous and may undermine deterrence stability in South Asia. The Indian government may resort to a limited war in case of any major terrorist attack on the Indian soil, because today, India is enjoying diplomatic support of the US, Russia, Europe etc. because of its big market, defense deals and economic clout.

In such a situation India may try to carry out a limited conventional attack against Pakistan. India is a big economy along with good financial setting, but Pakistan cannot even afford a limited war in modern times. The Indian motivation might be to cripple Pakistan's economy through a limited war and then carry out ceasefire. In this way Pakistan's economic development and progress would face a huge setback. On the question of a limited war in South Asia, former CGS, Lt. General (retd) Muhammad Mustafa Khan was of the view that,

> *India developed nuclear weapons to deter Pakistan's nuclear weapons, but we have developed nuclear weapons to deter a conventional war. Limited war is unlikely, but through miscalculation it can happen, but it would remain strictly limited. We have to maintain our 'so called irrationality', they must know that we have developed a capability of tactical nuclear weapons and we are quite capable of using them, it is not there only to be stored in safe places, if need be they will be used* (Khan L. r., 2017).

Limited war by the Indian military may not remain limited after Pakistan's response. According to former Director General Arms Control and Disarmament Agency- (ACDA), Strategic Plans Division, Pakistan, Air Commodore (retd) Khalid Banuri,

> *Nobody even an aggressor can ensure that limited war would remain limited. And when you have nuclear weapons on both sides, limited war has an inherent danger of escalation. So, thinking of limited war without thinking of consequences of war termination are highly risky* (Banuri, 2018).

The risk of escalation would always be there in case of any limited operations by the Indian military. In the words of Bharat Gopalaswamy, "Pakistan's nuclear weapons, although they have not presently been operationalized, are the surest route to escalating conventional war to the nuclear level" (Gopalaswamy, 2018). It would be difficult for the Indian military to contain the

war after huge losses, which may escalate the domain of war and end up in a nuclear exchange. The Indian military's insistence with limited war concepts and overwhelming military modernization would plunge this region into quagmire of instability and turmoil.

Pakistan is a credible nuclear weapon state along with demonstrated capability to seriously shatter the Indian military's myth of indomitability. Pakistan's policy makers have made it clear 'the era of hot wars is over' ("India proxies in play on Pakistan's Western border: NCA Adviser", 2017). The nuclear weapons of Pakistan have prevented India from any limited or total war since the induction of nuclear weapons. To ensure credible nuclear deterrence Pakistan needs to achieve assured second-strike capability through nuclear submarines, deep underground/concealed tunnels and truck mounted mobile warheads etc. The Indian military's procurement of long range and long endurance armed drones would be a source of concern in Pakistan. India's hawkish military and civil leadership may choose to carry out drone strikes against alleged hideouts of the Kashmir based fighters in Azad Jammu and Kashmir or Pakistan military's positions on LoC in the garb of so called 'surgical strikes'.

Such a move would invite severe response from Pakistan. But the Indian military's diplomatic clout and its alliance with major powers like Russia, US and Europe would help India to garner international support for such a strike inside Pakistan. In such conditions, Pakistan would have to respond forcefully and make it costlier for the Indian military. In first place, Pakistan would have to deploy medium and long-range air defense missiles to shoot down any high-altitude Indian UAV before it carries out surveillance mission or a so-called surgical strike.

The Indian Navy's aspirations for blue water navy has threatened the strategic stability in south Asia. The deployment of aircraft carriers, nuclear submarines, long range P8-I maritime surveillance aircraft, stealth frigates, destroyers, and anti-submarine warfare corvettes have

seriously compelled Pakistan to re-think about the protection of its maritime interests in the IOR and Arabian sea. Pakistan operate a small Navy which has no parallel with the massive 200+ ship Indian Navy.

Pakistan has launched a massive CPEC project with the help of China. The economic activity at Gawadar port would be crucial for Pakistan's development in future. The Indian navy's nuclear submarines and their deployment and operations from Mumbai and Karwar bases in the Arabian Sea and IOR would seriously threaten Pakistan's maritime economic and strategic interests. To counter such a development, Pakistan and China needs to improve their defenses around the Gawadar port, increase joint patrol in the Arabian Sea and beyond, induct modern surveillance and anti-submarine warfare aircraft to detect and destroy enemy submarines before they could strike. It is obvious that Pakistan's economic conditions does not allow to compete in conventional arms race with India. On the other hand, the Indian military has allocated billions of dollars on the refurbishment, procurement and joint collaboration of different weapon and equipment under *make in India* initiative by the Modi government.

In future, the conventional asymmetry between Pakistan and India would become unmanageable, compelling Pakistan to overwhelmingly rely on nuclear weapons to deter any aggression by India. The massive Indian military modernization, conventional disparities and prodigious reliance of Pakistan on nuclear weapons would bring the region at a dangerous flash point, where a little mistake, miscalculation or misperception would lead this region to further instability and insurmountable chaos.

3.6. The Operationalization: Military Exercises- (2004-2018)

Military exercises are essential for the development and augmentation of the armed forces. These exercises facilitate to bring innovation, flexibility and progression in the overall war fighting capabilities of a military. The efficacy of military wargames is as old as the human history. Chankya Kautilya in ancient India advised his King to regularly practice the art of war, he was of the view that, "infantry, cavalry, chariots and elephants should carry out practice in the arts outside (the city) at sun-rise. The king should constantly attend to that and should frequently inspect their arts" (Boesche, 2002).

In that context, whenever a country comes up with a new doctrine or strategy, they have to check it from a number of angles. The first angle is mobilization that you want to concentrate your forces in certain area, so you try to find out how much time it will take to actually mobilize those forces. In Indo-Pak situation, the Indian military faced problems in mobilization during operation Parakram in 2001-02. Later, the Indian military practiced and cut short the mobilization time and also equipped its 'Holding Corps' also known as 'Pivot Corps' with offensive weapon and equipment. Second, important thing is logistics, that if you go for an operation in a particular area, how will you sustain and support those operations logistically. Then, there is the actual maneuver that you have to get along your guns, main battle tanks, APCs, mechanized forces, engineers, and infantry in the same proportion the way you have to advance.

Another aspect which is tested in the wargames is the synergy and integration among the armed forces. A country assesses its air support that from where the aircraft, gunship helicopter or UAVs will fly in case of proactive or cold start type of operations. The Indian military is supposed to be flying from different areas, as per CSD they would like to open multiple fronts, so how the air force will support all this. All these elements discussed above would require regular military

exercises. If the Indian military has to check its synergy & integration in the armed forces, quick & swift operations behind the enemy lines, logistics and supplies in day/night, close air support, shallow maneuvers with mechanized infantry, MBTs and APCs, Special Forces for cross border raids or surgical strikes, they need to carry out hundreds of exercises to master their doctrines or strategies.

After the Indian military's promulgation of CSD, Pakistan army also responded with massive military exercises with code name Azm-I-Nau to practice joint operations, quick maneuvers, close air support, night operations, network centric environment and mechanized forces to counter any eventuality on the border. The Indian military's multiple exercises depict their seriousness to execute their new war doctrines and political will to fight a limited conventional war in south Asia.

As far as political will is concerned, the incumbent BJP government led by Prime Minister Modi has categorically used harsh language to teach Pakistan a lesson in case of any alleged terrorist attack in IHK or on the Indian territory. Former Commodore of the Indian Navy, C. Uday Bhaskar review the efficacy of military exercises and myth of CSD in these words, "the Cold Start (Doctrine) in my view - is over interpreted. But exercises are annual / routine for large armies"(Bhaskar, 2017). However, former vice Chief of Naval Staff of Pakistan, Vice Admiral (retd) Muhammad Haroon, opines that,

> *"the Indians want to improve their war fighting concepts through these exercises, he was of the view that, the military exercises are carried out by all belligerents when they are across each other. The Indians have done it, fine. There is no problem. They are trying to refine their operational strategies, they are trying to put things in order they are trying to find out lacunas, in their systems" (Haroon, 2017).*

However, Brigadier (retd) Feroz Hassan Khan believe that, military exercises are meant for operationalization of the strategies/doctrines and strategic beckoning, he was of the view that,

> *You carry out exercises for two things. One is to prove your (war fighting) concepts and secondly these exercises are meant for strategic signaling, to keep the political and strategic pressure on Pakistan. Every defense attaché in New Delhi observes these exercises. They want to perfect their capabilities as much as they can, and they want to signal Pakistan that we mean it* (Khan B. F., 2017).

Professor Dr Parvez Iqbal Cheema, Dean FCS, NDU is of the opinion that "by carrying out military exercises a country demonstrates its military prowess, he said I think by demonstrating that they have the ability to conduct exercises not only individual but joint exercises with other countries. The (military) exercise actually demonstrate your military power in that sense and its effectiveness one way or the other. I think in that sense army actually becomes a very professional army having repeatedly undertaken exercises here and there in that sense. This generate this impression that the Indians are very professionally trained Army" (Cheema, 2017).

Therefore, regular wargames assist a country to test and validate its new warfighting concepts, doctrines, strategies and tactics. India has carried out numerous military exercises since 2004 to test and validate its CSD or proactive military operations and improve synergy and integration in the armed forces to fight quick, swift limited battles under the nuclear threshold of Pakistan. Currently, the Indian military lacks required capabilities to initiate any meaningful limited conventional operations and achieve outright victory against Pakistan.

Despite weaknesses in its overall military's offensive capabilities, India is carrying out regular large-scale military exercises close to the border with Pakistan to overcome deficiencies. According to former Director General, Pakistan Air Force Strategic Command, Air Marshal (retd) Muhammad Ashfaque Arain, "Historically, all military exercises by Pakistan and India have always been conducted close to the shared border with an aim to identify shortcomings and to find out possible responses. While such exercise would help India fill the gaps in their capabilities, close monitoring of such exercises will help Pakistan to formulate responses"(Arain, 2018). The

next part of the study aims to analyze the Indian military's exercises since 2004 to 2018. What type of tactics and strategies were practiced in last 14 years? What type of new weapon systems were introduced and practiced in these war games? What tangible changes India has brought in its overall warfighting capabilities vis-à-vis Pakistan as far as quick mobilization, logistics, offensive maneuvers, synergy and integration in the Indian armed forces is concerned?

3.6.1. The Exercise Divya Astra- 2004

The Indian military came up with the idea of shallow maneuvers under CSD in 2004. In that perspective, Indian armed forces needed agility and offensive punch in its overall military machine to execute its new limited war doctrine. The first exercise took place in March 2004, with code name "Exercise Divya Astra" in Rajasthan sector to test its capabilities of launching a pre-emptive strike against Pakistan under CSD. India claimed that it has achieved 50-fold increase in the Army's surveillance and neutralization capabilities over the past two years (Mohan V. , 2004).

The Indian military took a significant step during this exercise by inducting Long-Range Reconnaissance and Observation System- (LORROS), which it has procured from Israel. The LORROS is a high quality, remotely controlled ground-based observation system designed for medium and long-range surveillance. This kind of a system is good for intelligence gathering and reconnaissance purposes especially in the plain and desert areas. This system also has the ability to identify the targets at long distance without any time barrier ("LORROS", ELBIT Security Systems Ltd.,, 2004). The LORROS will be used to check the disposition or movement of enemy in day and night. Such capabilities are essential element for the execution of any offensive maneuvers at the border. The next exercise took place in 2005, which also saw some important development in the Indian military's offensive capabilities at the border vis-à-vis Pakistan.

3.6. 2. The Exercise Vajra Shakti- 2005

The Indian military faced long mobilization issues in the operation Parakram in 2001-02. To address this issue India came up with the idea to augment offensive capabilities in the holding corps deployed at the border with Pakistan. In this way India will not require to muster its strike Corps deployed deep inside India. In May 2005, the Indian military tested its limited war concept in an exercise code named "Vajra Shakti". It was a 10-day exercise held in the plains of Punjab in proximity with Pakistan.

Main feature of this exercise was the use of satellite imaging facilities for real-time information about enemy disposition and battlefield coordination and awareness. First time, a Force Multiplication Command Post- (FMCP) was set up to integrate flow of information as a principal tool for decision making and NCW capabilities in the Indian Army (Vijay Mohan, 2005). In this military exercise, India brought flexibility in its holding corps- (Defensive Corps) deployed at the border.

These holding corps were designated as Pivot Corps and apportioned role to initiate offensive operations if required in the battlefield in case of any eventuality. According to the then Chief of Army Staff, Gen J. J. Singh, "They (Pivot Corps) have assigned roles, which are offensive as well as defensive and the doctrine does not spell them out in detail. The decision making has been left to theatre commanders, depending upon their assessment and evaluation of the situation" (Vijay Mohan, 2005). According to Brigadier Sanjeev Madhok, a Mechanized Brigade Commander in the Indian Army, 'these assets can be mobilized and deployed much faster as they are stationed closer to their designated area of operations than the Strike Corps which are based in places as far off as Mathura and Bhopal'(Vijay Mohan, 2005). The Indian Army in this exercise

reoriented the role of holding or defensive Corps and added offensive elements to initiate invasive maneuvers if required to save the mobilization time.

Such a tactical change in the force structure will benefit the Indian Army's quick operations under the CSD or proactive military operations. These Pivot Corps could be used to lead an offensive strike to engage the enemy in one area. This will facilitate the strike corps to open a new front elsewhere. This change of strategy will give element of surprise and tactical advantage to the Indian armed forces in the battlefield. But in reality, whether they can operationalize it or not? That is still debatable in the strategic circles. The next exercise aimed at synergy and coordination between air and ground forces.

3.6. 3. The Exercise Desert Strike- 2005

The Indian military carried out another exercise in the same year with code name 'Desert Strike 'in desert areas of Rajasthan. In this particular exercise more than 20,000 Indian Army personnel participated. The Indian Army deployed force multipliers like Russian T-90 tanks, mechanized combat vehicles in tandem with advance Israeli Searcher Heron UAVs, air Defence missile system and other electronic sensors and surveillance systems at Pokhran field firing range.

The Indian military practiced synergy between air and ground forces which is a key element in any offensive operations ("Indian Army, Air Force display Prowess in 'Operation Desert Strike", 2005). The synergy in armed forces will enhance the Indian Army's capabilities to launch proactive military operations under the CSD. Without coordination and synergy, it would be difficult for India to carry out offensive operations against Pakistan.

3.6. 4. Exercise Sanghe Shakti- 2006

The Indian military conducted "Exercise Sanghe Shakti" in Sidhwan Khas, near Phillar in the plains of Punjab in 2006.More than 20,000 Indian soldiers along with 2500 vehicles from II-Corps (Strike Corps) participated in this particular war game. The AN-32 transport and logistics aircraft dropped an entire parachute battalion while the IL-76 dropped the logistics and other equipment at night to practice behind the enemy lines operations in dark ("Army launches Sanghe Shakti", 2006). The aim envisaged in this exercise was to draw out enemy reserves in the general area and to degrade the counter offensive capabilities of the enemy. However, it has been discussed earlier that the Indian CSD would require day and night swift and quick operations. In Exercise Sanghe Shakti, the Indian Military tested its night vision capabilities. These capabilities are essential part of any offensive strategy against Pakistan.

3.6. 5. The Exercise Ashwamedh- 2007

The Indian military conducted another significant exercise code named Ashwamedh in 2007 to rehearse the NCW and EW capabilities in areas of Suratgarh in Rajasthan and Bhatinda in Punjab. The most important feature of this exercise was the deployment of Strike Corps (I-Corps). The IAF and commandos executed offensive operations to validate the Indian military's CSD or proactive military Ops. The mechanized forces, T-90 MBTs, Artillery, Gunship helicopters and advance UAVs were also part of this exercise ("Ex Ashwamedh", 2007).

The Indian military's aggressive doctrines would require synergy and integration between modern aircraft and advance tanks along with mechanized infantry to break into Pakistan's defenses and carry out limited shallow maneuvers. In this exercise, the Indian military practiced all those elements which are necessary for the execution of CSD or proactive military Ops. Another significant aspect of 'Exercise Ashwamedh' was the ability of Indian military to fight under

Nuclear Biological or Chemical- (NBC) warfare environment. The demonstration of such capabilities is a signal to Pakistan that if needed India can call Pakistan's nuclear bluff. Such a thinking is aggressive and may lead this region to further mayhem and turmoil. In the same year, Indian military came up with another major exercise in Punjab near to Pakistan's border.

3.6. 6. The Exercise Shatrunash- 2007

The *Exercise Shatrunash* took place in Ludhiana, Indian Punjab. Again, Indian military carried out offensive maneuvers and tested combat readiness of Strike Corps ("Vajra Corps conducts exercise 'Shatrunash' in Punjab", 2007). The Indian military tested synergy and integration between Army and Air Force, examined recently inducted weapons and carried out quick maneuvers in the plains of Punjab. About 15,000 soldiers, 150 advance tanks, attack helicopters and SU-30 aircraft participated in this particular exercise ("Vajra Corps conducts exercise 'Shatrunash' in Punjab", 2007). This was second major exercise by India in 2007, which signify the eagerness and enthusiasm of the Indian military to overcome operational deficiencies and operationalize its aggressive strategies against Pakistan to maintain total dominance in South Asia. The next exercise aimed at the refurbishment of the IAF and concerted effort between the air and ground forces to achieve greater coordination and synchronization.

3.6. 7. The Exercise Brazen Chariots- 2008

The Exercise Brazen Chariots in 2008 marked another era in the history of IAF. This particular wargame was carried out in Thar Desert close to Pakistan. The IAF demonstrated suppleness, diversity and greater outreach in this exercise (Singh P. K., 2008). Apart from IAF, the Indian Army also exhibited enhanced firepower of the modern T-90 tanks, advance air Defence capabilities and heliborne operations by Special Forces behind the enemy lines. This was one of the major military exercise in which more than 37,000 soldiers from XXI-Strike Corps

participated. The Indian military commanders set objectives to carry out coordinated multiple offensive operations against adversary in an NCW and EW environment (Singh P. K., 2008).

Such exercises would augment the Indian military's capabilities to execute joint, coordinated offensive operations under CSD or proactive military operations. All these capabilities discussed above are essential for quick operations. The Indian military's mad rush to acquire such offensive capabilities depict that in future, India may resort to shallow maneuvers or surgical strikes by Special Forces against Pakistan. The next exercise brought significant transformation in the Indian military's surveillance and real-time information capabilities.

3.6. 8. The Exercise Hind Shakti- 2009

The Exercise Hind Shakti in 2009 is considered as the most significant exercise of that year because India in these drills brought sea change in its surveillance and reconnaissance capabilities. Any offensive military operation is of no use unless it is supported by real-time information from space assets. This is the reason that after the culmination of this exercise former Indian Army Chief General Deepak Kapoor acknowledged that 'Hind Shakti exercise is another step in Army's continued venture to fine tune its CSD' (Unnithan, "Hind Shakti to fine tune proactive strategy: Army chief", 2009).

An important feature of Exercise Hind Shakti was 72-hour training session, which is exactly the same time for the execution of CSD or proactive military operations. Yet again the Indian Army's strike formations under (II-Corps) executed joint operations with rapid incursions by Mechanized infantry, T-90 MBTs with close air support of the IAF (Unnithan, 2009). The most significant aspect of this exercise was the induction of spy satellite by India. Apart from spy satellite, Heli-borne observation systems, long range advance UAVs, LORROS, Battlefield

Surveillance Radars- (BFSRs) and Weapon Locating Radars- (WLRs) were part of this exercise (Unnithan, 2009). The Exercise Hindi Shakti was significant step towards the attainment of advance surveillance and reconnaissance capabilities which is vital part of any offensive operations in the modern warfare scenario.

3.6. 9. The Exercise Vayu Shakti- 2010

The year 2010 marked significant for the Indian military's operational capabilities. In 2010, the Indian military has carried out two major exercises. First exercise "Vayu Shakti" took place in Rajasthan. The Indian military tested and validated its night vision capabilities, joint operations and precision strikes by the SU-30 MKI aircraft ("IAF to showcase 'Vayu Shakti-2010' at Pokhran today" , 2010). More than one hundred fighter, surveillance, logistics aircraft demonstrated massive Fire Power Demonstration- (FPD) in Pokhran ("IAF to showcase 'Vayu Shakti-2010' at Pokhran today" , 2010).

The Indian military's transport and logistics aircraft dropped Special Forces in dark to practice behind the enemy lines operations or surgical strikes. The Indian military carried out fire power demonstration to target simulated radar positions, moving MBTs and mock terrorist hideouts at Pokhran range in Rajasthan. The Exercise Vayu Shakti practiced all those capabilities which are required to execute offensive operations under CSD or proactive military operations. Another major wargame in 2010 took place in May 2010.

3.6. 10. The Exercise Yodha Shakti- 2010

In May 2010, Indian military conducted a month long wargame Yodha Shakti in Rajasthan desert, to assess its ability to conduct intense, limited operations to impose heavy damages on the adversary (Dutta S. , 2010). The Exercise Yodha Shakti aimed at joint operations and night-vision

capabilities in the mechanized forces to conduct offensive maneuvers without any time barrier (Dutta S. , 2010). More than 14,000 soldiers from I-Corps (Strike Corps) participated in this particular exercise (Banerjee, 2010).

Other aspects covered in this wargame were heliborne Special Forces operations, multiple thrusts by MBTs in close coordination with gunship helicopters (Banerjee, 2010). The IAF also exhibited its skills to quickly supply logistics to forces carrying out operations deep inside enemy territories (Banerjee, 2010). The Indian military is enhancing its operational capabilities to carry out cross border raids with greater synergy, integration and precision ("Army war game in Rajasthan along Pak border this month", 2010). However, Pakistan has the ability to reciprocate any offensive maneuvers by India. In that framework any offensive operations by India would be disastrous for the regional security.

3.6.11. The Exercise Vijayee Bhava-2011

The Indian Army conducted an Exercise with code name Vijayee Bhava- (blessed to win) in May 2011 to operationalize the concept of synergy and integration between Pivot Corps (deployed at the border) and II- Corps (Ambala based Strike Corps) ("Indian Army begins exercise in Rajasthan", 2011)**.** The Exercise took place in Suratgarh and Bikaner areas close to the border with Pakistan. The major aim of the exercise was to practice and incorporate new concepts and technologies in the Indian Army. The Indian military jointly carried out synergetic operations. According to reports over 50,000 soldiers, 400 Tanks and 300 aircraft took part in this wargame (Kapoor, "Vijayee Bhava" , 2011). The main feature of this exercise was offensive maneuvers by elite T-90 MBTs of the Indian Army along with, highly advanced BMP-II Infantry Combat Vehicles. The Exercise Vijayee Bhava also saw active role of the mechanized infantry units buoyed by highly sophisticated Artillery firepower, close air support by air defense units, crossing

the obstacles through mobile bridges laid by Indian Army engineers over water obstacles, mines sweeping equipment for swift mobility through minefields, close air support by attack helicopters and highly advanced aircraft.

These capabilities together are crucial to get tactical edge in the battlefield, destroy enemy's strategic and operational reserves (Kapoor, 2011). Lieutenant General S.R. Ghosh, GOC-in-C, Western Command of the Indian Army said during the exercise that, "Every army fight to win. There is no prize for second place. I believe there is scope for a conventional war without escalating beyond the nuclear threshold"(Kapoor, 2011). Another important feature of the Exercise Vijayee Bhava was the close air support of the IAF which provided air defense, close air support to the land forces/ infantry and Armour units, special airborne and heliborne operations behind the enemy lines (Bhatia, 2011).

The Indian Army practiced offensive and defensive operations in an NCW and EW environment. Apart from rapid mobilization and quick maneuvers the Indian Army also practiced surveillance and reconnaissance capabilities by using long range highly sophisticated UAVs and spy satellite. The IAF played an important role in this exercise by employing wide range of assets for variety of airborne operations. The IAF carried out over a hundred sorties by its aircraft. About three hundred paratroopers and fifty despatchers were dropped by one IL-76 and six AN-32 transport and logistics aircraft during night operations. The IAF practiced offensive maneuvers which included interception in enemy territory, destruction of advancing enemy tanks and APCs, quick mobilization ground and airborne air Defence assets and special heliborne operations (IAF joins exercise "Vijayee Bhava", 2011). The Indian Army also practiced quick mobilization in this exercise to cut short long deployment time to get element of surprise and tactical edge against

enemy. The Indian army claimed that now they can mobilize their troops **within 48 hours**. During 'Ops Parakram' the Indian army took almost 27 days to reach at the border.

Since then Indian army has been practicing reducing the time of mobilization. After this exercise India can quickly deploy their forces at the border for offensive operations. During this exercise the Indian Army formations took almost 45 hours to travel 450kms and reach at the decided point. The Exercise Vijayee Bhava proved that the target of quick mobilization and deployment within 48 hours could be achieved (Sharma S. , 2011).

Such exercises on regular basis would improve Indian Army's overall operational capabilities. The Indian Army would become and agile and lethal force to reckon with. It would create serious challenges for Pakistan army. Pakistan would have to match Indian army in conventional capabilities to deter any limited offensive maneuvers. The conventional gap between both states would seriously hamper peace and stability in the region and allow for extreme counter measures by Pakistan military which may entail the development and deployment of TNWs at the border to counter any quick and swift conventional thrusts by technologically superior Indian military.

3.6.12. The Exercise Pine Prahar – 2011

In June 2011, the Indian Army executed a major wargame with code name 'Exercise Pine Prahar' in Punjab sector. The Vajra Corps based in Jalandhar and Panther Division took part in the exercise with 12000 troops, modern tanks, infantry combat vehicles and other force multipliers (Arora, 2011). The exercise Pine Prahar focused on the integration of the armed forces, network centric and electronic warfare capabilities, swift decision making by the field commanders, quick mobilization and logistics (Arora, 2011). The former GOC of Vajra Corps Lt. General Munish

Sibal, said that, “the exercise includes assimilation of modern weapon and equipment including IAF, battleground transparency and greater suppleness in sync with the modern warfare requirements (“Month-Long Indian Army Exercise Along Pak Border”, 2011).

The Indian Army Chief after the culmination of Exercise Pine Prahar said that Indian army is ready to carry out cross border attacks like the Americans (“Ready to strike even inside enemy's territory: Army chief", 2011). It appears that the idea behind these exercises is to enable the Indian Army to conduct quick operations behind the enemy lines. The Indian military wants to validate its limited war concept to fight a conventional war with Pakistan under the nuclear umbrella.

3.6.13. The Exercise Sudarshan Shakti- 2011

The Indian military carried out Exercise Sudarshan Shakti in 2011. This exercise was conducted in Barmer-Jaisalmer areas of Rajasthan close to the border with Pakistan. It was 15-day long exercise which involved about 60,000 troops, 300 MBTs including T-90s & T-72s, 120 artillery guns, SU-30 MKIs &Jaguars aircraft, AWACS and MI-35 transport and attack helicopters. The Indian military also practiced synergy and integration between ground and air force which is considered to be the prerequisite for any quick and swift military operations (“Indian Army conducts Sudarshan Shakti exercise”, 2011).

The Indian COAS General (retd) V. K Singh said that ‘the exercise Sudarshan Shakti is a milestone that would augment our war readiness and support the Indian military to counter multi-dimensional threats to its national security’. The Exercise Sudarshan Shakti is the result of well calibrated transformation in the Indian military to acquire offensive capabilities and maintain operational readiness for limited war against Pakistan under the nuclear threshold. In this wargame, the Indian Army effectively carried out maneuvers in a centrally networked environment

("Network Centricity comes to fore in Exercise Sudarshan Shakti", 2011) fully connected with surveillance and recon assets including Spy satellites, AWACS, UAVs and advance Radars.

In addition, the exercise Sudarshan Shakti also practiced behind the enemy lines Heli-borne special operations, long range artillery fire, maneuvers by the Mi-35 attack helicopters and offensive thrusts by highly sophisticated T-90 Tanks along with mechanized formations of the infantry (Kattakayam, 2011). The Indian Army has conducted Exercise Sudarshan Shakti in an Integrated Theatre Concept- (ITC) in which the aim is to destroy the enemy or capture some territory. To achieve the capability to fight a war under integrated theatre environment, a well-conceived strategy is needed in which more than one strike Corps/formations are deployed to impose heavy losses on enemy forces (Kapoor, 2011).

Such a concept would require a field commander with tactical headquarter which is connected with all strike and pivot formations in the battlefield. In addition, these deployed forces would also have the air support of the IAF South Western Air Command- (SWAC) or the Western Air Command- (WAC). The synergy and integration between air and land forces is the key for success in integrated theatre concept (Kapoor, 2011). The IAF would play crucial role in any future conflict with Pakistan, it could be employed to destroy Pakistan's Armour and other mechanized forces in the battlefield and provide cover to its own mechanized infantry and MBTs (Kapoor, 2011). In south Asian context crossing the LoC or International border with Pakistan may not be a realistic approach because of the nuclear factor and international pressure, what could be achieved in limited quick assault is the destruction of Pakistan military outposts near LoC to avenge any alleged terrorist attack on the Indian soil or IHK.

3.6.14. The Exercise Ashwamedh-2012

The Exercise Ashwamedh took place in May 27, 2012 in the areas of Jalandhar, Indian Punjab. In this particular military drills more than 12,000 Indian soldiers, about 200 MBTs, air defense components, heavy artillery, mechanized infantry, Engineering and Signals actively participated. In addition, the coordination between the Army and the Air Force was also part of the exercise to improve inter-services cooperation and assimilation. In four days of rigorous military exercise the Indian military practiced defensive and offensive operations.

During the exercise the Indian army's Special Forces conducted operations in close coordination with the IAF and crossed the obstacles with greater ease and comfort with the help of tactical bridges made by the Indian engineering Corps ("Vajra Corps exercise 'Ashwamedh' concludes in Punjab", 2012). According to the then General Officer Commanding- (GOC) Lt Gen Sanjeev Madhok, the Indian Army achieved its objectives during exercise Ashwamedh and all branches of the Indian Army exhibited their war fighting skills and operational readiness("Military exercise 'Ashwamedh' culminates", 2012). The components practiced in this particular exercise exhibit the Indian military's tenacity to execute limited offensive operations under the nuclear overhang.

3.6.15. The Exercise Shoor Veer-2012

The Indian military concluded another military exercise on May 5, 2012. This wargame was code named 'Exercise Shoor Veer'- (Brave Warrior). This was one of the largest ever wargame carried out by the Indian Army. This combat rehearsal was conducted in the deserts of Thar, Rajasthan in close proximity with Pakistan border. The stated objectives of this wargame were to test latest

weapon and equipment and to validate limited offensive operations. The exercise Shoor Veer involved both day and night operations by the air and ground troops.

According to the Indian Defence spokesperson S. D. Goswami, "The exercise was unique for the Army as force and technology were employed in perfect synergy to reap unprecedented dividends" (Sebastian, 2012). This exercise was carried out by the Jaipur-based South Western Command, entailed the launch of theatre offensive by formations of SAPTA Shakti Command, namely the Strike Corps-I and the Chetak Corps (Sebastian, 2012). Strategically significant I-Corps was engaged for offensive operations against enemy. The Indian military has been practicing this concept since 2004.

More than 60,000 Indian soldiers, 300 combat vehicles including latest Tanks T-90s, Long range 150mm artillery guns, multi barrel rockets were involved in this exercise ("India's Shoor-Veer military exercise", 2012). The exercise 'Shoor Veer' will experiment the promptness and efficiency of the Indian armed forces in an integrated warfare environment. In this exercise the IAF actively participated and practiced synergy and assimilation with ground forces. Latest aircraft of the IAF SU-30 and Jaguars along with attack helicopters MI-25, MI-17 and UAV were also part of exercise 'Shoor Veer' to demonstrate synergy and integration ("Military exercise Shoor Veer culminates", 2012). During the exercise the Indian Army and the IAF tested new war fighting concepts and doctrines with real time pictures of the battle zone provided to a centralized command and control center from fighter jets, UAVs and attack helicopters, waging war in network centric environment and massed tank drills backed by long range artillery guns ("Shoor Veer, Indian military exercise along Pakistani border, 2012). Both the Indian Army and the IAF deployed their Remotely Piloted Aircrafts- (RPAs) to gather intelligence and advance information in support of

their missions. This shows the Indian military's advancement in the field of UAVs ("Shoor Veer, Indian military exercise along Pakistani border, 2012).

The Indian military has also carried out Special Heli-borne Operations- (SHBO) with the help of Mi-17s and elements from SWAC. The Airborne Assault Operations- (ABAO) were also practiced and a large contingent of paratroopers was para-dropped to practice behind the enemy lines offensive operations ("Shoor Veer, Indian military exercise along Pakistani border, 2012). This exercise will help the Indian military to operationalize concepts like CSD or pro-active military operations and also allow them to test and validate latest weapon systems and modern equipment inducted in last few years.

3.6.16. The Exercise Rudra Akrosh- 2012

In May 11, 2012, the Indian Army conducted another major exercise code named 'Rudra Akrosh' in Punjab sector to practice the operational and transformational effectiveness of various formations under the WAC ("Western Army Command conducts summer training exercises", 2013). More than 20,000 troops participated along with fighter and transport aircraft in joint operations. The Exercise Rudra Akrosh also witnessed various combat drills by mechanized infantry, latest tanks, long range artillery, heliborne Special Forces operations and surveillance gear. In addition, the advanced UAVs and attack helicopters were also part of this exercise ("Western Army Command conducts summer training exercises", 2013).

3.6.17. The Exercise Iron Fist- 2013

The IAF would play a decisive role in any future conflict with Pakistan. Since 2004, the IAF has been part of the military exercises. In February 22, 2013, the IAF conducted a large-scale exercise with code name 'Iron Fist' ("Iron Fist 2013 military exercise in Pokharan", 2013). The main purpose of this exercise was to validate Indian military's operational readiness and overall war

fighting capabilities. The IAF demonstrated its ability to conduct day/night operations. The Exercise Iron Fist was carried out in the Pokhran test range facility in Rajasthan. More than 230 aircraft from IAF carried out synergetic operations with army in a network centric environment ("Iron Fist 2013 military exercise in Pokharan", 2013). The exercise Iron Fist mainly focused on air Defence capabilities, counter surface force operations, urban warfare, search & rescue Ops, offensive maneuvers and a short take off by a C-130J Hercules transport and logistics aircraft. The IAF employed its fighter aircraft Su-30 MKI, Mirage-2000, Jaguar, MiG-21, MiG-27, MiG-29 and Hawk trainers for this particular exercise. Whereas, the transport, logistics and surveillance aircraft including the C130J, AN-32, Embraer Airborne Early Warning and Control (AEW&C) and IL-76 also participated in the exercise Iron Fist (Chopra A. M., 2013).

3.6.18. The Exercise Panchjanya- 2013

Pakistan share a huge border with India in Punjab and Rajasthan sector. In both these areas Indian military has conducted many military exercises to operationalize its war fighting doctrines ("Army undertaking exercise 'Panchjanya' in Punjab, 2013). In May 21-23, 2013, the Indian army carried out a major military exercise with code name 'Exercise Panchjanya' to improve its overall war fighting capabilities and validate its 'Integrated Theatre Battle- (ITB)' concept to fight future war in synergy and integration between air &land forces. The Indian military also practiced its modern warfare weapon and equipment during day and night situation to operationalize its aggressive war fighting concepts. Again, in this exercise the Indian army emphasized on the joint operations between Air and Ground forces and heliborne Special Forces operations ("Army undertaking exercise 'Panchjanya' in Punjab, 2013).

3.6.19. The Exercise Shahbaaz Ajay- 2013

The Exercise Shahbaaz Ajay was third inline wargame in December 20, 2013. More than 15,000 soldiers of the Reorganized Army Plains Division- (RAPID), 100- MBTs, highly sophisticated artillery guns, and advance air defense systems were part of this exercise. According to the Indian military's spokesperson colonel SD Goswami, the Indian Strike Corps validated new concepts and refined existing battle procedures.

A high degree of integration was achieved with the IAF while undertaking specialized operations which included an air borne assault and a Heli-borne special forces operation" ("Army carries out wargames near Indo-Pak border", 2013). The Indian military is frequently practicing heliborne Special Forces operations behind the enemy lines, it appears that they are practicing limited incursions or surgical strikes to copy the US Special Forces raid on Abbottabad. Such a thinking against a nuclear weapon state is dangerous and may entail serious implications for the regional security.

3.6.20. The Exercise Sarvada Vijay- 2014

The Exercise Sarvada Vijay- (Always Victorious) was carried out in Mahajan field firing range, in Rajasthan on May 3, 2014. It was a joint exercise meant for rapid thrusts into enemy territory with close air support of the IAF and T-90 tanks on ground along with mechanized infantry and other offensive elements. More than 20,000 troops, 200 tanks, 500 infantry combat vehicles and artillery were part of this exercise. Mathura based Strike Corps was also involved in the offensive maneuvers at the border (Kapoor, 2014). The Exercise Sarvada Vijay is a routine exercise to revamp the Indian military's overall war fighting capabilities. The Indian Army has also exercised highly sophisticated long-range UAVs, surveillance radars, and AWACS to ensure continuous

flow of information to achieve battleground transparency for real time information, quick decision making for effective countermeasures (Anand, 2014).

3.6.21. The Exercise Drad Sankalp- 2015

The Exercise Drad Sankalp was held in the deserts of Rajasthan in December 2015 to incorporate joint warfare skills in Indian armed forces, assess new concepts and run-through modern weapon &equipment inducted by the Indian military recently. The southern command of the Indian Army practiced offensive operations in this wargame. The Exercise Drad Sankalp mainly focused on the synergy and integration among the Indian armed forces (Anand, 2015).More or less 45,000 Indian soldiers participated in this wargame. These drills lasted for two months in which India tested its war fighting operational capabilities ("Army Conducts Major War Exercise to Validate Capability", 2015).

During the Exercise Drad Sankalp, infantry and mechanized forces practiced rapid maneuvers in joint collaboration with the IAF. In addition, the Exercise Drad Sankalp also involved whole variety of ground forces to include transport and logistics aircraft, long range Artillery, Gunship helicopters, Special Forces, NCW and EW capabilities in sync with IAF ("Army chief General Dalbir Singh reviews training exercise Drad Sankalp", 2015).

3.6.22. The Exercise Shatrujeet- 2016

The Indian Army has conducted another major exercise in Rajasthan areas to validate its offensive military operations. This exercise focused on the joint operations between army and Airforce to improve synergy and integration in the Indian Armed forces for quick and swift operations against Pakistan. The Exercise Shatrujeet involved Indian Army's Strike I- Corps which is based in Mathura (Junaid, 2016). The Indian Army also practiced capabilities to fight in nuclear, biological and chemical warfare environment. The Exercise Shatrujeet involved MBTs, mechanized infantry

and artillery formations. The Indian Army claimed to have achieved capability to fight in an integrated battle theatre fighting concept in which army and Airforce along with helicopters and Special Forces would have close cooperation for limited, intense and quick operations. The exercise also aimed to improve its limited war strategy to mitigate threats of Pakistan's Hatf-IX tactical nuclear weapons. The Indian military also Para dropped about 3000 soldiers to fine tune its strategy for behind the enemy lines operations (Junaid, 2016).

In addition, more than 30,000 soldiers participated in the Exercise Shatrujeet which shows the Indian Army's resolve to authenticate its limited war doctrine (Saksena, 2016). On the culmination of the exercise the former Indian Army chief Army General (retd) Dalbir Singh said that the exercise was successful and aimed at sharpening the Army's deep strike capabilities in enemy territory("Army's 'Shatrujeet' exercise concludes, 3 Jawans die", 2016).

3.6.23. The Exercise Sarvatra Prahar- 2016

The Indian Army in first month of 2016 conducted a major Exercise 'Sarvatra Prahar' which involved artillery units, Special Forces operations along with attack helicopters, advanced UAVs, WLRs, surveillance and reconnaissance sensors and equipment ("Army Displays Its Deadly Firepower at 'Sarvatra Prahar' in Nashik", 2016). The Exercise Sarvatra Prahar showcased the Indian Army's artillery power which involved entire range of guns, rockets and missiles. This exercise demonstrated the Indian Army's firepower and lethality in artillery guns, short range missiles and sophisticated indigenous and imported rockets ("School of Artillery Conducts Exercise 'Sarvatra Prahar' at Devlali Field Firing Ranges", 2016).

3.6.24. The Exercise Chakravyuh-II- 2016

In May 2016, the Indian military conducted a major wargame in Suratgarh area of Rajasthan which is about 70km away from Pakistan. The exercise was code named 'Exercise Chakravyuh-II'. In this exercise the Indian Army tested operational capabilities of the Pivot Corps, rapid division deployed near to the Pakistan border in Suratgarh, Rajasthan ("Chakravyuh-II: Indian Army holds massive military training exercise in Rajasthan", 2016).

The Exercise Chakravyuh-II mainly focused on the quick mobilization with close air support in a Network Centric and Electronic Warfare environment. The Indian Army also tested its surveillance, reconnaissance and communication systems to assimilate the flow of information from different platforms ("Chakravyuh-II: Indian Army holds massive military training exercise in Rajasthan", 2016). The Indian Army again conducted Heli-borne operations with Special Forces to improve its overall offensive capabilities (Anand, 2016). All these capabilities are essential part of any offensive maneuvers against the adversary. Pakistan must keenly observe these exercises and come up with adequate response/countermeasures to deter any misadventure by the Indian military in future.

3.6.25. The Exercise Megh Prahar- 2016

The Exercise Megh Prahar was carried out in the month of July 2016. The Indian Army's Strike I-Corps which is based in Mathura took part in this particular wargame. The Indian Army yet again rehearsed blitz maneuvers with its highly advanced T-90 Tanks, ICVs, latest weapon and equipment, synergy and integration between Army and Airforce. The Indian Army's Lt Gen Shokin Chauhan who is GOC, Strike I-Corps said that the Indian Army's I-Corps showcased highest degree of operational readiness in all aspects of war fighting (Anand, 2016).

3.6.26. The Exercise Iron Fist- 2016

The IAF carried out exercise 'Iron Fist' in 2016 to test and validate its new concepts and weapon systems. More than 180 fighter, transport and logistic aircraft and helicopters were part of the exercise. The IAF also showcased indigenously developed Light Combat Aircraft- (LCA) -Tejas and SU-30 MKI aircraft ("Iron Fist 2016: IAF showcases combat capabilities in Pokhran", 2016).

The Iron Fist was a day/night exercise in which the IAF demonstrated its firepower and operational readiness. The stated objective of the IAF was to validate a coordinated "aerial ballet" to operationalize the IAF's lethal firepower, agility and overall warfighting capabilities over the entire range of aerial operations ("181 aircraft to participate in IAF's Iron Fist exercise", 2016). These drills also displayed the IAF's ability to work under the Network Centric and Electronic warfare environment.

The Indian Air Chief Marshal Arup Raha said that all tri-services of the Indian military are ready for integrated military operations at the tactical, operational and strategic level because the future conflicts would be fought in synergy and coordination among all branches of military ("IAF showcases firepower in Iron Fist Exercise in Rajasthan", 2016). The Indian military is continuously practicing joint operations since 2004.

It is likely that these regular military exercises would bring sea change in the Indian military's overall operational capabilities. Although, military exercises are carried out in a tailored environment, they are different from the real war scenario. But consistent military drills would help the Indian military to overcome its deficiencies and validate limited war concepts with greater ease and comfort.

3.6.27. The Thar Shakti Exercise- 2017

The Indian Army conducted a huge military exercise with code name 'Thar Shakti' in Rajasthan sector close to the border with Pakistan. About 20,000 troops participated in this wargame to operationalize its aggressive military doctrine (Banerjie, 2017). The major purpose of the exercise was to validate Indian Army's operational capabilities for limited, quick and swift warfare operations.

The main feature of this exercise was the use of Special Forces for tactical operations using transport helicopter and aircraft to Para drop troops (Banerjie, 2017). Same concept has been repeatedly practiced in almost all exercises since 2004. The purpose of such shallow operations is to carry out limited incursions or surgical strikes in response to any alleged terrorist attack on the Indian soil.

3.6.28. The Exercise Tropex – 2017

Since the inception of limited war doctrine in 2004, the Indian military is emphasizing on the joint warfare capabilities, focusing on the limited, intense and synergetic military operations involving all branches of the Indian armed forces to achieve quick victory against adversary, without invoking the nuclear redlines of Pakistan. The Indian military introduced Joint Armed forces doctrine in 2017, to validate these new concepts, it has carried out major exercise with code name Exercise Tropex- (Theatre Readiness Operational Exercise) in which the Indian Army, Air Force and Navy jointly practiced offensive operations in a limited war scenario ("Navy, IAF and Army's Tropex exercise ends", 2017).

More than seventy aircraft, forty-five ships and hundreds of soldiers participated in a month long 'Exercise Tropex' to improve their joint warfare capabilities. The Exercise Tropex started in January 24, 2017 and culminated in February 23rd, 2017. It was carried out in the Western sea of

India. The Indian nuclear submarine, Aircraft carrier INS Vikramaditya, SU-30 MKI and Jaguar fighters were also part of this wargame. The official statement by the Indian military claimed to have "tested their combat readiness in all formats, reinforced inter-operability and synergy among armed forces in difficult operations in multifaceted conflict situations".

The Exercise Tropex also saw greater role of the special forces of the Indian Army, Air Force and Navy in quick and swift operations. The close interaction among armed forces helped the Indian tri-services to operationalize modern warfighting concepts and provided the opportunity to hone overall warfighting capabilities ("Indian Armed forces conduct month-long exercise to test combat readiness to deal with any possible threat", 2017). The synchronization among all the branches of any military require huge efforts and regular military exercises. It is early to expect that the Indian Army may have achieved the capability to fight a limited conventional war in close collaboration and integration with the IAF and Navy in a network centric warfare environment.

3.6.29. Exercise Hamesha Vijayee- 2017

The Indian Army's Southern Command came up with a major wargame with a code name 'Hamesha Vijayee' in Rajasthan to validate its offensive limited warfare concepts and ability to launch deep incursions inside enemy territory. The Indian Military practiced quick maneuvers with mechanized forces in a network centric environment along with precision, accuracy and greater firepower. In addition, the Indian military since 2007 has been practicing regularly under the nuclear, chemical or biological warfare environment to fine-tune its ability to fight in case of any such attack by Pakistan (Gurung, 2017).

According to the Indian Defence spokesperson, Lt. Col. Ojha the exercise Hamesha Vijayee focused on real-time information warfare assets to revamp overall surveillance and reconnaissance capabilities to get information edge against adversary. The Indian military has also

conducted Heli-borne operations to sharpen their skills to conduct surgical strikes across the LoC(“Army chief witnesses’ firepower at 'Hamesha Vijayee' war exercise”, 2017).The exercise Hamesha Vijayee witnessed participation of over 30,000 soldiers, 200 T-90 MBTs along with Globemaster and C-130 Hercules transport and logistics aircraft. Again, the exercise took place at Barmer and Jaisalmer areas close to Pakistani border.

The Indian Army Chief General Bipin Rawat claimed that the exercise met all its objectives and it was “highly successful”. The incumbent Southern force Commander of the Indian Army Lieutenant General D.R. Soni also claimed that the Indian Army learnt valuable lessons during the exercise. He said, “A number of vital concepts were validated during this exercise and important lessons were drawn which will enable the army to streamline its operational plans and procedures” (Mathrani, 2017).

It is hereby noteworthy to mention that scripted exercises in a controlled environment are totally different from the real battlefield scenarios, where the actions of the adversary are unpredictable and uncontrollable. However, one cannot deny the efficacy of these exercises and their likely implications for the neighboring state.

3.6.30. Exercise Gagan Shakti- 2018

The year 2018 saw a huge development in the overall operational readiness of the Indian military. The exercise Gagan Shakti was one of the major exercise that took place to revamp Indian military’s offensive capabilities to take out targets deep inside enemy territory, coordinated joint operations by air and land forces without any time restriction in network centric environment (“Gagan Shakti 2018: Indian Air Force set for show of strength in exercises with Army and Navy” , 2018).

The exercise Gagan Shakti is considered to be the biggest ever military exercise since 2001, which shows the Indian military's resolve and seriousness to enable its armed forces to fight modern wars with greater firepower and outreach. More than 1,100 fighter, transport & logistics aircraft, over three hundred officers and about 1500 airmen participated in this major wargame. The exercise Gagan Shakti aimed at all terrain maneuvers, in which the IAF conducted operations in desert areas, high altitude and maritime domain ("Gagan Shakti 2018: All you need to know about India's biggest military exercise", 2018).

Another important facet of this exercise was the execution of Inter- Valley Troop Transfer-(IVTT) in synchronization with linked Army Commands. The IVTT was carried out in the mountainous areas of Northern and North-Eastern Sectors. The objective of IVTT operations was to test and validate the Indian military's ability to redeploy troops and logistics from one area to another in short span of time. Movement of troops in mountainous rugged terrain is a difficult task for obvious reasons. But after this IVTT capability the Indian military will be able to redeploy or reposition their troops within few hours, which may help them achieve greater delicacy and outreach against adversary ("Exercise Gagan Shakti-2018: IVTT operations In the Northern and North Eastern sector", 2018). Other important features of the exercise Gagan Shakti were the extensive use of surveillance and reconnaissance capabilities by AWACS and Special forces operations to practice surgical strikes ("Indian Air Force concludes Exercise Gagan Shakti-2018", 2018).

As part of the exercise the Indian military para dropped 560 soldiers in desert areas to practice offensive operations behind the enemy lines to take care of any resistance against the Indian armour incursions to achieve the element of surprise against enemy in dark ("Gagan Shakti 2018: IAF, Army carry out airborne assault", 2018). The IAF in this exercise also demonstrated

its ability to respond to any eventuality under nuclear, biological or chemical warfare environment ("Can India fight nuclear war? IAF Gagan Shakti exercise finds out: 10 points", 2018). The IAF also made a superfluous claim that they are capable of fighting a two-front war with China and Pakistan. The Indian Air Chief Dhanoa claimed that, we have attained repositioning and rebalancing of assets from one area to another within two days ("Can India fight nuclear war? IAF Gagan Shakti exercise finds out: 10 points", 2018).

However, the IAF's offensive capabilities are still limited. The IAF is grappling with the modernization issues. New inductions would take time and phasing out of the soviet era aircraft is rapidly taking place. Therefore, it could be argued that at the moment the Indian military lack the adequate offensive punch to initiate any aggressive actions against Pakistan or China. But that does not mean the Indian policy makers have abandoned their aggressive doctrines. It is just the matter of time and capability. Once the Indian military achieve required offensive capabilities, it may resort to use of force against Pakistan, which may destabilize the region.

3.6.31. Exercise Vijay Prahar- 2018

The Indian military conducted another major exercise in 2018 with code name exercise Vijay Prahar in Suratgarh. Above 20,000 soldiers from Strike formations of the south Western command participated in this exercise. Main objective of the Exercise Vijay Prahar was to gauge the Indian military's capabilities to fight in synergy and integration with other branches. Other important features of the exercise Vijay Prahar were real-time information about enemy dispositions, intelligence gathering, observation and recon proficiencies while utilizing spy satellite, advance UAVs, NCW and EW capabilities, with an objective to have greater battlefield transparency for an effective command & control in a digitalized environment.

The Indian military also utilized its gunship helicopters for close air support to the ground forces for quick maneuvers ("Vijay Prahar exercise under way in Rajasthan", 2018). Another important aspect of the exercise Vijay Prahar was the Indian military's ability to fight in nuclear warfare environment ("Vijay Prahar: Army men practice fighting in 'nuclear weapon environment", 2018). This exercise depicts the Indian military's readiness in case of Pakistan's use of TNWs. This particular exercise is Pakistan specific as far as the concept of the wargame and area of operation is concerned. Exercise Vijay Prahar also practiced offensive operations by Special Forces with gunship helicopters and air cover by the IAF (Tuli, 2018).

3.7. Evaluation of the Indian Military Exercises- 2004-2018

The Indian military exercises since 2004 revolved around a few concepts which involves quick and swift limited operations under digitalized environment. The Indian military has put major emphasis on the synergy, integration and synchronization of the Army, Air Force and Navy. One thing was common in almost all wargames since 2004. That was to cut short mobilization time and achieve element of surprise against the adversary. Surprisingly, the Indian military since 2004 has practiced only those elements which were according to the stated concepts of the Indian armed forces which includes, the CSD- 2004, Proactive military operations, sub- conventional warfare operations or surgical strikes across the LoC.

The operationalization of above concepts requires offensive capabilities which may entail quick maneuvers by T-90 MBTs, mechanized infantry, Network Centric and Electronic Warfare capabilities, Spy satellites and long-range UAVs for real time information about adversary's movement, deployment & strength, impeccable air defense assets, synergy and integration among armed forces, night vision capabilities, air superiority and political will. Lt General (retd) Amjad Shuaib evaluates the efficacy of Indian military exercises in these words,

……These exercises have been designed to fight a battle within plains that is area of our concern. The composition of the force will also give you an indication that these exercises has been focused on your areas. For example, if they use tanks, armour vehicles etc naturally we know that these vehicles cannot be used in high altitude areas, you can't maneuver armored forces in Siachen, Aksai Chin Areas, China or Donglog areas, this is the first aspect. And the second aspect is the locations of the exercise, if exercises are held very close to the international border, which the Indians have been doing then let me say they can implement their Cold Start Doctrine, so you have to take certain measures (Shuaib, 2017).

Figure-5

Source: Author's own

After careful examination of the Indian military exercises since 2004, it can be argued that India has tested and experimented synergy and integration among its armed forces for quick and robust operations. It has also practiced day and night war fighting capabilities, surveillance and reconnaissance skills, behind the enemy lines operations, air mobility and logistics, mechanized Armour, Infantry and Artillery. India has also exercised NBC warfare capabilities, NCW and EW capabilities.

Navy's marine commandos, Special Forces operations, para-dropped, Strikes Corps, air fire power, and Pivot Corps were also part of these exercises. As discussed above, all these elements are essential for the offensive, quick and swift operations. Main focus of these wargames was to operationalize Indian military's limited war doctrines against Pakistan, because all these exercises were carried out in the plains of Punjab and Deserts of Rajasthan. Former CJCSC, General (retd) Ehsan Ul Haq doubt the Indian military's ability to carry out any offensive military operations against Pakistan. He said,

> ……. *The first aim of these exercises was to evolve this doctrine of proactive military operations or CSD. Secondly, they did some restructuring of forces, in terms of the size of the reserves, and then the relocation of their formations, to ensure a forward deployment against Pakistan. As far as the feasibility or efficacy of the CSD or proactive military ops as concept (is concerned), I would still say that it is somewhat dangerous and unrealistic to expect that they can carry out substantial military operations against Pakistan* (Haq, 2018).

It is difficult to ascertain, whether India has fully achieved offensive capabilities or not. Because military exercises are totally different from the real war scenarios. Sometimes it becomes difficult to assess the enemy response from small level exercises. As far as Pakistan is concerned, it is a nuclear weapon state with strong conventional military capabilities. The Indian military at the moment lack absolute conventional superiority vis-à-vis Pakistan. So, it is arguable that despite many military exercises on the border, the Indian military still lags behind in adequate offensive

capabilities to launch any decisive conventional military operations against Pakistan. Former Chief of Air Staff of the Pakistan Air Force, ACM Tahir Rafique Butt critically evaluates the Indian military's wargames in these words,

> ……. *It is mandatory for every country to put into practice its new doctrines, concepts, strategies etc. this is done under a tailored and academic environment it may not create the actual war environment. The supervisory cell or control advice the conduct of war gaming. But our own strategies and the way we want to fight a war also undergo war gaming. We also conduct military exercises with army, air force and navy, sometimes we hold joint exercises. We also suppose that how we will counter the Indian attack. It is normal, and every country does that* (Butt, 2017).

Professor Walter C Ladwig of the Kings College London view these military exercises as routine matter and their value is limited, he elucidated his view point in these words, "All militaries conduct exercises. The degree to which these test operational concepts under combat-like conditions needs to be examined. Highly scripted exercises that fail to simulate battlefield conditions will only add limited value. Moreover, there must be evidence of true joint-ness between the army and the air force. Beyond exercises, the right types of hardware must be in place as well as organizational structures that allow local commanders to exercise initiative" (Ladwig, 2017).

However, Shashank Joshi, Research Fellow at RUSI London, described the Indian military exercises significant and useful. He said, "(Military) exercises are crucial for training and signaling purposes. Too many exercises held since 2004, including large-scale tri-services exercises, and those including rapid combined-arms warfare, are likely to be very important in helping India mobilize more quickly, move with greater nimbleness than was possible in 2001-02, and coordinate air and ground forces more smoothly (Joshi, 2017).

Senior Fellow at the Carnegie Endowment for International Peace, Ashley J Tellis, is of the opinion that these exercises will improve the Indian military's overall capabilities but the

option to strike Pakistan rests with political government, he was of the view that; “Yes, they will help the Indian military to hone its capabilities but whether these capabilities will be used against Pakistan will depend on the political choices and not just military capabilities” (Tellis, 2017). Though, India practiced these elements in its military exercises but full coordination and integration among the armed forces is difficult proportion to achieve. Without proper coordination and understanding between the Indian armed forces, it would be difficult for India to operationalize its offensive CSD, proactive military operations or surgical strikes against Pakistan.

Chapter-4
Implications for the Deterrence Stability of South Asia

4. Introduction

The doctrinal change and induction of highly sophisticated weapon and equipment would create security dilemma for Pakistan in south Asia. The conventional asymmetries would create strategic disparity in south Asia, allowing the Indian military to exploit the gap between nuclear and conventional military capabilities of Pakistan to carry out quick limited offensive military operations. Such a thinking is aggressive and would plunge the region into further mayhem and turmoil. Pakistan would also speed up work on the induction of modern weapon and equipment to fill the gaps in its conventional deterrence vis-à-vis India to maintain strategic stability in south Asia.

The doctrinal transformation in the Indian military suggests that, there is a greater risk of limited war between India and Pakistan. After the induction of nuclear weapons, the possibility of total war has shrunk. Now it appears that the Indian military is aiming to fight a sub-conventional war or carry out surgical strikes with its Special Forces, advanced helicopters, UAVs or highly sophisticated aircraft. The incumbent government in India has shown its desire to isolate Pakistan globally, managed to designate some of the Kashmiri leaders as militant and threatened to use force in case of any alleged terrorist activity in India or against Indian forces in IHK.

All these eventualities would lead to a skirmish between India and Pakistan, which may escalate into a limited or full fledge conflict on LoC, working boundary or International border. Threat of a possible conflict looms over the skies in south Asia with the presence of such aggressive doctrines by India. Pakistan's economic condition does not support arms race with India. It would

try to fill the gaps with its indigenous defense industry but still it has to go a long way to achieve capabilities to counter the Indian military's capabilities including the long range air defense systems (S-400 and Barak-8), Long endurance UAVs, P8I Anti-Submarine Warfare Long Range Maritime Surveillance and reconnaissance aircraft, spy satellites, nuclear submarines, and fifth generation aircraft etc. It would be unwise for Pakistan to indulge in arms race with India. India is a bigger economy and they can afford force multipliers already mentioned in study.

Pakistan would first try to deter India with its conventional capabilities to do quid pro que in case of any breach (surgical strikes, special forces raid, air strikes etc.) of its territorial integrity, if conflict escalates then Pakistan would bring nuclear weapons into fore, especially TNWs with small yield and short range to counter shallow maneuvers by the Indian Army. The overwhelming reliance of Pakistan military on nuclear weapons would be a dangerous development in south Asia.

Which means that Pakistan will use it if the Indians cross the red-lines, which are ambiguously defined. Pakistan's policy of ***full spectrum deterrence*** does not clearly define that at what stage Pakistan would use TNWs. Whereas, the Indian military's persistence with CSD, surgical strikes and aggressive military buildup along with large scale military exercises on regular basis creates skepticism and fear in Pakistan.

The use of TNWs would escalate the conflict which may result in similar or major nuclear strikes by the Indians which may ultimately destroy both nations. Because the Indian nuclear doctrine does not clearly differentiate between tactical or strategic nuclear warheads. It generally talks about ***massive retaliation*** in case of any WMD threat or use against the Indian forces anywhere in the world. Such an ambiguity put a question mark on Pakistan's rationale behind the development and employment of battle field nuclear weapons. What if India responds Pakistan's tactical nuclear weapon with its strategic nuclear warheads? Such a scenario portrays a bleak picture of deterrence

stability in south Asia. The doctrinal shift in the Indian military, massive military modernization and Pakistan's full spectrum deterrence strategy with the induction of battlefield nuclear weapons would seriously challenge the deterrence stability in south Asia. It is imperative for both nuclear belligerents in south Asia to show restraint and work together to resolve their issues bilaterally in an amicable way. The road to confrontation would seriously disrupt the progress and development of both nations. Any conflict in south Asia limited or total would have far reaching implications for the regional and global security. The next part of the study would examine the likely implications of the Indo-Pak strategic competition for the deterrence stability of south Asia.

4.1. Conventional Disparity in South Asia

The defense collaboration of the Indian military with the US, Russia, Israel and Europe would create strategic disparity in south Asia. Conventional imbalance between India and Pakistan would further exacerbate the already fragile deterrence stability in South Asia. It would have direct bearing on Pakistan's national security which has long standing adversarial relationship with India. The strategic partnerships with Russia, America, Europe and Israel would fill the gaps in the Indian military's overall conventional capabilities and it will emerge as an impeccable force in the region and create security dilemma for other regional states especially, Pakistan.

The Indian military would add aircraft carrier, nuclear submarines, Long Range Surveillance and reconnaissance anti-submarine aircraft, refurbished MiG29K, designated spy satellites, highly advanced stealth frigates, Barak-8 air defense system for warships and other modern weapon and equipment for its Naval arm. With these capabilities the Indian Navy would literally control the maritime traffic, and choke points in the Indian Ocean, Arabian Sea and Bay Bengal. According

Shashank Joshi, Research Fellow at RUSI, London, the Indian naval modernization would have far reaching implications for Pakistan; he said,

> *……as India's naval strength grows, Pakistan will face greater challenges in the naval sphere. It will become easier for India to project power onto the Makran coast, and to blockade Pakistan in wartime. However, Pakistan's own A2/AD capabilities are also growing, and China's presence in Gawadar is likely to prove an important defensive shield, or perhaps a tripwire* (Joshi, 2017).

After the development of Gawadar port and CPEC type of mega projects, Pakistan is largely dependent on sea. The induction of modern weapon and equipment would transform the Indian Navy into a lethal force. Pakistan's maritime interests would be threatened with such a huge, highly sophisticated and well-equipped Navy with greater outreach and lethal fire power. Pakistan's Vice Chief of Naval staff Admiral (retd) Muhammad Haroon on the question of CPEC/Gawadar security and Indian Navy's growing maritime capabilities in the IOR said that,

> *Whenever you start a thing like CPEC you always build up defensive measures around it. So Pakistan is doing it accordingly or probably have done substantial part of it. As far as the Indian Naval development is concerned the moment they displace itself and display its muscle in the North Arabian Sea, obviously it will be retaliated. They understand that we keep on operating over here, our ships are moving there, and their ships are moving there. If there is any motive behind their activity we will come to know. When an enemy tries to do something funny he has to take some measures. For example, their aircraft will be moved closer to our border, similarly their ships, and the submarines will be armed, the moment they start doing some activity the ships would sail out. Larger forces are required to create an effective measure. Whenever there is any activity we will come to know, the antennas are working* (Haroon, 2017).

It would be difficult for Pakistan Navy to match the Indian Navy's acquisitions and transformations because of the obvious economic challenges. But at the same time Pakistan has to be ready to safeguard its maritime interests. Pakistan maintains a small navy to safeguard its coastal areas and has no ambitions to become a blue water navy or operate in the deeper seas. At the same time, it has to maintain strategic balance in the IORs or in the Arabian Sea to deter any aggressive

moves by India which may undermine Pakistan's maritime interests. Pakistan has taken some steps for instance the establishment of Naval Strategic Force Command- (NSFC) ("Pakistan Cites Second-Strike Capability", 2012) and test of submarine launched (700km range), Babur-III cruise missile which is claimed to be providing the country with second strike capability ("Pakistan attains 'second strike capability' with test-fire of submarine-launched cruise missile" , 2017). According to Brigadier (retd) Dr Naeem Salik, the test of Babur-III would provide temporary solution, he said,

> *"I would say this is temporary solution, this is not the ultimate solution. The ultimate solution is long range missile preferably SLBMs because the SLBM can take greater payload as compared to the cruise missiles placed on nuclear powered submarines"(Salik, 2018).*

Dr Salik is right in his assessment because with conventional submarine and 700km range we cannot call it long term solution or assured second strike capability. Because the conventional submarine cannot remain under water for longer period of time, it has to come up for refueling, battery charge, logistics etc. on the other hand nuclear submarine can remain submerged for longer period of time with nuclear weapons on board. Though, it is bit noisier than the conventional subs but at the same time it has greater outreach and endurance which is needed in our case to ensure credible second-strike capability at sea. Vice Admiral (retd) Muhammad Haroon, who was also Commander of Pakistan's Submarine fleet, believe that nuclear submarine must be inducted for assured second strike capability. He was of the view that

> *Babur-III would provide the second-strike capability to Pakistan and prevent India from any aggressive moves at sea. We need to induct a nuclear submarine because a conventional submarine has to come up to charge its battery, to freshen the air quite often, while a nuclear submarine is powered by nuclear systems, it doesn't have to come up for days. So it stays down, remain hidden. In a submarine warfare 90% of the submarines are gone when they are carrying out snorkeling or they are on surface or they carry out a transmission. If you don't do any of these three, you are down and low at your station, quietly working and observing everything in a range of about 300 nautical miles radius, it*

> *makes lots of difference. You are depending on your detection and engagement systems* (Haroon, 2017).

Nevertheless, conventional submarine equipped with Babur-III may not provide assured second-strike capability, but it would definitely shore up Pakistan's nuclear deterrence capabilities. With 700km range Pakistan can easily strike India's economic hub Mumbai in case of any major war. The deterrence value of the Babur-III cannot be ignored but at the same time long term solution would be the induction of nuclear submarines. Pakistan has also raised some bases around Gawadar port to protect it from any external attack.

Former CJCSC General (retd) Ehsan Ul Haq affirmed that Pakistan has taken some defensive measures to protect its maritime interests especially the Gawadar port. He said, "We have developed some air bases in and around Gawadar, Pasni, Ormara, Masroor and Bolari, they are all facing the sea front and they are backed up by Turbat, Khushab and others" (Haq, 2018). In addition, the IAF is eying to add fifth generation aircraft from French and Russian suppliers which is necessary for air superiority and operationalization of the aggressive doctrines. These aircraft once inducted would be a threat for Pakistan because at this moment Pakistan's air defense capabilities are limited. On the question whether Pakistan can take out the Indian aircraft SU-30 or Rafale, Former CJCSC, General Ehsan Ul Haq said,

> *It depends on what that aircraft is doing, if it is going to fly very high then we don't have the long-range air defense systems. If it is going to come and attack from low height, precision strike. Unless, it comes very close, because our capability is limited to Short Range Air Defense System- (SHORADS) and now we are getting into Low to Medium Range Air Defense system- (LOMADS) and the third stage would be High and Medium Altitude Air Defense System- (HIMAD) which is like the S-400 and all these. They cater for standoff capabilities, otherwise we are also getting standoff weapons, which will fire from 100km. You don't have those systems which can engage an aircraft 100km away. Instead of going for one system, it depends on which are available for example S-400 is available, my recommendation would be we should also go and buy S-400* (Haq, 2018).

General Ehsan advised Pakistan must go for S-400 long range air defense system, but it has got two major issues, first is the affordability, can Pakistan afford such a costly system? Second, will Russia provide this system to Pakistan keeping in mind its close defense collaboration and strategic partnership with India? For Pakistan the most convenient option would be to get long range air defense system from the Chinese.

They would be happy to share it with Pakistan. Ultimately, Pakistan has to get the long-range air defense capabilities to counteract the standoff capabilities of the IAF. According to former Director General, Pakistan Air Force Strategic Command, Air Marshal (retd) Muhammad Ashfaque Arain, Pakistan has started work on the fifth-generation aircraft to offset the IAF's air dominance, he was of the view that,

> *PAF is continuing to improve its capability, work on the fifth-generation fighter has already started to offset the imbalance created by induction of modern fighters in IAF. Similarly, induction of certain weapons on PAF inventory will seriously challenge Indian intent of air superiority. PAF has and will retain the capability for attaining air superiority at intended places for required durations* (Arain, 2018).

The Indian military's acquisitions of highly advanced transport and logistics aircraft from the US would help India to improve its mobility and agility. These acquisitions would work as force multipliers for the IAF in case of any limited intense quick and swift warfare situation vis-à-vis Pakistan. Likewise, the Indian military's acquisitions of Long range air defense systems like S-400 and Barak-8 would not only protect India's key installations from any aerial threat but also provide the IAF a cover to carry out sub-conventional or surgical strikes against Pakistan.

Such a system would be a threat for Pakistan Air Force, but it would be difficult for the Indian military to protect their land from Pakistani ballistic or cruise missiles. The efficacy of S-400 in a

war like situation is yet to be tested. Vice Admiral (retd) Muhammad Haroon explained the anxiety of the Pakistani policy makers in these words,

> *You cannot saturate an air with 100 missiles, and these (S-400) things are there they create problems for us, it can create an impression that our missile may not hit India. We don't want them to have it. Probably it would push Pakistan to build more warheads (Haroon, 2017).*

Such fears would create a serious security dilemma for Pakistan and add false sense of superiority in the minds of the Indian policy makers which may give them confidence for a misadventure in the shape of surgical strikes with air force or armed UAVs in a hope that they can protect their air space from Pakistani aircraft or missile. Resultantly, such a move will force Pakistan to improve its nuclear arsenal qualitatively and quantitatively. Senior Fellow at the Carnegie Endowment for International Peace, Washington DC, Ashley J Tellis said Pakistan will counter the S-400 or Barak-8 air defense systems, "…. with more nuclear weapons" (Tellis, 2017).

According to Air Marshal (retd) Muhammad Ashfaque Arain, "Ababeel (MIRV) capable of delivering multiple nuclear warheads is an answer to India's modern air defense system" (Arain, 2018). However, Bharath Karnard believe that these systems would have value if India-Pakistan go for major war, he was of the view that,

> *These systems (S-400, Barak-8) could have an impact if 'total war' was on Delhi's mind, which it is not. Most India-Pakistan conflicts, I have long maintained, are limited, small time affairs involving counter-force actions that the late Major General DK Palit, former DGMO, correctly described as "communal riots with tanks" not serious wars fought to a decisive end* (Karnad, 2017).

The IAF is also quickly filling the gaps in its overall war fighting capabilities and concepts. The induction of spy satellite for the IAF, acquisitions of AWACS, lethal weapons, air force version of BrahMos cruise missile and advanced avionics and radars would seriously challenge the

strategic stability in south Asia. India has clear edge as far as military application of the space program is concerned. According to former ACM (retd) Tahir Rafique Butt,

> *……. that is one area where they are ahead of us. That's one area where we goofed up, we are generally depending on other agencies to give us the information about our own country and enemy country, we don't have eyes in the air from that point of view. We have reconnaissance capability well into India in some F-16 electronic pods and AWACS, they are quite efficient. They can carry out surveillance of about 30 to 40 miles inside India. But what overall satellite can do, we cannot do that. They will be able to find our dispositions. The entire world knows about the location of our bases, but they would have update on the movement and deployment of our troops in quick time, that would give them (an) edge* (Butt, 2017).

The strategic stability in south Asia is fragile but relatively stable because of Pakistan's nuclear capability but in future the nuclear deterrence may face serious challenges because of the massive military modernization and huge conventional asymmetries. The conventional deterrence would erode in coming years because of the latest acquisitions by the Indian Military.

The failure of conventional deterrence in south Asia would compel Pakistan to rely on its tactical or strategic nuclear weapons to counter any misadventure by the Indian military. So it could be argued that the Indian military's doctrinal transformation along with massive military modernization drive would have direct bearing on the conventional deterrence in south Asia and it would invite countermeasures by Pakistan, which may include realignments with major powers or arms race.

4.2. Renewed Arms Race between India and Pakistan

Convectional Deterrence as defined by John Mearsheimer is 'function of the capability of denying an aggressor his battlefield objectives with conventional forces' (Mearsheimer, 1983). The conventional deterrence makes it costly and prevents enemy from any aggressive maneuvers, surgical strikes or limited conflict. At this moment Pakistan's conventional military capabilities

are good enough to deter India from any aggressive moves at LoC or International border. However, in future the conventional balance may tilt in favor of India creating serious challenges for Pakistan's security. Pakistan would also jump into arms race and divert its funds from socio-economic development to defense related procurements. Pakistan cannot engage in an open arms race because it would be ruinous for the country keeping in mind the fragile economic conditions. Former Ambassador to India, Ashraf Jahangir Qazi believe that arms race would be disastrous for Pakistan, he was of the view, that

> ……. *a military arms race with India (air, sea or land) would be fatal for Pakistan. That is how the Soviet Union collapsed. Moreover, it is not necessary. Pakistan needs a minimum deterrent, a sufficient defence, a successful economy, an inclusive polity, and a far-sighted and wise foreign policy (especially towards China, Afghanistan, and the US.) This requires hard work, patience, sincerity, belief in Pakistan and no short-changing of the people* (Qazi, 2017).

Another scholar from Pakistan, former Director ACDA at SPD, Brigadier (retd) Feroz Hassan Khan said that, "Pakistan cannot afford arms race with India" (Khan B. F., 2017). Obviously, India is a bigger economy as compared to Pakistan, it may sustain arms race, but it would be difficult for Pakistan to maintain conventional balance. According to Professor Dr Moonis Ahmer of Karachi University, Pakistan must maintain credible minimum posture vis-à-vis India. In reply to a question, whether Pakistan can afford arms race with India, he said, "……no because of huge costs will be involved which Pakistan in view of its severe economic crisis cannot afford. Hence, minimum nuclear deterrence with India is still a viable option for Pakistan" (Ahmar, 2017). Professor Dr Parvez Iqbal Cheema, Dean of FCS, National Defense University opines that Pakistan must improve its economy, if it does well economically, then you can buy modern weapon and equipment. He elucidated his view point in these words,

> ……. *No, I don't think so, given the existing situation, I am taking the economy at the moment suppose Pakistan also does very well economically may be but at the moment*

> *I don't think it will be wise to get into an arms race with India. Indian economy is very strong compare to us and they can afford to go into purchase of weapon and equipment. On the other hand, Pakistan may have to depend on heavily on its own industries but if Pakistan economically do very well then you can even purchase sophisticated weapons from outside* (Cheema, 2017).

Former CJCSC of Pakistan General Ehsan Ul Haq said, "Probably India can afford an arms race better than we can because of the size of their economy, the way their economy has been performing in the last ten years or so. We must be very clear that we can't afford arms race more than India can afford. It is to our advantage that we don't engage in an arms race" (Haq, 2018). However, Professor Dr. Zafar Nawaz Jaspal believe that Pakistan cannot afford arms race as far as numerical parity is concerned, however Pakistan can focus on indigenization to reduce the load of foreign defense imports. He expounded on the issue of arms race with India in these words,

> *If you go by arithmetical model, one is equal to one, two is equal to two, NO, Pakistan cannot sustain arms race with India. Pakistan does not need to indulge in an arms race with India. Pakistan has already adopted very economical defense strategy. Gradually it shredded the burden of foreign purchases and moved towards indigenous reliance so with this current pace balancing with the indigenous weapons production and at the same time indigenous nuclear capability, if Pakistan go with this same pace instead of arithmetic matching like only focusing on sustaining the balance of terror in such a situation Pakistan sustains the arms race with India. But if Pakistan start focusing on the balance of power in the traditional sense, then Pakistan cannot sustain arms race with India* (Jaspal P. D., 2017).

According to Pakistani perspective arms race with India is costly and not in the interests of the country. However, Pakistan must focus on the indigenous defense capabilities and balance it with its nuclear capability, in this way Pakistan can maintain strategic parity vis-à-vis India. However, some Indian scholars believe that Pakistan can sustain arms race with India with Chinese help. Professor Dr. Harsh V Pant of the Kings College London shared his view point that "On its own, Pakistan cannot sustain the arms race. But with Chinese help it can" (Pant, 2017). According to Bharath Karnard, Pakistan cannot sustain an arms race with India. He linked the Indian arms

acquisitions with China. He said, "No. Just as arms racing with India is unaffordable for Pakistan, India is trying to match China's military muscle with a like build-up is equally beyond India's economic means" (Karnad, 2017). Senior Fellow at the Carnegie Endowment for International Peace, Ashley J Tellis endorsed the view point of other scholars on the issue of arms race that, "Pakistan cannot sustain any open-ended arms race with India" (Tellis, 2017).

An unrestricted arms race with India is not at all in favor of Pakistan for obvious reasons. There are certain areas where Pakistan will need huge financing to balance the Indian military, for instance the Indian military's space program for military application, induction of S-400 long range air defense systems, fifth generation aircraft, nuclear submarines, P8I Long Range Maritime Surveillance Anti-submarine aircraft etc.

However, there are certain areas where Pakistan has maintained relative parity with India. Pakistan had already taken some concrete steps to retain conventional balance in the field of MBTs, mechanized forces, long range artillery, gunship helicopters, aircraft with advance avionics, firepower and greater outreach, air defense and second-strike capability at sea and land. The next part of the study discussed Pakistan's conventional arms acquisitions to maintain strategic parity in the region.

a) - The Al-Khalid- Main Battle Tank: Answer to T-90 MBT of India

The Indian Army's acquisition of T-90 MBTs would compel Pakistan to upgrade and equip more Al-Khalid and Al-Zarrar Tanks. Pakistan has already carried out deal with the Ukrainian defense firm to upgrade the engines of over 200 Al-Khalid MBTs. This collaboration with Ukraine would not only upgrade Al-Khalid MBTs but also give boost to its indigenous armor capabilities against India (Pakistan to Upgrade Al Khalid Tank Engines, 2016). The Al-Khalid- MBT is considered

as the strength of Pakistan Army. As of 2015, Pakistan Army possessed 600 Al-Khalid MBTs and the number may grow keeping in mind the procurement of Russian T-90 MBTs by the Indian Army. The Al-Khalid MBT is equipped with a 125mm gun, anti-tank missiles with an effective range of about five km. The Al-Khalid Tank is capable to fire 8 rounds in a minute with high accuracy and precision. This Tank is also equipped with night vision capabilities (Osman, 2015) which is going to provide Pakistan with 24/7 defense against Indian military's incursions.

b) - Competition in the Air Defense Capabilities

The Indian military is procuring highly sophisticated air superiority aircraft from Russia and France along with long range air defense systems from Israel (Barak-8) and Russia- (S-400). These capabilities would create huge strategic imbalance in south Asia. To maintain balance vis-à-vis India, Pakistan is also considering adding medium and long-range air defense systems from China. The possibility of sub-conventional warfare or surgical strikes have raised the alarm bells in Pakistan.

To counter incoming highly advanced aircraft Pakistan needs an impeccable air defense capabilities. In March 12, 2017, Pakistan Army inducted highly sophisticated air defense system LY-80 to deter the IAF from any aggressive moves. The LY-80 has the ability to detect and destroy incoming aerial threats with greater precision and accuracy ("Pakistan Army inducts Low to Medium Altitude Air Defence System- No PR-131/2017-ISPR", 2017). The LY-80 with its advance features possess the capability to take out targets at an altitude from 400 to 10,000 meters, which makes it a nightmare for the enemy air assets ("HQ16A LY-80 Ground-to-air defense missile system", 2018). This air defense system can intercept an aircraft or UAV at an altitude of 40km, and it can destroy an incoming missile at max 12km range. The 85% success rate against combat aircraft and 60% against cruise missiles makes it a terrible weapon for the enemy forces

("HQ16A LY-80 Ground-to-air defense missile system", 2018). According to former commander of Pakistan Army Air Defense Corps, Lt General (retd) Zahid Latif Mirza,

> *The LY-80 was inducted during my period, and I take pride in sharing it with you that this air defense system with 40km range is "deadly accurate". We can take out the Indian SU-30 MKI, Rafale or any other aircraft in their inventory* (Mirza, 2018).

The Indian military is aiming quick, swift and intense operations against Pakistan. Such an induction in the Pakistan inventory would hamper any aggressive moves by India. Because this air defense system has a reaction time of 12 seconds and each unit of LY-80 can intercept four targets all together at an altitude from 15 to 20,000 meters ("LY-80 Medium Range Air Defense Missile Weapon System", 2017).

China in 2016 introduced the advanced version of HQ-16 with longer range. The improved version of LY-80 has the ability to take out targets at 70km range instead of 40km (Richard D Fisher Jr and Neil Gibson, 2016). Pakistan and China enjoy close defense collaboration which is going to grow in future. The Indian military's acquisition of fifth generation aircraft and high-altitude armed drones would provide India with an option to carry out surgical strikes to effectively operationalize their aggressive doctrines. Such a change in the strategic dynamics of South Asia would compel Pakistan to look for long range air defense systems. It is unlikely, the US, Russians, Israelis or Europeans would share their air defense technology with Pakistan. Secondly, the fiscal cost may not be suitable for Pakistan. The best available choice would be the Chinese Long-Range Air defense systems to counter the Indian military's air dominance in the region. The induction of HIMADS would deter India from any surgical strikes or any other proactive military operations. The Chinese HIMADs are highly accurate and affordable for Pakistan. The procurement of this force multiplier will checkmate the Indian military's air supremacy in south Asia vis-à-vis

Pakistan. These HIMAD systems has the ability to shoot down advanced combat aircraft, cruise missiles and high altitude UAVs at an altitude of about 125km ("Will China sell new long-range surface to air missiles to Pakistan"?, 2016) with these attributes this LR-SAM would be a weapon of choice for Pakistan to deter the Indian military from any aggressive moves in the region. The HIMADs would deny India from any edge in the air and establish credible conventional deterrence. But this conventional deterrence would be at the cost of Pakistan's social welfare. The money which could be spent on the reconstruction, development, education or human resource development would be spent on these weapons. The Indian military's mad rush for the modernization has compelled Pakistan to induct such weapon systems to ensure its sovereignty and territorial integrity.

c) - Race for Anti-Tank Guided Missiles- (ATGMs)

The Indian Army is seeking to induct ATGM Spike missiles from Israel and indigenously developing ATGM Nag. These ATGMs are third generation anti-tank missiles, capable to take out modern MBTs with greater speed and precision. Pakistan's Al-Khalid and Al-Zarrar MBTs would face threat of obliteration. To counter this threat Pakistan would require further upgradation of these tanks with enhanced maneuverability to avoid detection by the enemy ATGMs.

In addition, Pakistan can also acquire advance version of third generation ATGMs to deter the Indian Armour incursions. The best choice available for Pakistan is Chinese HJ-12 Anti-Tank Missiles. China has developed highly sophisticated HJ-12 anti-tank portable missile systems with high precision rate and ability to take down the most advanced MBTs in the world including the American M1 Abrams and Russian T-90 MBTs (Philipp, 2014). The HJ-12 is capable to hit its target 2.5 miles away which makes it lethal weapon against modern Armour capabilities of any country. This new anti-tank weapon is equipped with 'fire and forget' attributes which makes it

highly accurate against moving targets (Philipp, 2014). The Chinese HJ-12 Anti-Tank Missile would be weapon of choice for Pakistan in future, as far as the Indian Army's acquisitions of latest T-90 MBTs is concerned.

d) –Balancing in the Advanced Artillery Guns

The Indian Army is rapidly revamping its Artillery and adding long range advance Artillery guns with the help of America and South Korea. The Indian military has also developed indigenous artillery guns with an effective range and firepower. The Indian military has signed a deal of worth $737 million with the US for the supply of advance M777A2 LW155 ultralight howitzer artillery to add firepower and lethality in the forces deployed at LoC and regular border with Pakistan (Chabba, 2016).

Another important induction is locally developed indigenous 155mm/45 calibre artillery gun called Dhanush to fill the operational gaps in country's artillery guns (Singh D. , 2016). The DRDO is also working on the advance version of Dhanush Artillery with 155 mm / 52 Cal attributes (Singh D. , 2016). According to plans the ATAGS would be ready for production in 2019 after almost six years of improvement and ground testing (Singh D. , 2016). The long range, light weight, advance electronics and computing of ATAGS would be a big plus for the Indian Army. Such guns are made for mountainous and rugged terrain like LoC in Kashmir.

These guns could be transported with heavy lift helicopters which India is already acquiring from the US. The Indian Military has also signed a major defense deal with South Korean defense firm to induct modern artillery guns worth of $660 million. This joint collaboration would improve the indigenous defense industry and private sector of India. The Modi government has announced a massive $250 billion program to revamp the Indian military. These Artillery Guns would be in

service in next 2-4 years after the final approval by the cabinet committee of defense. India is going to procure about 100 such artillery guns under make in India program (Singh D. , 2016). These inductions would overhaul the Indian military's long-range fire power in plain areas of Punjab, Rajasthan and mountainous areas along the LoC and working boundary. Keeping in mind the Indian military's advancement in Artillery Guns, Pakistan has also started procurement of advance artillery guns to maintain conventional parity vis-à-vis India. The details of Pakistan's artillery guns acquisition are discussed in the next part of the study.

e) - Pakistan's Procurement of Artillery Guns: Balancing Firepower

In response to the Indian military's acquisition and development of highly sophisticated artillery guns, Pakistan is also seeking help from other countries to induct modern artillery guns to maintain conventional balance in South Asia.

f) - The South African T5-52 is 155mm and 52 calibre Artillery Gun

This artillery system is truck mounted highly mobile with an effective range and speed of 600km and 85km respectively. The T5-52 is 155mm and 52 calibre Artillery Gun. This artillery gun is highly sophisticated with advanced features and ability to fire modern munitions at a range of about 42.5km. The T5-52 artillery system has the ability to carry 27 on- board projectiles and 26 on-board charges. It requires only a crew of four persons to bring this gun into action or out of action in a minute ("Artillery" , 2017). Such a system in place would shore up Pakistan's firepower at the LoC and international border. These capabilities would deter India from any offensive maneuvers. In line with artillery modernization, Pakistan has also approached the Siberians for advance Artillery Gun.

g) - The Siberian Artillery Gun- NORA B-52

Pakistan is also considering Siberian Artillery Gun- NORA B-52 for its Army. Recently, a high-profile Pakistan Army delegation led by the Director General of Artillery Major General Farhan Akhtar carried out a visit to Serbia to negotiate on areas of convergence with Serbian Minister of Defence Mr. Zoran Djordjevic. Both countries decided to jointly manufacture advance weaponry and technology transfer. Though further details are not public, but it is expected that Pakistan might have been negotiating highly advanced Serbian Artillery (NORA B-52) for Pakistan Army (Khan B. , "Pakistan Army Delegation Visiting Serbia", 2017).

The Serbian artillery gun Yugoimport-SDPR NORA B-52 is a 155 mm 52-calibre gun with a 28-ton weight. This Gun has the ability to take out targets at a distance of about 41 km. The NORA B-52 is also highly mobile with a max speed of 90km and it has a potent range of about 1000km, which is going to add superior maneuverability and greater firepower (Khan B. , 2016). The enhanced mobility and advanced munitions make it a nightmare for the enemy forces. Keeping in mind the Indian military's ability to track the artillery position, rocket and mortar sites with weapon locating radars, Pakistan need such a mobile Artillery system to evade enemy's weapon locating radars, which can change their location quickly after carrying out barrage of artillery fire on the enemy positions to avoid detection and obliteration.

h) - The South Korean KH179 155mm Towed Howitzers

Pakistan has also imported a KH179 155mm Towed Howitzer for trials. The KH179 is a 155mm/39-calibre towed howitzer which fits into Pakistan's Army's artillery requirements. This South Korean Howitzer can fire four rounds max in a minute at a distance of about 30 km

("Pakistan Imports Towed Howitzer, Grenade Launchers from S. Korean Hanwha for Possible trials", 2017). The Indian military's modernization drive has pushed Pakistan to unending arms race to add modern weapons of worth $12 billion from 2016 to 2024. Pakistan will spend about $855million on the purchase of Self-Propelled Howitzer- (SPH) ("Pakistan Imports Towed Howitzer, Grenade Launchers from S. Korean Hanwha for Possible trials", 2017). Once, these advanced artillery guns are in place, it would provide Pakistan with enhanced firepower against the Indian military at LoC or international border. The Indian military's mad rush for modernization forced Pakistan to go for modern artillery guns to maintain conventional parity vis-à-vis India to dissuade any misadventure.

i) - Competition for Second Strike Capability in South Asia

The Indian military's weapon spree is backed by its huge economy. This is the reason that India can afford to have aircraft carriers, long range maritime surveillance aircraft and nuclear submarines for second strike capability and dominance at sea. The Indian military's acquisition of second strike capability at sea prompted Pakistan for counter measures. To achieve this goal, Pakistan has developed, and tested submarine launched Babur-III cruise missile which may provide second strike capability to Pakistan. Babur-III with 700km range is considered as a reply to India's sea-based K-4, K-15, Dhanush and BrahMos missiles. In addition, the Babur-III is equipped with terrain hugging and sea skimming abilities to dodge the enemy's air Defence systems ("Pakistan test-fires nuclear-capable submarine-launched cruise missile" , 2017). But nuclear tipped missile on a conventional submarine may not provide credible second-strike capability because of the early detection and obliteration by the Indian military's Long Range-Anti Submarine Warfare Surveillance Aircraft P8-I. Though, the conventional submarines are quieter than nuclear subs, but the threat of detection would remain high.

The induction of P8-I would be a grave threat for the conventional submarines of Pakistan. Pakistan has to employ other options to get assured second strike capability for deterrence stability. According to Michael Krepon, "Second strike can be assured by mobile, ground-based capabilities that are properly moved out of garrison in a crisis to foil preemptive strikes. Command and control over these forces is not simple, but it is much easier than going to sea" (Sadiq, 2014). Other option for Pakistan could be the development of deep underground tunnels to avoid decapitating first strike by the Indian military to ensure the second-strike capability of Pakistan. According to reports, Pakistan has already attained this capability in 2009. According to a report,

> *"Pakistan has reportedly addressed issues of survivability through pursuing a second-strike capability, possibly building hard and deeply buried storage and launch facilities, deploying road-mobile missiles, deploying air defenses around strategic sites, and utilizing concealment measures"* (Paul K. Kerr and Mary Beth Nikitin, 2016).

The Indian military's acquisition of nuclear submarine and other initiatives for the second strike capability would create security dilemma for Pakistan, compelling the latter to invest more resources on the fool-proof second strike capabilities to ensure credible deterrence against conventionally bigger enemy.

J) - India- Pakistan Competition for Attack Helicopters

The gunship helicopters are integral part of modern warfare. These helicopters provide close cover to the ground forces, provide lethal firepower against advancing mechanized forces, MBTs and APCs. The Indian military's acquisition of Apache helicopters from the US forced Pakistan to acquire modern gunship to maintain balance of power in this sphere.

k) -Chinese Z-10 Attack Helicopters

In 2015, Pakistan started to integrate advanced Chinese Z-10 attack helicopters (Fels, 2016). Pakistan got three Z-10 "Thunderbolt" gunship helicopters in 2015 to add offensive punch in Army

aviation and replace the ageing American cobra helicopters. The Z-10 gunship is equipped with lethal HJ-10 anti-tank missile, 23mm chain gun, which has the ability to fire about 600 shells in one minute. The Z-10 is considered as identical to the American Apache helicopters (Jeffrey Lin and P.W. Singer , 2015). The Z-10 is also equipped with night vision capabilities and known for greater maneuverability and agility in close combat. Pakistan is seeking replacement of 51 American AH-1 Cobra helicopters. The Z-10 would provide close air support to the ground forces, rescue missions, kill missions and battlefield recce. The Z-10 helicopter is highly equipped with advanced features which makes it a highly mobile and lethal machine in the world (Jeffrey Lin and P.W. Singer , 2015). Pakistan is waiting for the delivery of 15 AH-1Z helicopters but at the same time looking for alternative Russian suppliers for expectedly twenty MI-35 multi mission helicopters (Ansari, 2016).

l) - Russian Mi-35 Attack Helicopter

The Indian military's apache helicopter deal with the US, made a room for Pakistan to seek the Russian help to address the shortage of its attack helicopters in Army. The deal for the supply of four Mi-35 Hind-E helicopters from Russia was signed in 2015 (Osman, 2015) and Pakistan received all of the four helicopters in 2017 (Dominguez, 2017). This helicopter is basically designed to carry out special operations in difficult terrain and harsh weather conditions. The Mi-35 is also regarded as a flying tank because of its ability to carry variety of lethal munitions (Valle, 2016). This helicopter is designed to absorb 50 calibre rounds because of its thick armor plates and bullet proof windshields (Valle, 2016).

The Mi-35 helicopter is equipped with advanced precision weapons to take out MBTs, APCs and close air support for any quick and swift operations. This helicopter is also fitted out with night vision capabilities and other features, which includes twin-barrel GSh-23V 23mm cannon with

450 to 470 rounds ("Mi-35M (Hind E) Attack Helicopters, Russia", 2017). The installed gun in the Mi-35 has the ability to fire 3,600 rounds in one minute. It is also armed with different arrays of lethal weapons including anti-tank missiles and other munitions. The Mi-35 has maximum speed of 310km/h and it has an effective range of about 460km, but with full fuel load it can reach a distance of about 1000km ("Mi-35M (Hind E) Attack Helicopters, Russia", 2017). With these attributes the Mi-35 would be a force multiplier for Pakistan in case of any counter insurgency operations in FATA or specialized military operations against India. In both situations it would be a weapon of choice to counter any threats without any time barrier, geographical or environmental constraints.

m) - The US AH-1Z Viper helicopters

Pakistan has also inked a defense deal with the United States to induct nine AH-1Z Viper Attack Helicopters. These helicopters are part of the Foreign Military Sales Program of the US ("Contracts: Press Operations, Release No: CR-062-16", 2016). The AH-1Z Viper helicopter has a max speed of 420 km/h and a range of about 610km ("US Navy orders nine AH-1Z Viper Attack Helicopters for Pakistan" , 2016). The AH-1Z Viper is one of the most advance helicopters in the world because of its greater maneuverability, lethal munitions and ability to operate in all weather conditions.

This helicopter is equipped with modern digital technology which enable it to carry out missions at night in harsh weather or rugged terrain. Different variety of armaments makes this helicopter a lethal machine in air. It is armed with 16- AGM-114A/B/C Hellfire anti-tank missiles along with pods with 70-mm rockets (Tchkuaseli, 2017). It could also be equipped with AGM-114F Hellfire anti-ship missiles, free-fall bombs and two fire-and-forget AIM-9 Sidewinder supersonic air-to-air missiles with infrared target detection and a 20-mm three-barrel cannon.

In addition, the upgraded version of the AH-1Z helicopter has improved survivability and crashworthiness. The AH-1Z Viper is also equipped with infrared suppression system which covers engine exhausts, laser and radar warning systems, and radar jammer (Tchkuaseli, 2017). The induction AH-1Z Viper would help Pakistan to replace its aging fleet of cobra helicopters. It would also provide Pakistan military with an offensive punch and provide close air support to the ground forces and Armour units in an intense warfare situation.

n) - The Turkish T-129 Attack Helicopters

Pakistan is also considering Turkish gunship helicopters to replace its ageing fleet of attack helicopters to maintain strategic balance with India in this domain. The Turkish Aerospace Industries- (TAI) is in negotiation with Pakistani counterparts for the procurement of Turkish T129 helicopters. In June 2016, Pakistan tested Turkish helicopters. Pakistani authorities want to produce parts and assemble these helicopters in Pakistan Aeronautics Complex- (PAC) facility to boost it indigenous defense industry.

Pakistan Army Chief Qamar Javed Bajwa has also carried out a visit to Turkey and witnessed the performance of this helicopter, which shows Pakistan's greater interest in this machine for its Army ("Pakistan Selects Turkish T129 Attack Helicopter Over Chinese Z-10", 2017). On May 24, 2018, Pakistan and Tukey formally signed a deal for 30 attack helicopters (Jennings, 2018). The Turkish T129 ATAK helicopter is highly advanced lethal machine equipped with sophisticated technologies and enhanced firepower. It is twin engine helicopter specially designed for attack and recce purposes. The T129 ATAK helicopters has been modified to achieve "high and hot" performance needs in for tough terrain and harsh weather conditions ("T129 Attack Helicopter", 2017).

This helicopter is equipped with capabilities to operate in day & night all weather conditions, which enable a military with 24/7 readiness and option for special Ops, close air support or attack against enemy forces without any time barrier. The T129 ATAK has the ability to fire different types of munitions which may include hell-fire, spike, stinger and many other guided or unguided missiles. It has a maximum cruising Speed of 269 km/h and a potent range to cover an area of about 561kms, which makes it a highly sophisticated attack helicopter in the modern times ("T129 Attack Helicopter", 2017). It would give Pakistan Army an option to carry out missions at long range with high precision and success rate. The advance features in this helicopter would boost Pakistan Army's maneuverability, quick mobility and firepower in an intense quick and swift warfare scenario.

o) - Competition in the Domain of Long Endurance Armed UAVs

In response to the Indian military's acquisitions of long range, extended endurance, highly advanced armed UAVs from the US and Israel, Pakistan has also jumped into the race and developed its own armed UAVs with limited endurance and firepower ("Pakistan successfully tests first indigenous armed drone", 2015). But the development process is continued, and it has been revealed that Pakistan is close to induct long range armed UAVs in near future to dissuade the Indian military's technological advancement in the field of armed UAVs (Williams, 2017).

Apart from the UAVs development Pakistan has also been forced to deploy counter measures to shoot down any Indian UAV. According to the former Chief of Air Staff of the Pakistan Air Force, ACM Tahir Rafique Butt, "We can shoot down Indian UAVs flying at an altitude of 50 or 55 thousand feet without any problem. We shot down Indian UAV 15 years back" (Butt, 2017). Another senior military officer of the Pakistan Army, Lt General (retd) Naeem Khalid Lodhi believe that Indian military's capacity to launch surgical strike through UAV is limited, he said,

> *Indian forces are quite some time away before they can carry out surgical strikes with the help of a drone. Because that requires a lot of precise control, and very special ammunition which they might be having but must be having with very low quantity. And also, whenever you import a technology there is always something left out because if you compare it with the US, they have a very comprehensive global network of using drones. So, to use drones for surgical strikes is possible but to use it on large scale which can really make some impact is not an easy thing* (Lodhi, 2017).

Pakistan is working to increase the endurance, firepower and operational range of Shahpur UAV. Currently, this UAV possess 50 kg payload capacity, 7 hours of endurance, 17,000 feet ceiling, and a range of about 250 kms. The advance version would be modified according to the needs of the Pakistan military. With the induction of armed drones Pakistan has achieved a huge milestone. In future India may use its armed UAVs procured by Israel for any missile strikes across the border ("India turns to Israel for armed drones as Pak, China build fleets", 2015).

The possession of armed drones in Pakistan's inventory would give Pakistan an option to reply in the same fashion. The conventional arms race would get boost in South Asia preventing this region from inter-regional connectivity and economic development. The conventional arms race would plunge the region into further mayhem and turmoil. Hostilities would flare-up at the border between India and Pakistan, putting regional security at greater risk of limited war.

4.3. Risk of a Limited War in South Asia

Most of the Indian and Western scholars believe that the possibility of limited war in south Asia is reality. John J Mearsheimer describe this challenge in these words, "the level of fear between states varies from case to case, but it can never be reduced to an inconsequential level. The stakes are simply too great to allow that to happen. International politics is a potentially deadly business where there is the ever-present possibility of war, which often means mass killing on and off the

battlefield, and which might even lead to a state's destruction" (Tim Dunne, Milja Kurki and Steve Smith, 2013).

However, in south Asian context the presence of unresolved issues and continued war mongering by the Indian political and military leadership paved the way for another conflict between India and Pakistan. Recently, the Indian Army Chief General Bipin Rawat has reiterated that the Indian military would cross again the LoC and target Pakistan (Singh R. , 2017)**.** He also reiterated that Cold Start type of offensive operations are reality in the modern age because the Indian PM Modi has also declared in the combined commanders' conference in 2015, that future conflicts will become shorter, and wars will become rare (Unnithan, 2017). It appears that, because of the nuclear deterrence a major war may not take place between India and Pakistan. However, the possibility of a limited war cannot be ruled out.

The Indian civil-military leadership has consistently threatened Pakistan with hawkish statements. However, the execution of any aggressive doctrine or military operation would be difficult and dangerous for the Indian military. Many experts around the globe doubt the Indian military's capacity to initiate any limited, quick and swift operations against Pakistan (Vipin Narang and Walter C. Ladwig , 2017). But the Indian military has been improving their overall war fighting capabilities since 2004.

They have regularly carried out numerous military exercises close to the border with Pakistan and practiced quick, swift and intense warfare operations. Since 2004, the Indian military is in process to induct modern T-90S MBTs from Russia, SU-30 MKI, Apache Attack helicopters, Transport and Logistics aircraft, Long range air defense systems-(S-400 and Barak-8), Network Centric and Electronic warfare capabilities, Long range armed drones and advanced artillery guns. All these capabilities are essential for the Indian military to achieve strategic dominance in the region against

Pakistan. These procurements would fill the gaps in the operational capabilities of the Indian military and help India to carry out quick and swift operations under their aggressive doctrines. Senior Fellow at the Carnegie Endowment for International Peace, Ashley J Tellis believe that there is a possibility of limited war in south Asia between India and Pakistan, he said,

> *There is a low probability of limited war between India and Pakistan, but the risks are related less to Jammu and Kashmir and more to terrorist attacks against India. India and Pakistan can sustain major conventional war, but it would be costly and dangerous for both countries* (Tellis, 2017).

The Indian political and military leadership is on board and huge transformation has taken place in their overall strategic thinking vis-à-vis Pakistan. Now the plan is not to engage in long drawn wars but to carry out quick limited incursions or surgical strikes to avoid international pressure and nuclear threshold of Pakistan. Such a scenario would be devastating for the peace and stability of south Asia. Another expert on south Asia, Mr. Shashank Joshi, of RUSI replied affirmatively that there are chances of limited war between India and Pakistan, he explained the scenarios for a limited war in these words,

> *Yes, because we had such a war in 1999. In fact, such a war could break out not just over Kashmir, but also over terrorism elsewhere - such as in Punjab, wider India, or even in Afghanistan. It could also be caused by India-China conflict, which draws Pakistan in. Limited war is eminently possible, and it would be complacent to imagine that it cannot occur* (Joshi, 2017).

Most of the Indian scholars believe that limited war is possible in south Asia. Therefore, fighting a limited war would be a risky phenomenon for both nuclear powers in south Asia. A limited war for India may not be considered as limited by Pakistan. What if Pakistan's response imposes more damage on the Indian military? Then, obviously pressurized by the public, the Indian military may escalate the conflict which may ultimately lead to a nuclear exchange.

Former Director ACDA Brigadier (retd) Feroz Hassan Khan explained the concept of limited war in these words; "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). Another expert on south Asia, Mark Fitzpatrick, Executive Director of IISS–Americas and head of the IISS Non-Proliferation and Nuclear Policy Programme believe that a limited war in south Asia is possible but it would remain limited because of the nuclear factor, he said;

> *I do see a great possibility of not just limited war but all-out war in south Asia, I think the limited war could start based on sub-conventional attack as occurred in Mumbai and against the Indian parliament in 2001. The dynamics has led to those attacks still present in south Asia and the way, those previous attacks were in some way connected to the Pakistan government not that the government of Pakistan directed them to attack but they had some training in the past they had some guidance and they still have some kind of connection. This is very likely to happen again in the future and when it happens India's response would be more forceful than of course that at the time of Mumbai according to the general mood in India the general policy of India, defense right now, and when India responds, Pakistan's response might also be tit for tat and this could lead to an escalation* (Fitzpatrick, 2017).

In case of aggression by India, Pakistan's response would be equally matched. In case of escalation, both states may engage in major clash on the LoC or international border which may lead towards escalation. The strategic disparity between India and Pakistan would raise the possibility of limited war in the region which may lead to a total war. India is adding offensive weapon and equipment to operationalize pro-active military operations or cold start doctrine against Pakistan.

It is clear that both states are having strategic parity as far as nuclear deterrence is concerned. The existence of nuclear weapons in south Asia prevented India and Pakistan from any total war, but the possibility of limited war could not be ignored. The conventional gap between both states

would tilt the balance of power in favor of India. The induction of modern technologies, force multipliers, weapon and equipment would fill the operational gaps in the Indian military. Such a possibility would be dangerous as far as Pakistan is concerned. In case of any major terrorist attack, the Indian military may carry out limited attack or surgical strikes on Pakistani soil. Pakistan's reaction would be uncertain, if Pakistan military replies in the same fashion, then hostilities may break out and a limited war may escalate into a major conflict between both states and end up in a nuclear exchange. Any nuclear exchange in South Asia would have far reaching implications not only for the regional states but also for the US, Europe and Middle Eastern economies. Therefore, it is advisable for the Indian policy makers that they must show restraint and resolve all outstanding issues with Pakistan in an amicable way.

The route to confrontation would lead this region to further mayhem and turmoil which is not in the interests of either party. Both states must learn to live together as good neighbors because one can change his/her friends but cannot change thy neighbors (Dutta I. , 2010). Pakistan would take all necessary steps to deter a conventional war in South Asia. In that context, Pakistan came up with the idea of battlefield nuclear weapons.

4.4. The Development and Deployment of Tactical Nukes

The doctrinal shift and massive military modernization drive have seriously challenged the deterrence stability in South Asia. Huge conventional asymmetries and adoption of offensive doctrines by the Indian military forced Pakistan to develop TNWs to deter the Indian armed forces from any aggressive moves under nuclear threshold. The Indian military is aggressively practicing its offensive elements in military exercises close to the border with Pakistan. India is also

modernizing its overall war fighting capabilities and adding new force multipliers which may destabilize the conventional deterrence in south Asia.

Pakistan cannot afford costly arms race with India because in last 15 years Pakistan have lost more than $123 billion in the war against terror (Khan I. , 2017). After years of setbacks finally Pakistan's economy is growing slowly ("Pak economy improving, challenges persist in energy, finance: IMF, 2017). Fragile economic conditions of Pakistan does not allow for arms race or conventional war with India. Ultimately Pakistan would rely on its TNWs to deter any limited aggression by the Indian military under CSD or proactive military operations. The development and deployment of TNWs in south Asia setting is an unprecedented development. Because both nuclear weapon states in the region share a huge border along with consistent antagonisms and unresolved issues since their independence in 1947 (McLeod, 2008).

The development of TNWs would have far reaching implications for the regional and global security because any limited exchange would lead to a full fledge nuclear conflict. Such a scenario is nightmarish for both states. The TNWs possess low yield of about 0.1 kiloton or 15-20 kilotons to megatons- (depends on the requirement and strategic space a country possess), limited radius of blast area confined to a few hundred meters, result in less casualties as compared to strategic weapons. The TNWs are also considered as battlefield weapons because they are aimed at against the advancing enemy forces instead of enemy cities or military installations (Chakma D. B., 2011).

a) - The Tactical Nuclear Weapons: Cold War Experience

Initially, the US and Russia developed TNWs in the cold war to deter each other from any aggressive moves. Pakistan has also been following the same path on the pretext that the Indian military is improving its conventional capabilities to hit Pakistan harder and nuclear capabilities

to create huge asymmetry in conventional and non-conventional domains (Markey, 2013). According to the 2017 estimates by the Federation of American Scientists- (FAS) the US possess around 500 TNWs (Davenport, 2017).

Whereas, the SIPRI believe the Russians have a stockpile of about 1,850 TNWs (Kristensen, Shannon Kile and Hans, 2017). Both states during cold war had strategic parity with long range bombers, Intercontinental Ballistic Missiles- (ICBMs), nuclear submarines and other lethal weapons to destroy each other many times over. That strategic parity created a gap which could have initiated a conventional conflict under nuclear overhang. To fill that gap both states developed and installed tactical nukes in Europe to deter each other from any limited strikes or incursions (Catherine M. Kelleher and Judith Reppy, 2011). Same thinking prevails in South Asia, Pakistan and India are compatible in terms of strategic weapons which created a gap and both states engaged in a limited conflict in 1999 (Todd S. Sechser and Matthew Fuhrmann, 2017). That gap again brought both states on the brink of war in 2002. India wanted to utilize that gap after 2004 and introduced CSD to carry out multiple limited incursions inside Pakistan in case of any alleged terrorist attack on the Indian soil or IHK (Rajesh Rajagopalan and Atul Mishra, 2014). The Indian military after2004 practiced this doctrine and tried to fill the operational gaps in their overall strategy and offensive capabilities. The doctrinal transformation and huge military modernization compelled Pakistan to develop TNWs to deter India from any aggressive moves under the nuclear overhang.

b) - Pakistan's Rational for Tactical Nuclear Weapon: The Hatf-IX- (NASR)

The Hatf-IX- (Nasr) is a Tactical Nuclear Weapon developed by Pakistan to achieve full spectrum deterrence at all levels. The Nasr is a short-range and low yield TNW to counter emerging threats in the region. It is considered to be highly advanced with ability to carry out precision strike along

with shoot and scoot attributes. The Hatf- IX had a range of about 60km ("Press Release: No PR-94/2011-ISPR", 2011) and the new version tested in 2017 possess a range of about 70km (Syed, 2017).

The COAS of Pakistan General Qamar Bajwa said that, "the Hatf-IX put Cold Water on Cold Start" (Syed, 2017). Former Director General of Strategic Plans Division- (SPD), Lt. General(retd) Khalid Kidwai said that the purpose of TNWs is to deter India from the operationalization of CSD or finding a gap in the conventional asymmetries in the region under nuclear umbrella ("A conversation with Gen. Khalid Kidwai", 2015). The development of TNWs deterred India from a limited division sized attack under CSD but the situation has changed after the induction of Hatf-IX in 2011.

In 2012, India introduced sub-conventional warfare strategy, which aims at quick, swift, limited, joint operations with ground forces against alleged militant hideouts or safe havens (Air vice Marshal Arjun Subramaniam AVSM et al, 2012). These operations could be termed as sub-conventional or surgical strikes, without invoking Pakistan's red lines. Now a few dozen Special Forces personnel, along with lethal stealth gunship helicopters, with close air support of the latest aircraft, long range air defense systems (S-400- Barak-8), deadly long-range artillery fire for cover along with night vision capabilities and recon by long endurance armed UAVs and other space assets including spy satellites could be used for sub-conventional operations or surgical strikes against Pakistan.

Now, what is the relevance of TNWs in such a scenario where India may not activate its IBGs/Pivot Corps deployed at the border because of the International pressure, threat of TNWs, lack of element of surprise, shortage of adequate offensive punch, absence of long range air defense capabilities, dearth of air superiority aircraft and modern MBTs, lack of required synergy and

integration between air and ground forces. India at this moment lack these offensive capabilities to operationalize its aggressive doctrine. But that does not mean that they are scrapping this idea.

There is a thinking in the Indian military to carry out such limited attacks across the LoC and they have also got incumbent government's nod. On the question whether India would operationalize its (CSD) limited war strategy against Pakistan or not, Former Commander of Pakistan Army Air Defense Corps, Lt General (retd) Zahid Latif Mirza was of the view that,

> *"The Indians can operationalize CSD because they are working on it. They are building forward garrisons, underground bomb proof sites, conducting regular military exercises and cutting short the mobilization time. All these developments are vivid that they are going to operationalize CSD against Pakistan" (Mirza, 2018).*

In such a scenario Pakistan must induct modern weapon systems to counter any offensive operations on its soil. The use of TNW against India would have far reaching implications for the regional and global security. It may invite massive retaliation by the Indian military as declared in their nuclear doctrine (Rajesh Rajagopalan and Atul Mishra, 2014). Any nuclear exchange in this region would be devastating. It is necessary that both states must show restraint and work together to ease tensions. Lt General (retd) Zahid Latif Mirza view nuclear war as suicidal for both states, he further expounded that,

> *……frankly speaking, my first reaction would be that both should recognize the fact that nuclear war is a suicidal war, nobody is going to win. Both should realize that neither side should push the other to the edge of nuclear weapons. Once you reach the nuclear weapons then there is no end, where it will finish. I personally feel that they should not push each other but if they keep on doing it suppose, if India crosses red-lines defined by Lt. General (retd) Khalid Kidwai, then Pakistan will be forced to reply, by choice Pakistan would not. But if you are forced into a situation then you have no option and that situation should be avoided even by India. Pakistan may be badly damaged, but India will also be damaged very badly* (Mirza, 2018).

In addition, the TNWs of Pakistan may deter India from CSD or proactive military Ops but what about sub-conventional ops or 'surgical strikes'. To counter this emerging strategic challenge

Pakistan would require impeccable conventional military capabilities to deter such operations. Apart from these challenges, the south Asian region would face many threats.

c) - Indo-Pak Race for Tactical Nukes

Soon after the test of Pakistan's Hatf-IX in 2011, India also tested its Short-range TNW- Prahar (O'Donnell, 2013). It is expected that both states would develop more TNWs to counter any conventional limited incursions by either side. In such a situation the threshold of both states would come down risking the strategic stability of south Asia with the development and expansion of more TNWs in region. Pakistan's establishment of fourth nuclear reactor is aimed to increase the production of plutonium to add 8-10 nuclear warheads in a year (Singh C. A., 2011).

The Indo-US deal and access to Nuclear Suppliers Group- (NSG) would also enhance India's capacity to bring qualitative and quantitative change in its strategic and TNWs. The development of more battlefield nuclear weapons in south Asia by both states would increase the risk of theft, accidents, safety and security of the weapons and radioactive material. The arms race for TNWs would further jeopardize the economic growth of India and Pakistan. Both states would rush for more nuclear power plants for the production of nuclear fuel to maintain credible deterrence against each other.

d) - Accidental Launch/ Miscalculation/ Unauthorized use

The Western scholars believe that the Pakistani battlefield nuclear weapons during a war would always be dangerous to control (Krepon, 2017). Normally, the deployment of TNWs would require delegative command and control system, in which the field commander/units would get the direct control of these weapons, which increases the chances of miscalculation, unauthorized use, accidents or theft (Thakur, 2015). But the command and control of the Pakistani TNWs would be

assertive as claimed by the relevant authorities however the deployment of the TNWs would always pose a threat of an accident, miscalculation or accidental launch by the central command (Kanwal B. G., 2012). Ultimately, the launch codes would be provided to the battlefield commander after his evaluation of the conflict on ground. What if battlefield commander makes a mistake or miscalculate the attack by the enemy? Such a situation would create serious threats to the strategic stability of south Asia. Both countries have established hotlines, they need to avoid conflict in first place. Secondly there should not be delegative control of TNWs because of the regional dynamics, shared environment and border proximity. The Western analysts believe that the threat of accidental launch and miscalculation would always be there which needs to be kept in mind by both militaries (Fitzpatrick, 2017).

e) - Lowering of the Nuclear Threshold

The development of battlefield nuclear weapons means that Pakistan has further lowered its threshold. What if India after the procurement of SHORADS and HIMADS try to play with Pakistan's nuclear bluff? ("Ready to call Pakistan's nuclear bluff, says Army Chief Bipin Rawat", 2018). According to P.R. Chari, "the real danger from a tactical nuclear weapon arises from the psychology it engenders that nuclear war is possible" (Joeck, 2013). Such a scenario would be threatening for the regional and global peace and security because Pakistan's response would be uncertain.

Risking already fragile nuclear deterrence is not at all a great idea. India must show restraint and work closer with Pakistan to address their long-standing disputes including Kashmir and others. According to Pakistani perspective the TNWs would deter the Indian military's CSD or proactive military operations from limited incursions into Pakistani territory. According to Former Director

General Strategic Plans Division of Pakistan, Lt General (retd) Khalid Kidwai, the era of hots wars is over. He was of the view that;

> *As far as Pakistan is concerned it is well within our sovereign right to find an answer to the Cold Start Doctrine, so at the conventional level, at the nuclear level we have tried to find answers to how to neutralizes the cold start doctrine, which takes care of the mobilization time, the exercises, cutting down of the reaction time etc. etc. it is the kind of a doctrinal game that goes on between any two adversaries. An adversary when develops a new doctrine the other side tries to find answers to that, we have also found the answers to cold stat doctrine, because of which I feel confident enough to say that the era of hot wars is over* (Kidwai, 2017).

Pakistan has adopted full spectrum strategy in which the development and deployment of the battle field nuclear weapons play key role. These weapons are meant to avoid another war in south Asia and they have no offensive purpose. The Indian military's mad rush for conventional weapon and equipment has tilted the balance of power in favor of India. The conventional asymmetry between the two states is increasing with the passage of time. At the moment Pakistan is somehow balancing the conventional deterrence but in future the imbalance would increase creating 'security dilemma' for Pakistan.

Professor Dr Parvez Iqbal Cheema, Dean of Faculty of Contemporary Studies (FCS) at National Defense University, Islamabad elucidated the logic behind Pakistan's development and deployment of TNWs. He said;

> *First, I would say if there is imbalance in the arms acquisition, so this is a threat to the stability of south Asia, there is no doubt on that. India has actually acquired so much conventional weapons that the gap between Pakistan and India has rapidly increased. Now increased difference between the conventional capabilities makes Pakistan more dependent upon its nuclear capability. Which is a dangerous trend, I think they should recognized the fact that the more you develop in terms of conventional gap between Pakistan's conventional capabilities and your conventional capabilities, increasingly you are pushing Pakistan to heavily rely upon its nuclear capability, which is not a good thing in that sense* (Cheema, 2017).

Most of the scholars in Pakistan argue that credible nuclear deterrence is the source of stability in south Asia. They view it as a stabilizing factor that prevented imminent wars in 1986-87, 1990 Kashmir uprising, containment of 1999 Kargil conflict, failure of the operation Parakram in 2001-2002 and Mumbai attacks in 2008. India and Pakistan avoided direct military confrontation since the development of nuclear weapons. Professor Dr Zafar Nawaz Jaspal maintains that Pakistan's acquisition of TNWs is not for offensive purposes, it is aimed to deter India from any undesirable action against Pakistan. He was of the view that,

> *…… the TNWs have proven that they are stabilizing because Pakistan is not using the TNW's induction for gaining a military superiority in the region. It is using to maintain or sustain the* ***balance of terror*** *between India and Pakistan. Which has been destabilized by India's various doctrines cold start, proactive (military Ops), or which has been very much under stress due to India's spree of weapon purchases. So, Pakistan's induction of the TNW is as a reaction to India's increasing military potential. And it also reflects it is a force multiplier for sustaining the balance of terror, so that India cannot go for aggression. So, in that particular context it is a stabilizer* (Jaspal P. D., 2017).

However, the Indian and Western scholars largely differ from Pakistan's perspective. They believe that the development and deployment of TNW is a source of instability because of associated risks of safety and security, command and control, inadvertent use/unauthorized use, miscalculation, preemptive strike by the Indian military which may create 'use it or lose it dilemma' for Pakistan (Fitzpatrick, 2017). Well known expert on south Asia, Prof. Bharath Karnard, consider TNWs as extraneous to the strategic stability of south Asia. He was of the view that,

> *I have argued that TNWs are irrelevant to strategic stability in the subcontinent because they serve no real purpose other than psychologically comforting Pakistan which, incidentally, is no bad thing. In the main because the 'exchange ratio' works against GHQ, Rawalpindi. [Exchange ratio concerns the destruction imposed on the adversary compared to the destruction you are able to absorb yourself.] Pakistan threatens first use, India promises massive retaliation in return. Any way a nuclear war starts, it will end realistically with only one result – parts of two major metropolitan areas, say, Delhi and Mumbai, will be destroyed, heavily damaged but Pakistan will become extinct (as a social organism) as most of its population and wealth-producing cities in the "strategic corridor" located in a line running north-to-south and within easy reach of Indian N-ordnance, will be reduced to, use the phrase of the Pentagon, "irradiated ruins"*(Karnad, 2017).

One thing is clear from the view point of Prof Bharath Karnard that there will be no winners in a nuclear war in south Asia. He naively undermined Pakistan's nuclear capability and its strategic outreach. If nuclear war takes place in south Asia, it would result in the destruction of both countries. It would not remain limited to two metropolitan cities of India. Pakistan's Shaheen-III ballistic missile has a range of about 2,750 kilometers which covers whole Indian territory along with Andaman-Nicobar Islands ("A conversation with Gen. Khalid Kidwai", 2015).

So, the balance of terror will prevent India and Pakistan from any escalation. The point to ponder is why Pakistan has introduced TNWs. The answer is to avoid war, but many experts on south Asia believe that the development of TNWs would complicate the nuclear deterrence in South Asia. Professor Harsh V Pant of the Kings College London-(KCL) believe that TNWs are destabilizing factor in south Asia. He said, that the "Tactical nukes can never be stabilizing as they decentralize nuclear decision-making" (Pant, 2017).

Professor Pant refers to the delegation of command to the local commanders in case of hostilities between India and Pakistan. However, Pakistan has categorically declared that there will not be any delegation of command. These short-range low/yield nuclear weapons will be centrally controlled by the National Command Authority- (NCA) (Ahmed, 2016). Therefore, the fears associated with command and control issues are not serious. Pakistani policy makers know the implications of inadvertent or unauthorized use. Pakistan has shown unparalleled resolve in the safety, security and handling of nuclear material, weapons, installations etc after the A. Q. Khan incident in 2004 ("Pakistan 1540 Reporting", 2015). But still there are people in the West who believe that these TNWs would pose threat to the strategic stability of south Asia, one such voice

is Mark Fitz Patrick of IISS. He is of the opinion that TNWs pose threat to the strategic stability of south Asia, he explained his view point in these words;

> *I think most Western Analysts see these tactical nuclear weapons as a source of potential instability because of the command and control problems that arise from TNWs. The United States found in beginning of cold war that TNWs posed a lot of problems concerning security of the weapons themselves and problems of concerning the use it or lose it dilemma, if TNWs have to be close to the battlefield they are vulnerable to preemption and to capture and so there is use it or lose it dilemma that can make use of them earlier than necessary in a conflict. There is also the issue of delegation of authority. if it is near the battlefield at some point the local commanders needs to be delegated to use them otherwise again what value would they be, but for something is important as nuclear weapons normally countries would like this firing authority held by the NCA so that's another reason and just as Nato found difficultly, it is the same difficulties also pertains to Pakistan's TNWs* (Fitzpatrick, 2017).

Another expert of south Asian security, and Director of Washington based think tank Stimson Centre, Micheal Krepon believe that TNWs pose a threat to the deterrence stability of south Asia because;

> *"Tactical nuclear weapons are the least safe and secure nuclear weapons in any country's arsenal, in large measure because they must be deployed near the battlefield, where they are susceptible to accidents and being overrun, or hit by airpower. Any mushroom cloud is a threat to uncontrolled escalation"* (Krepon, 2017).

Krepon also raised the safety and security issues related to accident and preemption by the enemy. However, he ignored the fact that if Pakistan can develop such weapons, it certainly has the ability to secure them from any preemption through concealment measures, mobile pods, and an effective air defense parameter. Pakistan has also maintained intentional ambiguity about the deployment stage of these short-range missiles, which adds to the deterrence stability. Experts on south Asian security, Professor Rajaram Nagappa consider TNWs of Pakistan as a threat to the strategic stability of south Asia. He said,

> *The deployment of TNWs in South Asia is a challenge to strategic stability. The introduction of TNWs has major implications. Introduction of this weapon system a) reduces the nuclear threshold, b) has to be accompanied with pre-delegation of decision to the local commander and c) increases the possibility of the weapon system falling into*

> *the hands of non-state actors. The consequence of each of the action and response can be analyzed. The threat to strategic stability is evident* (Nagappa, 2017).

The Indian scholars also believe that TNWs would lower down the nuclear threshold of Pakistan. Which means that Pakistan will not wait for the destruction of large portion of its military, fall of major cities, large scale engineered political destabilization, or economic blockade. The development of TNWs have also brought huge change in the strategic thinking of Pakistan. The adoption of full spectrum deterrence strategy means that Pakistan's nuclear weapons will ensure territorial integrity and credibility of nuclear deterrence at all levels.

5. Conclusion

The doctrinal transformation in the Indian military since 2001 would seriously challenge the strategic stability of South Asia. The overt nuclearization of South Asia has made the region hostile to Indian military modernization which took shape in the aftermath of Kargil Conflict in 1999, when its mighty military failed to respond back to Pakistan's military maneuver. The realization of the fact that under the nuclear overhang Pakistan still enjoys superior military preparedness became quite a challenge during 2002-03 military standoffs between the two nuclear nations.

In 2002, the Indian parliament was attacked by 'Kashmiri Mujahideens' who to project their freedom cause and announce negation of more than a million-military presence in Kashmir took over New Delhi's political headquarter. Though, through media propagation India successfully turned the attack into a terrorist incident but failed to justify its extra-judicial control over Kashmir. Moreover, political regime decided to punish Pakistan with an assumed plea that the attacks are sponsored by Islamabad. Hence, a military action was deemed necessary. India mobilized its forces towards Pakistan border. Knowing Indian intentions, the Pakistani political and military leadership decided to reciprocate the Indian adventurism.

The whole incident particularly the military mobilization taught India a bitter lesson, which in fact exposed its conventional doctrine's incompatibility with superior conventional response preparedness of Pakistan. Therefore, Indian strategy after 2002 parliament attacks transformed and it introduced revised version of nuclear doctrine in 2003. Immediately after the nuclear transformation, India introduced Cold Start Doctrine in 2004 to fix issues of military mobilization that it learnt during 2002-03 military standoffs. Both draft nuclear doctrine and CSD were linked

together, which provided shelter to the Indian integrated battle groups meant to carry out limited incursions into Pakistan. The igniting factor of the limited war doctrine got its momentum through a vague narration of terrorist act that in view of Indian stalwarts gets execution from Pakistan.

Revolving around the concept of squeezing Pakistan to exist as sovereign and compatible state parallel to India, the doctrine's basic objective pushed the idea to neutralize Pakistan's nuclear deterrence. In fact, the Indians have never accepted nuclear environment of South Asia that could disallow its military muscle to punish Pakistan. Hence, Pakistan's nuclear response to any Indian adventure was considered a 'bluff' in New Delhi. The CSD was considered modern and a prerequisite advancement in the Indian military's preparedness against Pakistan's overt or covert military maneuverability.

Regardless of momentous war mantra, the limitations and weaknesses in the CSD were exposed immediately after 2008 Mumbai attacks. Even, India could not operationalize its CSD against Pakistan because of the lack of preparedness, inadequate offensive weapons, deficiency of synergy and integration in the armed forces. The quick mobilization of Pakistan along with absence of surprise had shaken the overall hypothetical superiority of India.

All these factors played an important role in preventing India from any aggressive maneuvers against Pakistan. But after 2008, India brought a shift and started covert activities against Pakistan. The establishment of TSD, appointment of Ajit Doval as National Security Advisor and his aggressive "defensive-offense doctrine" seriously crippled Pakistan's internal security. India carried out covert operations inside Pakistan, supported insurgencies in Balochistan and terrorism in FATA.

Moreover, India used the Afghan soil to create problems for Pakistan in the post 2008 situation in which Islamabad faced huge losses. The disclosures of the arrested militants and high-ranking Indian spy exposed the Indian military's strategy of 'hybrid warfare' to capitalize on Pakistan's ethno-political, socio-economic, and geo-strategic vulnerabilities. Indian policies in Afghanistan have seriously jeopardized Pakistan's political, economic and strategic interests in Afghanistan. During this period India also launched offensive diplomacy against Pakistan and tried to isolate the country globally while linking the Kashmir freedom struggle with that of militancy. It garnered support of the international community because of their economic and strategic ties with New Delhi. The US and European countries are in strategic pact with India and it imports billions of dollars' worth weapon and equipment from these countries.

Due to above reasons, today international community do not see Indian atrocities in IHK and even labeled Kashmiri freedom fighters with a militancy tag. Other important players of the international community such as Russia also enjoys close political, economic and defense collaboration with India. Most of the Indian arms are imported from Russia and there is huge inter-dependence between both states. Russia is also least bothered about Kashmir issue and sees situation in Kashmir from the Indian lens. This is the reason that security situation in IHK got worse because of the unending oppression by the Indian military.

Pakistan has always supported the Kashmir cause and tried its best to keep this issue alive in the UN. This is the reason that India wants to destabilize Pakistan internally, so it can never raise dissent voice for Kashmir cause and remain engaged in the internal subversion created, nurtured and supported by India. To end Pakistan's support to Kashmir, India had brought change in its Air Force Doctrine of 2012 by introducing sub-conventional warfare strategy. This strategy was introduced in the aftermath of Pakistan's test of a tactical nuclear weapon 'Nasr' to check-

mate the Indian CSD. The purpose of the sub-conventional warfare strategy was to exploit the gap between total and limited war to carry out limited tactical operations or surgical strikes across the LoC with Special Forces, along with close air support of the high-tech helicopters and advanced aircraft with long range air defense assets in place. Such incursions could be termed as 'surgical strikes' against Pakistan military positions or alleged hideouts of the Kashmiri freedom fighters near LoC. Obviously, any military operations limited, or total would meet strong response from Pakistan.

It appears that the Indian government is ready to take the risk. The Modi government has shown its political will to carry out offensive operations against Pakistan. This is the reason that the Indian army Chief is "ready to call Pakistan's nuclear response as bluff". To acquire essential offensive capabilities to carry out any quick operations, the Indian military is adding modern weapon and equipment to fill the gaps. Moreover, the Indian military is working closely with other branches to induct assured second-strike capability at sea to deter Pakistan from any undesirable action. Such capabilities at sea would seriously threaten Pakistan's Gawadar Port and maritime interests in the Indian Ocean and Arabian Sea.

In 2017, the Indian military summed up its army, air force and naval doctrines and introduced a joint doctrine of the Indian armed forces in which India categorically envisioned surgical strikes against Pakistan. The doctrinal transformation since 2001 and massive military modernization would create huge strategic gap in South Asia. The conventional asymmetry would allow India to find a gap and carry out limited strikes against Pakistan in case of any alleged terrorist attack on the Indian soil. Pakistan's response would determine the future of this region. Pakistan has declared nuclear policy of 'first use' and 'full spectrum deterrence' to deter any threat to its national security and territorial integrity.

The strategic outlook of South Asia looks intense and in near future it may face greater instability and turmoil because of the doctrinal shift in the Indian military along with huge modernization drive. It seems that Pakistan would also jump into conventional arms race to establish conventional deterrence to make it costly for the aggressor any limited incursions under the nuclear overhang. But in case, if it could not match the Indian conventional superiority in fifth generation aircraft, long range air defense systems, Network Centric and Electronic warfare capabilities then ultimately the reliance would be on nuclear weapons to deter any aggression from India. In that situation Pakistan's nuclear threshold would be under great strain. Any conventional attack from India, limited or total, would invite quid pro quo response from Pakistan. It depends on the situation how Pakistan tackles such an eventuality.

Findings and Discussion

The study revolves around four questions.

First question was related to the strategic and ideological base for the doctrinal maneuvering by India? Second question focused on the Indian military's strategic thinking since 2001 altered the balance of power in the region and impacted the deterrence stability in South Asia? Third question concentrated on the Indian military's modernization and efforts to operationalize its military doctrines? And the last question highlighted the implications of the transformation in the Indian military's strategic thinking on deterrence stability of south Asia, particularly Pakistan? Therefore, after careful observation, analysis and literature review the study came up with following findings, which are not only according to the research questions but also initiated further debate on the subject under discussion for further research and investigation.

i. Impact of Hindutva and Kautilya on the Strategic Thinking of India

The first finding related to the question that how the Hindutva ideology and Kautilyan realist approach is relevant to the existing Indian strategic thinking? The study concludes that the impact of Hindutva on the Indian strategic thought is vivid on the incumbent BJP government which is considered as a political face of the RSS. But as far as previous congress government is concerned, there is no evidence of the impact of Hindutva ideology on the Congress government which has ruled India from 2004-2014. However, according to many scholars Modi having RSS background created anti-Pakistan rhetoric to win general elections. The anti-Pakistan oratory in the election campaigns created war hysteria and brought shift in the Indian strategic thinking, which helped New Delhi achieve the following agenda:

a. Primarily, during Modi tenure India has launched a diplomatic offensive to isolate Pakistan at regional and global forums.

b. Secondly, the Indian military carried out numerous ceasefire violations at LoC in which hundreds of Pakistani civilians and military personnel lost their lives.

c. Thirdly, the Indian military attempted to carry out surgical strikes, (which were denied by Pakistan) and the BJP and RSS leaders hailed it and referred it to RSS training.

d. Fourthly, Modi government influenced by RSS intensified covert operations and appointed hawkish former senior intelligence operative, Ajit Doval to capitalize on Pakistan's vulnerabilities and create mayhem and turmoil in the restive Balochistan province and tribal areas of Pakistan.

Therefore, it could be argued that contemporary government in India is influenced by the RSS ideology of Hindutva. They have created anti-Pakistan rhetoric in their society, and society does impact the strategic thinking of a particular country. The study has also found great relevance of the Chankya Kautilya's realist approach on the contemporary Indian strategic thinking. Kautilya's 'Mandala Theory' and 'Six-Fold Policy' has applicability when we discuss the strategic culture of India. In *Arthashastra*, Kautilya argued that war has three types:

a. First type is open war which is a declared war

b. Second is secret war which deals with sudden attack or war through deception, opening two fronts, terrorizing from one side and opening another front creating two front war dilemma for an enemy, which is a clear-cut depiction of modern Indian strategic thinking with reference to its CSD which aims at multiple thrusts, blitzkrieg type of operations within 96 hours?

c. Third, the most significant type of war is an ***undeclared war***, which could be related to the hybrid warfare of the Indian military in modern times.

The study has found that the Indian military has applied all these wars against Pakistan and the undeclared war or hybrid war is still going on, making difficult for Pakistan to manage its internal security situation, overcome its socio-economic woes, settle ethno-political wrangling and cope up with emerging geostrategic challenges in the shape of hostile neighborhood in Afghanistan and Iran; a clear depiction of 'Mandala Theory' which talks about a neighbor as an enemy. The study found that the hybrid warfare has created more problems for Pakistan than direct military operations since 1947. It appears that this trend would continue unless both states realize that proxy wars or covert operations against each other are impracticable in the modern times.

ii. The Doctrinal Transformation in the Post 2001 Scenario

Second finding deals with the doctrinal transformation in the Indian military in the post 2001 scenario and its impact on the strategic stability of South Asia. The study found that the Indian military after the nuclearization of South Asia faced problems to overpower nuclear Pakistan. The failure of 'Sunderji Doctrine' after the 'Operation Parakram' in 2001-02 exposed the Indian military's operational weaknesses to fight a quick and swift conventional war with a nuclear state.

Consequently, the Indian military introduced CSD or proactive military operations for shallow maneuvers instead of deep thrusts against Pakistan. Later in 2012 the IAF came up with the idea of sub-conventional warfare operations which envisaged greater role of the IAF to carry out surgical strikes against Kashmir based insurgent groups in IHK or across the LoC. Same idea was again presented by the Indian military in 2017 under a 'Joint Armed Forces Doctrine of 2017'.

The study would discuss the Indian military's doctrinal maneuvering and their likely impact on the strategic stability and response from Pakistan in the next paragraphs.

a. The CSD or Proactive Military Operations: Shallow Maneuvers

The study found that the Indian military's CSD or proactive military operations would remain an aspiration of the Indian military until or unless they induct essential capabilities i.e. conventional superiority, impeccable armor and mechanized forces, greater synergy and integration in the armed forces, assimilation of Network Centric and Electronic Warfare capabilities. The Indian military has been restructuring its forces deployed at the border, building infrastructure, bomb proof sites/bunkers and practicing quick mobilization to achieve element of surprise against Pakistan.

However, Pakistan's effective conventional and non-conventional response has neutralized the Indian military's CSD or any other limited war doctrine under the nuclear overhang. Pakistan has improved its conventional capabilities including MBTs, Anti-Tank weapons, medium range air Defence, armed UAVs and counter offense strategies to deter India from any such attacks under the CSD. In addition, Pakistan has developed battlefield nuclear weapons to overcome any weaknesses in the conventional domain. Pakistan's full spectrum deterrence has linked the nuclear strategy with that of conventional strategy, which has deterred any conventional war in South Asia under CSD.

b. Sub-conventional Warfare or Surgical Strikes

The Indian military in 2012 introduced sub-conventional warfare operations and in 2017 again reiterated that sub-conventional operations or surgical strikes are possible in future. The study found that the Indian military has the ability to carry out surgical strikes with their Air Force but at the same time Pakistan also possess the capability to carry out counter surgical strikes, which makes it unfavorable for the Indian military to initiate any such operation. As far as crossing the

LoC with gunship helicopters and Special Forces is concerned that is unlikely to happen because of three reasons mentioned below:

- The LoC is heavily militarized; it is highly possible that the Indian Heli-borne commandos would be detected soon after they attempt to cross the LoC.
- Pakistan has the ability to take down their helicopters and capture their commandos, which would be a source of embarrassment for India.
- India lacks adequate real-time info/human intelligence across the LoC to execute any precise operation without indulging in collateral damage. The only viable option left for the Indian military is to carry out surgical strikes by aircraft or long-range armed UAVs.

As per findings of the study, Pakistan has recently inducted medium range air defense system which has the ability to take down any Indian aircraft or UAVs. The study concludes that the surgical strikes by the Indian armed forces will be retaliated in quid-pro-quo style which may erode the Indian military's envisaged objectives and escalate the conflict.

c. The Hybrid Warfare Strategy

The study has found that the Indian military has effectively applied its hybrid warfare strategy against Pakistan to capitalize on Pakistan's social, ethnic, religious, economic, political and geo-strategic vulnerabilities. The Indian strategic thinking after its failure to execute CSD in the post 2008 Mumbai attacks came up with the idea to covertly destabilize Pakistan. In 2008 the Indian Army established a secret TSD unit to target LeT leadership in Pakistan and carry out terrorist activities to deter Pakistan's alleged support to Kashmir based fighters. The arrest and confession of Indian Spy Kulbushan Yadav and TTP leaders suggest that India is effectively operationalizing hybrid warfare strategy against Pakistan because direct military operation may not be a viable option keeping in view the risk involved.

The study finds that India has achieved phenomenal success in this irregular warfare strategy. Due to instability and turmoil in FATA, Pakistan was compelled to deploy more than 200,000 troops on Afghan border, lost thousands of soldiers and civilians in the war against terror which was to some extent supported by the Indian intelligence agencies from Afghan and Iranian soil. Though, Pakistan achieved huge success against militant groups in tribal areas and Balochistan, but consistent trans-border intelligence support, funding and safe heavens enabled paid mercenaries in the garb of TTP or ISIS to carry out subversive activities in Pakistan to disrupt mega projects like CPEC and regional connectivity. It appears that this trend would continue unless or until both states realize the fact that proxy wars would bring instability and turmoil.

iii. The Indian Military Modernization and its Impact on Pakistan

The study finds that the Indian military modernization is taking place but at a lukewarm rate. The induction of advance aircraft, air Defence systems would practically take several years to be inducted. On the other hand, Pakistan has already started work on the development of fifth generation aircraft. In addition, the Indian nuclear submarines are still in development and trial phase and it would take several years to provide India with fully operational second-strike capability. The Indian military is also phasing out its vintage MBTs and would replace them with Russian T-90S, which may take many years to induct because of the bureaucratic hurdles and administrative oversight. India would take several years to incorporate modern technologies and new weapon systems, by then Pakistan would match the Indian military's modernization drive.

The study has found that at the moment Pakistan has maintained reasonable conventional parity vis-à-vis Indian conventional capabilities except in Spy Satellites, Nuclear Submarines, Long Range Air Defense capabilities- (S-400 & Barak-8), and highly sophisticated maritime surveillance & reconnaissance Anti-Submarine warfare aircraft P-8I.

The study concludes that at the moment conventional gap is not wider but given the size of Indian economy and its strategic partnerships with Russia, America, Israel and Europe this gap may increase with the passage of time, compelling Pakistan to rely on its nuclear weapons to deter any adventurism by India.

iv. Regular Military Exercises Since 2004

The study has found that the Indian military has carried out 31 military exercises since 2004 to practice and validate its limited war fighting concepts. The critical analysis of these war-games suggest that the Indian military has worked on the synergy and integration of armed forces, amalgamation of NCW and EW capabilities, practiced Heli-borne special forces operations for possibly surgical strikes behind the enemy lines, offensive maneuvers by mechanized forces and strike Corps. Reportedly, the Indian military has also cut short its mobilization time and added offensive elements in the holding corps. But most of the scholars believe that war-games are different from the real war scenario.

Moreover, military exercises are routine to improve the military's operational capabilities and validate new war concepts. To operationalize modern warfare concepts, achieve greater integration and synergy, the Indian military would require conducting hundreds of such war-games to master these capabilities. The study also found that Pakistan has also initiated series of Azm-e-Nau exercises to reciprocate Indian military's offensive maneuvers at the border.

v. Possibility of Limited war in South Asia

The study has conducted interviews of many senior military officers, diplomats and scholars from renowned think tanks. Most of the Indian and Western scholars argued that there is possibility of limited war in South Asia, whereas Pakistani perspective has emphasized that 'the era of hot wars' is over because of the battlefield and strategic nuclear capabilities of Pakistan. The

Pakistani scholars believe that limited war asserted by the Indian military may not be considered as limited for Pakistan. After Pakistan's response India may escalate the conflict and put the region onto an irreversible course which may lead to further instability and turmoil. The study determines the 'conventional deterrence' and 'balance of terror' would prevent India from any misadventure against Pakistan. Any conflict if it took place would remain limited to a small skirmish at the LoC and may not escalate further because of the conventional parity of Pakistan vis-à-vis India.

vi. Battlefield Nuclear Weapons and the Related Issues

The study has also discussed the issue of battlefield nuclear weapons at greater length. The study finds that most of the Indian and Western scholars contend that, the TNWs are source of instability because of the associated risks of accidents, inadvertent use, miscalculation or their susceptibility to preemption by the Indian military and 'lose it or use it dilemma'. Contrary to available trends, the study considers Pakistan's TNWs as a source of stability due to the following reasons:

- They serve no offensive purpose, they are defensive weapons.
- They are solely meant to deter any conventional military operation by the Indian military.
- Pakistan's policy makers believe that if Pakistan can develop such weapons, certainly it has the ability to safeguard them as well from any accidents, unauthorized use, theft or sabotage.
- Pakistan has categorically rejected the claim that these weapons would be controlled by delegative command and control system. However, it has been declared that weapons will be controlled by NCA through assertive command & control system.

Therefore, the study argues that the induction of TNWs prevented India from the operationalization of any offensive conventional military operations aimed at multiple thrusts.

vii. Second Strike Capability and Deterrence Stability

The Indian navy declared that they are planning to induct six nuclear submarines to add second strike capability at sea. However, the study found that the Indian navy is several years away to get operational nuclear submarines for assured second strike capability. Therefore, Pakistan has initiated its efforts to get missile launching capability at sea. In that context Pakistan has tested a cruise missile from its conventional submarine.

The study finds that it may provide Pakistan with restricted second-strike capability because of the short range of cruise missile and conventional submarine. The conventional submarines are quieter than nuclear subs but due to their limited endurance and range they are susceptible to detection. In addition, short-range cruise missile cannot be termed as adequate second-strike capability.

The study maintains that to achieve assured second-strike capability, Pakistan must acquire nuclear submarines along with SLBMs with enhanced range, accuracy and precision to cover whole Indian Territory. The study has also found that the second-strike capability could also be achieved through deep underground tunnels, concealment measures, air defense parameters, mobile warheads, and robust fail-safe C4I system. The study finds that Pakistan has already achieved this capability; however, the induction of nuclear submarines along with long range missiles will add triad nuclear potential and assured second strike capability vis-à-vis India.

viii. Space Assets/ Spy Satellites for Military Purposes

The study found that the space satellite for military use is the only area where Pakistan has been 'goofed up'. Though, Pakistan possesses surveillance and reconnaissance capabilities well deep into India through its F-16 electronic pods and AWACS. They have the ability to carry out surveillance of about 30 to 40 miles inside India. On the other hand, what generally a satellite can do, we cannot do that. They will be able to discover our strategic sites, military bases, movement and deployment of our forces within no time. The study finds that this would give them an edge over Pakistan in this domain.

Recommendations

a. Expand Indigenous Defense Industry

The Indian military modernization along with its doctrinal shift emphasizes on limited, quick and swift warfare scenarios. To overcome challenges imposed by the superior enemy, it is pertinent for Pakistan to improve its indigenous defense industry and try to overcome operational gaps in its overall war fighting capabilities to meet contemporary and impending challenges. Pakistan must expand its indigenous defense industry, enhance the speed, range, maneuverability and firepower of its weapon system and end reliance on the other countries.

Pakistan urgently need to focus on air Defence, fifth generation aircraft, advance MBTs, mechanized forces including APCs & C4I- vehicles, Radars, surveillance and reconnaissance capabilities, range & precision of the missiles, modern artillery and gunship helicopters to reduce dependence on other countries. Once Pakistan improves its indigenous defense industry, it would help Pakistan to fill the operational gaps to maintain conventional deterrence workable in south Asian context.

b. Medium and Long-Range Air Defense Systems

The Indian military is striving for fifth generation aircraft and long-range UAVs and missiles. Air imbalance is very dangerous thing because that affects your land battle. India's all land strategy is impossible without an impeccable air force. Pakistan's own nuclear deterrence would be undermined under the air superiority of India. It appears that in future Russia, US, France and other European powers would sign strategic pacts with India to further enhance the Defence collaboration fill the gap in India's long-range air Defence missile systems and air superiority fifth generation aircraft.

For Pakistan this is major imbalance in the making in the future. Therefore, air force investment is very important for Pakistan. Conventional deterrence means impeccable air force along with mechanized infantry; advance MBTs, APCs and highly mobile C4I vehicles in the battlespace. Deterrence cannot function as well if your air superiority quickly goes away, your enemy won't let you move from theater.

It is not just air force, thinking about Space and ISR, it is a combination of space and modern technology. A country cannot allow its air defense to be weak. However, it is vital to ensure credibility of conventional and nuclear deterrence. Pakistan has already initiated work on fifth generation aircraft whereas it must also improve its short, medium and long-range air defense systems to defend itself from any incoming missile, UAV or aircraft.

c. Enhance Strategic Partnership with China

Due to economic constraints, Pakistan must further enhance its strategic partnership with China to fill the operational gaps in its overall war fighting capabilities. Pak-China defense collaboration is deep rooted and time-tested. Currently, both states are cooperating in many strategic spheres, which include joint manufacturing of JF-thunder aircraft, Main Battle Tanks, medium range Air Defense Systems, naval cooperation and joint training/exercises etc.

Pakistan must focus on long range air defense capability to offset IAF's numerical and qualitative edge in future. Since most of India-Pakistan border is consist of plain and desert areas, Pakistan military must improve the quality, speed, fire power, thermal imaging, and maneuverability of its MBTs, Armor Personnel Carriers, and C4I vehicles to give an apt reply to any offensive maneuvers on the border. In addition, both states can also work to enhance their collaboration in the fields of NCW and EW capabilities because modern warfare is all about technological advancement. Future conflicts would be intense, quick and short in time and space,

the quality of weapon and equipment would decide about the future conflicts. Pakistan must improve its night vision capabilities. Nevertheless, Pakistan's Al-Khalid MBTs, recently inducted gunship helicopters, aircraft and infantry is equipped with night vision capabilities, but they need to enhance the potential of armed forces to fight intense battles in dark to create an impact and achieve element of surprise against adversary.

d. Maintain Credible Deterrence

Since Pakistan's fragile economy cannot afford costly arms race with India, ultimately the next possible option for Pakistan will be to improve the precision and quality of its strategic and tactical nuclear weapons to maintain credible deterrence vis-à-vis India. Additionally, Pakistan can also enhance its second-strike capability for assured deterrence by acquiring nuclear submarines in future, increasing the number of deep underground tunnels to safeguard its nuclear weapons, command and control centers from any decapitation strike by the enemy. The survivability of the Command, Control, Communications, Computers, and Intelligence- (C4I) system and nuclear assets is essential for the assured second-strike capability to maintain credible nuclear deterrence. These steps would prevent India from any misadventure under the nuclear umbrella.

e. Pakistan's Surveillance and Reconnaissance Capabilities

Modern warfare is all about real-time information about the enemy disposition, deployment and movement during a conflict. A country with greater surveillance and reconnaissance capabilities and access to quick information about enemy would have obvious edge in the battlefield. In that context, Pakistan must also expand its surveillance and reconnaissance capabilities. Currently, Pakistan possess UAVs with short range and minimal durability in air for surveillance and recon purposes. It is necessary for Pakistan to upgrade and enhance the endurance & range of its UAVs, to maintain 24/7 vigilance at LoC, working boundary and international

border with India. Pakistan may also add greater fire power and improve the quality and precision strike in its UAVs to reciprocate any Indian attempt to use armed drones in future for surgical strikes at suspected sites of the Kashmir based fighters close to LoC. Round the clock surveillance and reconnaissance would deny India from element of surprise and give ample time to Pakistan military for counter measures and adequate response.

f. Synergy and Integration in the Armed Forces: Regular Military Exercises

Synergy and integration in the armed forces is an essential component in the contemporary warfare. Because of the nuclear weapons it is expected that the future wars would be limited, quick and swift in South Asia. It would be an essential part of the defense strategy to show greater integration and synergy among all branches of the military. The better a military is integrated and equipped with robust C4I system the better would be the chances of victory for that country. Pakistan must also improve its C4I system to augment synergy and integration among its ground, air and naval arms. Moreover, it must carry out regular military exercises with friendly states to learn and share modern training patterns for better connectivity and agility.

g. Research and Development in High Technology Areas

Most of the advance nations around the globe are focusing on quality and technology instead of quantity of the weapon and equipment. It is necessary that Pakistan must also focus its research and development in modern technology to maintain pace with the revolution in military affairs and develop impeccable capabilities and incorporate them in its overall military machine. Modern warfare is totally technology based. Pakistan's indigenous defense industry must also work on high technology areas, which may include, artificial intelligence, Computing, Nano Technology and Nuclear Biological and Chemical warfare capabilities. Pakistan military must carry out Research in all these high technology areas on a steady pace to meet challenges posed

by the modern warfare. These technologies would help Pakistan military to improve lethality of its arms, reduce the weight and size of the warheads and improve the accuracy and precision of its weapons.

h. Enhance Human Intelligence

The author of *Art of War* and one of the greatest military geniuses Sun Tzu emphasized on the significance of human intelligence in the warfare. Sun Tzu argued in the *Art of War* that foreknowledge of the enemy location, position, deployment, strength, weaknesses or intentions would enable a king to have advantage in the battlefield. He said, "……. foreknowledge cannot be elicited from spirits, by prayers or sacrifices, it cannot be obtained inductively from experience or reasoning from other analogous cases, knowledge of the enemy's dispositions can only be obtained from other men" (Giles, 2007). In the context, Pakistan must improve its human intelligence in neighboring states to know the enemy plans to counter their hybrid warfare or covert operations.

i. Socio-Economic Development in Balochistan and FATA

The enemy has capitalized on the socio-economic vulnerabilities of Pakistan in Balochistan and Tribal areas. Most of the population in these areas doesn't have access to quality education, better health facilities; basic human needs clean drinking water or food. Human resource development is non-existent and most of the youth is unemployed, disgruntled and an easy prey to foreign intelligence agencies, terrorist or extremist groups.

All these shortcomings make Balochistan and FATA a fertile ground for proxy wars, insurgencies, terrorism and extremism. It is imperative for the government in Pakistan to improve the infrastructure, establish industries, school, colleges, and universities, technical centers to enable unemployed youth to earn a respectable livelihood and deviate from terrorism or

extremism. Blaming the enemy for all our miseries would never bring structural peace in these areas, unless we put our own house in order and remove all those susceptibilities which help our enemy to exploit and destabilize us.

j. Consistent Dialogue Process

The study finds that India and Pakistan are nuclear weapon states and it is impossible for either party to win over the other. The ultimate solution is continuity of dialogue process. Both countries must build trust and amicably resolve all their outstanding disputes. It is imperative that India and Pakistan must start from what we call 'low hanging fruits' Sir Creek and Siachen disputes which could be resolved in a short span of time.

Then the next issue would be Kashmir dispute which would require an unwavering negotiation process involving all stake holders including Pakistan, Kashmir and India. It is necessary that India and Pakistan must learn from their past mistakes and deviate from costly arms race and spend that money on the human resource development of the millions of people starving in both countries.

We must see we have many disputes between two nations because of that relationship is not improving. Both the countries have taken positions which have political implications for both within their own countries. For example, in Pakistan nobody can ever imagine that any government can afford to forget about Kashmir. Same is the situation in India.

The Indian politico-military leadership must realize this fact that, when a nation decides to get independence ultimately, and they are also prepared to sacrifice, it cannot be stopped, Pakistan's creation is an ample prove. If they read writing on the wall as far as Kashmir is concerned option will be to enter negotiation and try to avoid bloodshed and ultimately decide something in a mutually beneficial manner.

There must be a negotiated solution on both sides. We have gotten immense potential in this region, entire region can flourish with inter-regional connectivity with Central Asia, Russia and China. Dialogue and reconciliation are the only way out and one condition add to the dialogue that there should be consistent dialogue. Both states must maintain the regularity and consistency of the dialogue process. When you maintain continuousness in negotiations, you automatically will find a way out. Pakistan and India must also build trust and mutual confidence in their ties to resolve their bilateral issues.

To conclude, it is imperative that both countries must show restraint and resolve all outstanding issues amicably through consistent dialogue process because, there will not be any winner in a nuclear war, as emphasized by George Wald in 1969 that, "there is nothing worth having that can be obtained by nuclear war - nothing material or ideological - no tradition that it can defend, which is utterly self-defeating" (Generation in search of a future, 1969). The road to confrontation between both states would bring further mayhem and turmoil in south Asia. The best way out is to mend ties, build trust, start meaningful consistent dialogue process to address all lingering issues, collaborate economically and convert this border of confrontation into border for cooperation and greater collaboration for long term peace and stability of South Asia.

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Appendix-I
Questionnaire for Interviews

Topic

Indian Military's Strategic Thinking Since 2001: Implications for the Deterrence stability of South Asia.

Ph.D. Scholar

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Note: Sir/madam you **don't** need to answer **all** the questions. You can answer as per your own convenience/expertise. I am also not expecting **long answers** keeping in view your **busy schedule**.

1. Do you find any relevance or influence of ***(RSS- Hindutva)*** - ideology on the modern strategic thinking of India?

2. What is the impact of Indian Military Modernization on Pakistan?

3.Can you please explain the Sunderji Doctrine of 1980s? How credible was that threat? How did Pakistan counter the Sunderji Doctrine?

4. How do you see the Doctrinal Shift of the Indian Army on the Strategic Stability of South Asia? (Cold Start Doctrine, Proactive military Ops, Surgical strikes or covert operations).

5. The Indian military has carried out more than 31 military exercises close to the border with Pakistan. Will these wargames fill the operational gaps in their overall military capabilities to effectively operationalize their aggressive doctrines?

6. How do you see the **deployment and development of Tactical Nuclear Weapons in South Asia?** Are TNWs threat to the Strategic Stability of South Asia or a stabilizing factor?

7. Do you foresee **any possibility of a Limited war** in South Asia between India and Pakistan over Kashmir issue? Can India and Pakistan sustain conventional war in modern times, when most of the population in both countries **lives below the poverty line**?

8. Can Pakistan **sustain arms race with India?** If conventional deterrence fails, do you foresee any limited nuclear exchange between India and Pakistan? **(Will Pakistan use TNW if India operationalizes CSD in near future?)** What would be India's expected response, '**Massive retaliation'?**

9. The Indian Navy is planning to induct Three Aircraft Carriers, Five Nuclear Submarines, Stealth Frigates Equipped with modern weapon and equipment, Barak-8 air Defence System, P8-I- LR ASW aircraft etc. **(India's maritime strategy-2015)**. **How do you see the future of the Indian Ocean or Arabian Sea in that context? Do you predict any implications of such a huge force for Pakistan's maritime interests?**

10. It is reported that for Air superiority against Pakistan, India must have 42 squadrons whereas currently, it is reduced to 33 squadrons? How do you see the induction of 'French Rafael Aircraft' and 'Russian- Super Sukhoi-fifth generation aircraft' and possible deal with the US for F-16s? Will Pakistan be able maintain balance to offset IAF's likely superiority in future?

11. How do you see **India's tilt towards West**? Will it bring **Russia-Pakistan closer?** Do you foresee any major defense deals between Pakistan and Russia?

12. How Pakistan will **Counter/React** to the Indian Military's inductions of highly sophisticated force multipliers e.g. Air Defense Systems- **S-400**, **Barak-8, Nuclear Submarines, P8I Anti-Submarine Warfare Aircraft**, **Apache Helicopters**, **Spy Satellites, and Fifth Generation Aircraft**?

13. Do you see any possibility of **'Surgical Strikes'** in near future by the Indian military, after any alleged militant attack on the Indian soil by Kashmir based fighters?

14. How do you see the India's Hybrid Warfare strategy- (Covert Ops)? Do you find any relevance between Indian NSA Ajit Doval's Defensive-Offense Strategy- **(Covert Operations)** and the arrest of Kulbushan Yadav- (Indian Spy) and the Confessions of TTP Leaders in the recent past?

15. Please suggest some tangible **recommendations**, how Pakistan and India can overcome their differences and resolve their outstanding issues amicably for the long-term peace and stability of South Asia?

Appendix- II
Interview Schedule Guide

SR. No.	Name	Designation	Mode of Interview and Duration	Date & Place
1.	**Maria Sultan**	Director General South Asian Strategic Stability Institute, Islamabad.	Personal Interview (32- minutes)	October 12, 2017 Islamabad.
2.	**Dr. Adil Sultan**	Visiting Fellow, Kings College London	Emailed Interview	October 11, 2017.
3.	**Lt General (retd) Amjad Shoib**	Former Adjutant General Pakistan Army	Personal Interview (45- minutes)	October 16, 2017.
4.	**Lt General (retd) Naeem Lodhi**	Interim Defence Minister-2018 Former Defense Secretary and Corps Commander of the XXXI Corps which is part of Southern Command based in Bahawalpur, Punjab.	Personal Interview (47- minutes)	October 22, 2017. Islamabad.
5.	**Lt General (retd) Ghulam Mustafa**	Former Commander of Army Strategic Force Command	Personal Interview on Phone (44- min)	October 26, 2017 Lahore
6.	**Lt General (retd) Mustafa Khan**	Former Chief of General Staff and Corps Commander of a Strike Corps/Commander Central Command.	Personal Interview (01- hour)	October 25, 2017. Islamabad.
7.	**Major General (retd) Hafiz Masroor**	Vice President Center for Global & Strategic Studies	Personal Interview (01- hour 12- min)	December 11, 2017. Islamabad.
8.	**Lt General (retd) Khalid Kidwai**	Former Director General Strategic Plans Division, NCA, Pakistan.	Personal Conversation (5- min)	December 6, 2017. Islamabad
9.	**Air Chief (retd) Tahir Rafique Butt**	Former Chief of Air Staff of the Pakistan Air Force- (2012-2015).	Personal Interview (01- hour 04- min)	November 23, 2017. Islamabad.
10.	**Vice Admiral (retd) Muhammad Haroon**	Former Vice Chief of Naval Staff, Naval Attaché, High Commission of Pakistan in New Delhi, Commander of Submarine Service and Commander of Pakistan Fleet.	Personal Interview (53- min)	November 22, 2017. Islamabad.

11.	**Brigadier (retd) Feroz Hassan Khan**	Former Director ACDA/SPD. Research Professor at the Department of National Security Affairs, Naval Post Graduate School, USA.	Personal Interview (01- hour 12- min)	October 16, 2017. Islamabad.
12.	**Ashraf Jahangir Qazi**	Former Ambassador to India, US and China.	Emailed Interview	October 13, 2017.
13.	**Professor Dr Parvez Iqbal Cheema**	Dean Faculty of Contemporary Studies, National Defense University, Pakistan.	Personal Interview (41- min)	October 17, 2017. Islamabad.
14.	**Prof. Dr Zulfiqar Chaudhary**	HOD Strategic Studies, NDU.	Personal Interview (34- min)	October 13, 2017. Islamabad.
15.	**Prof. Dr Zafar Nawaz Jaspal**	Professor at School of Politics and International Relations, Quaid-I-Azam University Islamabad	Personal Interview (46- min)	October 24, 2017. Islamabad.
16.	**Ambassador (retd) Abdul Basit**	Former Ambassador to India and the incumbent President, Islamabad Policy Research Institute.	Personal Interview (48- min)	October 11, 2017. Islamabad.
17.	**Professor Dr. Moonis Ahmer**	Meritorious Professor, Department of International Relations & Former Dean Faculty of Social Sciences, University of Karachi, Pakistan.	Emailed Interview	October 15, 2017.
18.	**Rear Admiral (retd) Parvez Asghar**	Former Commander of Two Destroyers as well as the 25th Destroyer Squadron	Personal Interview (51- min)	November 05, 2017. Karachi
19.	**General (retd) Ehsan Ul Haq**	Former DG-MI-(1998 -2001). Former DG- (ISI). Former CJCSC from 2004-2007)	Personal Interview (40- min)	January 16, 2018. Islamabad.
20.	**Air Cdr (retd) Khalid Banuri**	Former Director General Arms Control and Disarmament Agency- (ACDA), Strategic Plans Division, Pakistan.	Personal Interview (14- minutes)	April 05, 2018. Islamabad.
21.	**Brigadier (retd) Dr Naeem Salik**	Former Director ACDA/ Senior Fellow at CSIS	Personal Interview (56-minutes)	April 05, 2018. Islamabad.
22.	**Air Marshal (retd) Ashfaq Arain**	Director Strategic Operations, Commander of a Fighter Squadron and an Operational Air Base, Director General Air Force Strategic Command and Air Attaché in India	Emailed Interview	May 11, 2018.

23.	**Lt General (retd) Zahid Latif Mirza**	Former Commander of Pakistan Army Air Defense Corps	Personal Interview (15- minutes)	April 26, 2018. Islamabad.
24.	**Bharat Karnard**	Research Professor in National Security Studies at the Centre for Policy Research, New Delhi.	Emailed Interview	October 10, 2017.
25.	**Rajesh Basrur**	Professor of International Relations Coordinator, South Asia Programme, S. Rajaratnam School of International Studies, Nanyang Technological University, Singapore.	Emailed Interview	October 13, 2017.
26.	**Brigadier (retd) Gurmeet Kanwal**	Former Director of the Centre for Land Warfare Studies (CLAWS) in New Delhi.	Emailed Interview	October 11, 2017.
27.	**Shashank Joshi**	Research Fellow, Royal United Services Institute for Defence and Security Studies, London, United Kingdom.	Emailed Interview	October 16, 2017.
28.	**Rajaram Nagappa**	Professor and Dean, National Institute of Advanced Studies, Indian Institute of Science Campus, Bengaluru.	Emailed Interview	October 21, 2017.
29.	**Ashley. J. Tellis**	Senior Fellow at the Carnegie Endowment for International Peace, Washington DC	Emailed Interview	November 4, 2017.
30.	**Harsh V Pant**	Professor of International Relations in Defence Studies Department and the India Institute at King's College London.	Emailed Interview	October 11, 2017.
31.	**Udhay Bhaskar**	Former Commodore in the Indian Navy	Emailed Interview	October 17, 2017.
32.	**Bharath Gopalaswamy**	Director South Asia Centre, Atlantic Council. Washington DC.	Emailed Interview	February 01, 2018.
33.	**Professor Ramesh Thakur**	Director of the Centre for Nuclear Non-Proliferation and Disarmament (CNND) in the Crawford School, The Australian National University.	Emailed Interview	April 30, 2018
34.	**Dr. Walter. C. Ladwig-III**	Assistant Professor in International Relations at King's College London.	Emailed Interview	October 18, 2017.
35.	**Micheal Krepon**	Co-founder, The Stimson Center, Washington DC.	Emailed Interview	October 13, 2017.
36.	**Dr. Toby Dalton**	Co-Director, Nuclear Policy Program, Carnegie Endowment for International Peace	Emailed Interview	October 19, 2017.
37.	**Mark Fitz Patrick**	Executive Director of IISS–Americas and head of the IISS Non-Proliferation	Personal Interview (06- min)	December 06, 2017. Islamabad

and Nuclear Policy Programme), in an interview with the author on