UNVEILING INDIA'S DEFENSE MODERNIZATION UNDER MODI ADMINISTRATION: NAVIGATING REGIONAL GEOPOLITICAL CHALLENGE

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ABSTRAK

Tulisan ini berupaya mengeksplorasi modernisasi pertahanan India dan pergeseran strategisnya dalam merespons peningkatan pengaruh geopolitik China, khususnya sejak 2014. Tujuan utama penelitian didasarkan untuk menganalisis evolusi doktrin militer India, upaya modernisasi pertahanan, dan integrasi kemajuan teknologi untuk mengatasi ancaman regional dan memperkuat posisi strategisnya. Berangkat dari desain penelitian kualitatif dengan pendekatan studi kasus, serta data sekunder dari laporan pemerintah, dokumen kebijakan pertahanan, dan artikel ilmiah dianalisis menggunakan metode analisis tematik dan konten, menawarkan pemahaman yang komprehensif tentang strategi pertahanan India. Doktrin militer India telah bergeser dari pendekatan yang berfokus pada Asia Selatan ke kerangka Indo-Pasifik yang lebih luas. Inisiatif “Make in India (Atmanirbhar Bharat)” menekankan kemandirian sekaligus mengurangi ketergantungan pada senjata asing. Kemajuan teknologi dalam kecerdasan buatan, sistem otonom, dan keamanan siber menjadi inti dari modernisasi pertahanan India. Kemitraan strategis dengan negara-negara seperti Amerika Serikat dan Israel telah memperkuat kemampuan militer India. Namun, tantangan masih ada dalam hal ketidakefisienan birokrasi, integrasi teknologi, dan pengembangan industri pertahanan domestik. Modernisasi pertahanan India merupakan bagian dari strategi proaktif untuk mencapai otonomi strategis jangka panjang dan pengaruh regional. Tulisan ini lantas menawarkan pemahaman yang lebih dalam tentang strategi pertahanan India yang berkembang, yang menggabungkan inovasi teknologi dengan dinamika geopolitik.

Kata kunci: Modernisasi pertahanan India; Kekuatan geopolitik China; Otonomi strategis; Kemajuan teknologi; Produksi pertahanan dalam negeri.

ABSTRACT

This study explores India’s defense modernization and strategic recalibration in response to China's growing geopolitical influence, particularly since 2014. The main goal is to analyze India’s evolving military doctrine, defense modernization efforts, and the integration of technological advancements to counter regional threats and strengthen its strategic position. A qualitative research design is employed using a case study approach. Secondary data from government reports, defense policy documents, and scholarly articles are analyzed through thematic and content analysis methods, enabling a comprehensive understanding of India’s defense strategies. India’s military doctrine has shifted from a South Asia-centric approach to embracing a broader Indo-Pacific framework. The "Make in India" and "Atmanirbhar Bharat" initiatives emphasize self-reliance, reducing dependency on foreign arms. Technological advancements in artificial intelligence, autonomous systems, and cybersecurity are central to India’s defense modernization. Strategic partnerships with countries like the United States and Israel have strengthened India’s military capabilities. However, challenges remain in bureaucratic inefficiencies, technological integration, and domestic defense industry development. India’s defense modernization is part of a proactive strategy aimed at long-term strategic autonomy and regional influence. This study contributes to a deeper understanding of India’s evolving defense strategy, blending technological innovation with geopolitical dynamics.

Keywords: India defense modernization; China geopolitical assertiveness; strategic autonomy; technological advancements; indigenous defense production.

INTRODUCTION

China's geopolitical activities in South Asia and the Indo-Pacific region have profoundly influenced India's military strategy and defense policy since 2014. Some of the most troubling manifestations of China's intentions in South Asia include the Belt and Road Initiative (BRI) which seeks to expand China's influence in its neighboring states, for instance, Pakistan, Sri Lanka, and Bangladesh, through extensive economic and infrastructure investments (Mallick, 2024; Bharti, 2023). These projects, especially the China-Pakistan Economic Corridor (CPEC) and the strategic port acquisitions like Gwadar and Hambantota, are interpreted by Indian analysts as part of a broader encirclement strategy geared towards India and have exacerbated India's security concerns (Fang, 2024). With these developments, analysts wonder whether India can still control its sphere of influence and hold strategic equilibrium against China, which has now become more aggressive.

India's re-strategizing is an urgent priority now due to conciliating with the fact that viewing China's actions through the South Asia lens is inadequate. Consequently, India has adopted the Indo-Pacific strategy, changing its defense and diplomatic policies to incorporate the United States, Japan, and Australia (Keerthiraj & Sekiyama, 2023; Rajagopalan, 2020). This is not simply a change of words; India's apparent need to position itself as a major player in the conflict and protect the rules-based order that is being tested due to China's maneuvers shows its intent to 'project' China. India has, formally, embraced the Indo-Pacific strategy, as it attempts to alter its geography and enhance its partnerships with counter-coalition China while seeking hegemonic powers that are liberal maritime.

These issues take form and give birth to the questions that set the direction of the Indian defense policy: How is India's military doctrine responding to the ever-growing threats of China's aggressive policies along its borders? What changes have been made in military diplomacy and defense cooperation in military modernization? India's approach has been to an integrated approach incorporating deterrence, diplomatic engagement, strategic partnerships, and indigenously produced defense technologies. This is not an ad-hoc policy, instead, it is a carefully crafted and balanced take with the intent of preserving the nation's influence and interests.

India's explication of the "Neighbourhood First" strategy seeks to address China's growing influence over its smaller neighbors (Aryal, 2021; Jain & Gill, 2024). India's diplomacy and defense collaboration with Sri Lanka, Bangladesh, and Nepal is designed to offer credible substitutes to the Chinese-led infrastructure diplomacy. This also reflects India's growing strategy of soft power, using economic aid and technical assistance to influence engagement with other countries (Nuruzzaman, 2022; Nisar, 2019). Another pillar of the strategy is the India-Japan axis which emerged as both countries started to prioritize maritime security and counterbalancing China's military aggression in the Indo-Pacific region (Sekiyama, 2023; Rajagopalan, 2020).

Military modernization in India indicates the country's growing response in this regard. In line with India's focus on the achievement of naval power projection and maritime domain awareness, the country has driven the advancement of indigenous capabilities and the acquisition of cutting-edge technologies (Salam et al., 2020; Das, 2015). The integration of the private sector and initiatives such as "Make in India" and "Atmanirbhar Bharat" have catalyzed the reorientation of India's defense production toward self-reliance (Shettigar & Misra, 2022; Kaur, 2023). This approach not only aims self-sufficiency to decrease foreign arms dependence and strengthen India's defense industrial base, but also addresses supply chain vulnerabilities highlighted by the COVID-19 pandemic (Kumar et al., 2024; Bhat et al., 2022).

As much as these innovations have been recognized, their collective effect on the strategic rethink on India's posture has, to my knowledge, not yet been sufficiently addressed. There are also debates on discrete issues, such as India's naval modernization and the country's participation in the Quad alliance, but it has been observed that little effort has been made toward understanding these multifaceted responses towards India's military strategy with the overarching aim of countering China's assertiveness. Some of the scholars that I have come across, such as Pant and Saha (2020), and Loc (2023) seem to be in favor of India's strategic rethink. However, much still needs to be said about the nature and resilience of India's deterrence architecture.

Additionally, while the concept of the Indo-Pacific Region is gaining traction among policymakers, the theory remains largely undeveloped in the Indian context. As Rajagopalan (2020) notes, there is a lack of clear operational direction in India's strategy for the Indo-Pacific. As Nuruzzaman (2022) cautions, strategic divergences, particularly in multilateral formations like the BRICS, pose an increasing threat to India's ability to sustain a cohesive policy. These gaps in scholarship highlight the need to analyze the complex interrelations of shifting regional power dynamics, strategic rhetoric, and the politics of military posture.

This study attempts to fill these gaps by studying the evolution in India's military strategy in response to China's geopolitical assertiveness since 2014. It intends to explain the logic, consistency, and consequences of India's strategic realignment in the three interface domains of defense, regional diplomacy, and multilateral relations. It aims to construct a cohesive narrative on the conduct of emerging powers in a competitive multipolar system by examining defense policy documents, white defense papers, and recent scholarly works.

This research is novel in that it adopts a more holistic view of India's strategic rationality by situating its defense reforms within a geopolitical framework that encompasses military and non-traditional security threats. The argumentation of the study is based on the strategic shift of India, which is to reactive in nature, is now consolidating into a more proactive and all-encompassing defense stance which seeks to achieve long-term strategic autonomy. This, however, is in tension with the overarching reductionist narratives which portray India's actions as merely responding to Chinese provocations. This research will be conducted in the scope of the 2014 period, which marks the rise of Narendra Modi's administration and the formal articulation of several strategic initiatives. The research will focus on the South Asia and Indo-Pacific region with emphasis on the China-India relations, the influence of other countries, as well as the military structural changes in India. This study, with its rich theoretical and empirical basis, expects to advance the discourse on Asia's regional security as well as provide ideas to the 21st century strategic competition policymakers.

The study of India's defense behavior has been approached primarily through realism and the politics of power and survival in an anarchic international system. Realist scholars focus on the security dilemma, the situation in which the strengthening of one state's arms leads other countries to respond with an arms build-up, to explain India's arms race with Pakistan and China. Ali and Sidhu (2023) explain the narrative of the 1998 nuclear tests conducted by India and how it led to the intensification of regional rivalries and militarization, particularly with Pakistan. Butt (2015) builds on that logic by looking at the nuclear-conventional balance and the nuclear-conventional balance and its implications on deterrence and defense spending.

In addition to realism, constructivist approaches have become more prominent because of their focus on ideational factors—identity, norms, and political narratives. These

considerations are fundamental in moving beyond material logic to explain arms behavior of India. Ayob (2023) discusses India's special defense relations with Myanmar, arguing that identity politics and regional standing have a major bearing on arms transfer and defense diplomacy. Menon (2010) also investigates how India merges its historical alliances, particularly with Russia, and current geopolitical realities. These studies illustrate the extent to which national identity and policy narratives shape strategic and defense procurement decisions. More than that, constructivist scholar like Buzan and Herring actually developed this theorization first by proposing an important concept called 'arms dynamics' goes beyond traditional realism in helping to understand the process of military modernization. It views arms races not simply as competitive clashes, but as arms competition within broader regional security complexes influenced by specific contextual factors like the perception of threats and internal politics. Mohanty (2007) frames India's defense procurement in the context of its enduring conflicts and its ambitions of regional leadership. Frederick et al. (2022) focus more on China's military growth and India's response to it, arguing that security interdependence in South Asia requires constant adaptation of the defense policies.

Subsequent scholarship underscores India's increasing focus on self-defense industry mobilization as a form of strategic autonomy and self-reliant industrial policy. "Make in India" and "Atmanirbhar Bharat" initiatives serve both economic and geopolitical interests. Jacob and Bhatta (2024, 2025) postulate that indigenously produced defense equipment is critical not just for mitigating foreign dependence, but for enabling sustained technological progress and industrial robustness. These initiatives, though, are beset by the more pronounced issues of red-tape, scant research and development (R&D) activity, and infrastructure shortfalls (Arora, 2024; Singh & Milan, 2023). There are also empirical studies providing a regionally comparative perspective. Emamifar et al. (2023) and Шаповал (2025) consider South Korea, Turkey, and Israel as benchmarks for India, as all three have successfully capitalized on state-industry cooperation to drive domestic defense industry advancement. India's modernization efforts, in contrast to Israel's globally acknowledged cutting-edge defense industry, are hindered by slow procurement tempos and policy volatility. Still, Sanbad (2024) observes that the creation of defense corridors and PPPs could, over time, improve India's standing in the global defense value chain.

The modernization of India's military is largely driven by the advances in AI and autonomous technologies. Hadlington et al. (2023) and Bode et al. (2024) discuss the impact AI is having on all aspects of military operations, extending from surveillance to combat training and warfare simulations. India's focus on drones, as well as AI-enabled military platforms, aligns with sharpening warfare technologies and is a clear shift toward futuristic warfare paradigms (Rashid et al., 2023; Cho et al., 2020). Moreover, these technologies are critical in India achieving strategic deterrence parity with technologically superior rivals. With regard to geopolitical partnerships, these both help and challenge India with regard to strategic autonomy. The United States is a critical partner with India for defense and intelligence sharing with the help of COMCASA and LEMOA frameworks (Hussain, 2023). India also continues to have long standing military relations with Russia, which is a primary supplier of defense equipment, as well as a co-developer of the BrahMos missile and other weapon systems (Roy, 2023; Menon, 2010). Kapoor (2023) and Kara (2025) argue that India's balancing strategy, so-called multi-alignment, helps the country to cope with the complexities of the global order without having to compromise on its defense posture by aligning with a single power bloc.

Even with this robust theoretical and empirical knowledge, some gaps still exist concerning the integrated literature. First, there is a scarcity of identity, technological change, and economic nationalism unified explanatory models of India's military behavior. Second, while arms dynamics theory explains systemic interactions, there is a lack of attention given to the domestic political economy of defense production, especially the focus on MSMEs and

sub-national industrial policy, as noted by Arora (2024) and Jain et al. (2024). Finally, the intersection of AI and ethics, particularly concerning military integration, is a relatively unexplored territory, especially after the recent works of Bode et al. (2024) and Purja et al. (2023).

This literature review reveals the interplay of competing theoretical traditions, such as realism and constructivism, and arms dynamics theory, all of which seek to explain different dimensions of India's strategic behavior. Synthesizing these perspectives reveals a multifaceted transformation shaped by regional security challenges, technological advances, and a nationalist approach to industrial policy driven by state objectives. However, there remains a lack of understanding concerning the defense-industrial systems and the civil-military integration of technologies, which calls for further interdisciplinary inquiry.

RESEARCH METHOD

In this study, the focus is on the qualitative research design to analyze the intricacies of the military modernization process in India. Qualitative research provides insights on the perceptions, rationales, and choices of actors that impact military policies and modernization activities (Deschaux-Dutard, 2020; Castro & Carreiras, 2012). Unlike quantitative approaches that emphasize statistical figures, qualitative approaches obtain and provide a detailed, vivid explanation regarding the intricate reasons that shape military decisions, which is fundamental in analyzing military reforms and developing policies.

Analyzing India's defense reforms and their military strategies necessitates a case study approach. This approach offers an in-depth exploration of particular instances of military modernization, exposing the strategies and efforts involved, as well as the results of these reforms. It is even possible to study the relationship between military expenditure, economic development, and strategic policy using case studies. Investigating particular instances as case studies helps to identify recurring themes and causal factors that would remain hidden under more general analyses. This combination of case study research and secondary data sources allows for an intensive study of India's defense policies. Case study research relies on the foundations set out by Yin (2018), emphasizing the need for systematic data collection and analysis, which is Yin's main contribution. Researchers are able to apply matrix-based comparative analyses as well as pattern matching to assess the impact of defense reforms and strategies within a given set of historical, economic, and political conditions.

Data collection entails the use of secondary sources, including government publications, scholarly articles, and historical records. These sources offer thorough documentation of the defense modernization processes and enable the study of multiple determinants of the military strategy. Thematic and content analysis frameworks together make up the method of secondary data analysis for this case study. Thematic analysis identifies patterns and themes within the data, offering insights into broader trends and implications of military reforms. In contrast, content analysis examines the data for specific terms, phrases, and concepts and evaluates their frequency and importance.

DISCUSSIONS

India's defense expenditure has risen sharply since 2014 as a result of its attempts to manage security concerns in the region, especially from China and Pakistan. The modernization of its military to increase deterrence and the subsequent spending surge aligns with India's aspirations of achieving sovereignty, self-reliant technology, and global power status. Still, the spending divisions of procurement, personnel, and R&D pose difficulties for long-term innovation. The questions that guide this paper are: How has India

adapted its defense strategy to manage regional security challenges? What are the defense spending trends and their implications? The discussion will focus on the relationship between the defense budgets, technological innovation, and self-reliant policies and India's security posture.

Trends and Implications of Defense Spending

India's defense expenditure has been growing since 2014, and the budget now sits at approximately 75 billion, a steep increase from the 38 billion in 2014. This increase is in response to the growing threat from rival nations China and Pakistan, as well as the ever-growing military capabilities of China in areas like the South China Sea. This has led to increased security concerns for India and its allies (Malhotra, 2022; Freitas, 2024; Damayanti & Aurelia, 2022).

India has also been active in multilateral engagements and is a member of the Quad group which in includes, the United States, Japan, and Australia. Assisting in the Quad's patch of maritime security, India has also been active in multilateral engagements and is a member of the Quad group which in includes, the United States, Japan, and Australia. This group aims to counter the increasing dominance of China in the Indo Pacific region. The growing budget is inline with the expected budget for the stronger military partnerships which India plans to increase in the near future. The growth of India's defense budget is intricately linked to the nation's enduring national security policies and geopolitical aspirations. New Delhi seeks to maintain national sovereignty, improve defense and military capabilities, and position itself as a regional power and a significant global security influencer. The military budget is essential to India's modernization efforts directed against the growing military capabilities of China, especially in the South China Sea and the Himalayas (Freitas, 2024).

The budget for military expenditures serves a more comprehensive purpose as it seeks to improve the military power of the state through domestic arms production and acquisition of sophisticated arms. India's move toward self-sufficiency in the defense production sector, as seen in the response to the regional security challenges and the need for geopolitical technological independence is captured by Atmanirbhar Bharat. Furthermore, these expenditures and the modern arms and defense technologies targeted for procurement are aimed at enhancing India's regional as well as global security posture. India's economic development directly impacts defense budget allocation. Spending on defense can aid economic growth, and a growing economy translates into the ability to spend on modernization and preparedness. India has sought to align the defense budget with the economy, and with broader economic goals of enhancing employment opportunities and nurturing industrial growth, especially in domestic defense production, since 2014 (Azam et al., 2015; Yadav, 2022).

India's approach to defense spending is different from other regional powers, China and Pakistan. Aside from China being economically stronger, it also invests much more in defense spending, which is focused on domestic innovations and global military expansion (Narlikar, 2019). Pakistan has higher defense spending relative to GDP, but due to its relations with the United States and historic security concerns with India, its defense budget is more constrained externally (Kumar, 2021; Abraham & Purushothaman, 2024). India distinguishes itself from other global powers through its military spending and focus on internal and self-sufficient technologies, as well as its economic flexibility in defense spending.

There have been observable changes in the distribution of India's defense spending under the Modi government, particularly in procurement, personnel, and research and development (R&D). Enhanced procurement spending, which constitutes about 60-65% of

the defense budget, seeks to modernize and improve the operational readiness of the armed forces in view of the mounting threats from China and Pakistan (Thangamani, 2020). While personnel costs, which include pay and allowances, account for about 30-35% of the defense budget, ensuring the upkeep of India's large armed forces, this might hinder the funding for technological modernization (Jana et al., 2018). Under the current government, R&D, which is critical for sustainability in defense long term, has been receiving more focus. The "Make in India" initiative seeks to promote self-sufficiency in defense production to decrease foreign dependence. Nonetheless, R&D spending is still low at about 5-10% of the defense budget (Sarjito & Lelyana, 2024). Such low funding suggests a precarious balance between spending meets and future military technological advancements. Although increased procurement spending has enhanced India's military preparedness, India needs to devote more resources to R&D spending to ensure long term strategic autonomy and innovation.

The distribution of procurement, R&D, and personnel within India's defense spending deeply impacts the country's military preparedness. While modernization and operational improvement are assured by significant spending on equipment, the lower spending on R&D creates long-term challenges for innovation. Strategic Autonomy has been highlighted by the dependency on foreign imports and expensive defense contracts for high-tech domestically produced technology within the country (Sarjito & Lelyana, 2024). This contrasts with India's regional neighbor, who focuses on immediate operational readiness, in this case India. China spends a greater portion of its defense budget on research and development covering the long-term goals of becoming a world superpower economically, militarily, and technologically (Thangamani, 2020). In the meantime, Pakistan spends its defense budget in personnel spending focused on the constant conflict with India and unable to become modernized (Luqman & Antonakakis, 2021; Amir-ud-Din et al., 2019). India's middle-ground strategy spending two-thirds on modernized equipment and operational immediately enhances the country's position among other South Asian nations is balanced complemented by a gradual increase in R&D spending.

After 2014, indicate a strategic attempt to deal with regional security concerns, especially from China, as well as a comprehensive effort to enhance India's geostrategic posture. Spending increases over the years have paralleled India's modernization, self-reliance goals, international collaborations, and defense partnerships. Still, the spending allocation on personnel, procurement, and R&D reflects the need to balance short-term operational capacity with long-term strategic autonomy. These evolving patterns of defense spending position India as a central figure in regional and global security, although the country still needs to invest in technological advancement and self-sufficiency for the defense industry to sustain military edge.

Self-Reliance and Indigenous Production

The "Make in India" initiative, launched in 2014, has significantly encouraged self-sufficiency in India's domestic defense production, as well as lessening the dependence on foreign imports. Advancing India as a manufacturing hub is the primary goal of the initiative, especially in the defense sector, which is expected to facilitate economic development and generate employment opportunities. India has been one of the largest importers of military equipment in the world, with Russia, the U.S., and Israel being the primary suppliers of military technologies. The initiative aims to shift the dependence towards indigenization and self-sufficiency in defense production and technologies (Nandan & Ganesh, 2023).

One of the greatest impacts of the initiative is the increased participation of the private sector in defense production, which was an area dominated by the public sector. The

initiative coupled with the governmental reforms has been particularly favorable in relaxing investment procedures and streamlining public-private collaborations. The innovation and local manufacturing freedoms gained as a result of these policy adjustments have strengthened technological expertise and efficiency in India's defense-industrial base (Sanbad, 2024). As a result, India has witnessed substantial growth in defense manufacturing, with the establishment of new factories and development of indigenous systems, including missiles, aircraft, and naval vessels (Jacob & Bhatta, 2024).

This initiative is also highlighted by the growing defense exports of India, which rose from $300 million in 2015 to almost $1.5 billion by 2021. Moreover, the government eased the foreign direct investment (FDI) cap in the defense industry to 74% in 2016, which enabled foreign technological cooperation and investment. These foreign collaborations and FDI have proven vital towards the modernization of India's defense industry (Bisai & Mazumdar, 2018).

There is an overwhelming focus on self-reliance in defense production, which also means that India has a considerable technological, industrial, and political hurdles to overcome. India's defense industry as a whole suffers from a high lack of local technological resources with foreign dependencies, which slows the pace of local development. India has always struggled with advanced manufacturing technologies and sophisticated R&D capabilities which are essential in manufacturing advanced defense systems (Bisai & Mazumdar, 2018). There is a lack of technological expertise from private companies in the defense sector, which limits participation from public-private defense partnerships (Irfan et al., 2023). Moreover, the attempt to modify foreign systems and technologies to meet India's operational requirements is extremely difficult. These attempts undermine the effectiveness of new acquisitions and increase the difficulty of marrying new acquisitions with existing systems (Patel et al., 2023). There are also supply chain hurdles in which essential intermediate parts still need to be imported (Bitzinger, 2015).

The Indian defense industry is characterized by the predominance of state-owned enterprises, with private sector involvement being virtually non-existent. Within this framework, the bureaucratic inefficiencies in the organization's structure obstruct effective oversight in the management stream, which leads to prompt execution of projects, thus causing delays and augmenting costs (Bisai & Mazumdar, 2018). Furthermore, the inclusion of small and medium enterprises (SMEs) into the defense supply chain is problematic because the SMEs do not possess the requisite defense manufacturing capabilities and supporting structures (Irfan et al., 2023). With the evolving picture of defense, the pace of regulatory reforms is still lagging, which in turn is slowing down the foreign direct investment (FDI) inflows critical for modernizing the Indian defense capabilities (Bisai & Mazumdar, 2018).

From a self-reliance perspective, India also faces the problem of global shifting alliances. Sustaining India's historic dependence on Russian military hardware is no longer feasible due to recent geopolitical shifts, thus mandating a reevaluation of strategic defense partnership (Roy, 2023). Besides this, there are domestic political issues, including the public's prioritization of social spending in contrast to public defense expenditure (Prabhakar, 2024). Corruption and a lack of transparency concerning defense procurement further compounds the problem by dampening investor confidence, which in turn stifles private and foreign participation in the defense sector (Bitzinger, 2015). Resolving these challenges is imperative for creating a self-reliant framework.

The move towards self-sufficiency in production is particularly important in the context of the military capabilities and strategic autonomy of India because of the regional security threats coming from China and Pakistan. To strengthen the country's military

capabilities, self-sufficiency in production seeks to design and manufacture some of the military equipment and defense systems specific to the country's operational needs. India is also investing in obsolescence-resilient military capabilities with the indigenous Light Combat Aircraft (LCA) Tejas and the aircraft carrier INS Vikrant. In addition, India is expected to experience advancements in military capabilities due to investments in homegrown R&D in missile technologies, cybersecurity, and artificial intelligence (Khurshid, 2023). The shift to self-sufficiency in production also enhance strategic autonomy, particularly in the context of vulnerability to foreign pressures in defense procurement (Sagar, 2009). Such autonomy would allow India to establish bilateral defense partnerships at its discretion and pursue shared defense priorities and objectives rather than depend on foreign partners. In this respect, the Quadrilateral Security Dialogue (Quad) is beneficial for India because it fortifies India's strategic position without being tethered to a single partner's military systems (Damayanti & Aurelia, 2022).

Timely and efficient defense production achieve, however, some challenges still occur. Bureaucratic self-reliance may modernize delays, and hinder India's ability to sustain technological parity with regional powers (Poornima, 2023). The defense strategy of India, especially indigenization, has been shaped the most through collaboration with domestic and international defense industry partners. Such collaboration is important for innovation and advanced military capability development, as well as for achieving strategic autonomy. A marked increase in the defense industry in India has been made through domestic partnerships as public and private collaboration has encouraged innovation and efficiency. Private sector defense firms, due to favorable government policies, are more active in the development of advanced military technologies (Sanbad, 2024). Enhanced skill development of the Indian workforce is especially important for supporting long-term sustainable growth. The development of a responsive defense supply chain through domestic collaboration has enhanced the availability and timeliness of components, thus improving national security (Sanbad, 2024).

Collaborations with the U.S., Russia, and Israel have facilitated the transfer of technologies and the development of integrated defense systems. Through these partnerships, India has been able to acquire and integrate advanced technologies into its defense systems. One important instance is the U.S.-India collaboration on missile systems, which advances both India's defense capabilities and its diplomacy. Such strategic partnerships often lead to dependency which, in turn, can jeopardize India's objective of complete indigenization. Although these partnerships help expedite the acquisition of technologies, there is a need to invest in homegrown technologies to maintain strategic autonomy. Over the past years, strained relationships among states have seen an uptick in collaborative research and development projects, which has gained both attention and criticism. Although these partnerships have a lot to gain in the form of foreign technologies, there is always the risk of dependency involving foreign technologies, which can pose a burden on domestic investment and structure. Thus, India is faced with the challenge of balancing investment and dependency on foreign defense social technologies (Sanbad, 2024; Emamifar et al., 2023).

India's "Make in India" program has promoted advancements in the country's defense sector, moving towards greater self-sufficiency and less reliance on foreign imports. Although considerable strides have been made, gaps in technology, industrial productivity, and certain political aspects pose challenges. In order to realize complete self-sufficiency, India still has to address the issues of fostering innovation, investing in R&D, and navigating policy and bureaucratic hurdles that stifle progress. This shift to locally produced goods and services strengthens India's military capabilities and independence, enabling the country to more effectively respond to regional security challenges. Nonetheless, the effectiveness of

this initiative hinges on the ability to overcome challenges and sustain defense modernization efforts.

Incorporation of modern technology such as artificial intelligence (AI), autonomous systems, and sophisticated cybersecurity measures has significantly transformed India's defense strategy. India allocates artificial intelligence as well as autonomous systems to most of its military functions. This now includes the optimization of the military's resource mobilization, information warfare, reconnaissance and information gathering, command and control systems, and precision munitions. By recognizing and acting on the necessity to upgrade its defense forces and seeking to stay steps ahead of its rivals, the country demonstrates its ambitions.

AI has a critical role to modernize the defense sector of India. It serves its purpose in easing the multi-dimensional tasks of logistics, combat management, and military intelligence evaluation. Moreover, AI's propensity to quick and precise data interpretation makes it ideal. AI based systems for supply chain management optimization or resource requisition and devolution system ensures effortless access to vital assets (Rizvi et al., 2021). Most importantly, the Indian Government has taken steps to shift the country from the mere consumer of the technology to its creator, as seen in the "AI for Defense", seeking to address the needs and demand of the military sector (Khurshid, 2023).

India has effectively advanced unmanned aerial vehicles (UAVs) and unmanned ground vehicles (UGVs) within its autonomous systems sector. These unmanned systems are utilized for surveillance, reconnaissance, and combat operations, which helps in mitigating risks to human soldiers. Programs such as Rustom and Prachand drones are examples illustrating India's surging efforts to improve its reconnaissance capabilities (Jaya & Rukmono, 2021). These advancements enhance the Indian military's ability to monitor adversarial activities, thereby ensuring accomplished situational awareness during operations.

Facing ever-increasing threats in the cyber domain, India has adopted AI technologies for bolstering cybersecurity measures. AI is implemented in automating the identification and response systems, which enhances the response time and precision to possible cyber-attacks on military networks (Zohuri, 2024). The automation of cybersecurity measures is imperative in ensuring communication and data channels that are vital for national security. India is aiming to foster robust cyber security systems to combat emerging threats by encouraging public-private partnerships (Sholademi et al., 2024). Another aspect of India's defense modernization is the purchase of advanced weapon systems. India's adoption of modern missile systems is marked by the acquisition of the S-400 air defense system. It is further indicative of the country's efforts toward military modernization (Koser & Wani, 2024). These systems are important for India's military strategic deterrence capability and significantly enhances India's defense preparedness, especially in an economically volatile region. Collaborative efforts from countries like Israel also further India's efforts in the development of joint weapon systems and greatly improve operational effectiveness and technological reliability (Zahra & Liaqat, 2023).

India's defense sector is facing numerous challenges when it comes to fully adopting cutting-edge technologies, even with the country's recent advancements. One of the major hindrances is the need for substantial capital in the area of innovation in research and development, or R&D. Even though India is one of the highest military spenders in the world, a significant amount of India's defense budget is allocated towards operational necessities instead of technological innovation (Sadiq & Ali, 2022). In addition, cybersecurity poses a major concern, especially with India's military systems becoming more digitized. Cyber-attacks on critical defense infrastructure heighten the need for stringent cybersecurity

frameworks, especially for sensitive data and operational intelligence (Poornima, 2023). In addition, the implementation of AI and autonomous systems in military operations requires a change in India's military education institutions and a skilled workforce in the new curricula to manage and maintain these technologies (Chmyr & Bhinder, 2023).

Modernization of the Indian defense, integrating various components such as AI, autonomous systems, advanced weaponry, and implementing comprehensive cybersecurity measures, is a multifaceted initiative for reinforcing national security. Addressing inadequacies in defense funding, training, and cyber security systems is essential, particularly with the mounting challenges rigorously remaining. India, with support from interntionopartner, is well-positioned to intervene and invest towards fortifying cybersecurity infrastructure, fostering immediate defense development, and gaining international allies to strategically augment the nation's capabilities and well preserve its prominent stance in the shifting global security ecosystem.

Navigating Security Dilemmas

India has sought to modernize its defenses in response to both longstanding and more recently conceived threats, motivated by the need to improve deterrence in its locale, particularly through self-reliant initiatives and technological pathways. A distinctive feature of this modernization effort is the self-reliant defense-industrial base, epitomized by the Light Combat Aircraft Tejas, the Main Battle Tank Arjun, and the Indigenous Aircraft Carrier Vikrant (Patel & Vishwanathan, 2023). India is trying to reduce dependence on foreign suppliers of defense equipment and technology in line with the government's initiative "Make in India" aimed towards fostering domestic manufacturing and technological capabilities. This initiative will serve the dual objective of curtailing outflow of foreign exchange, while increasing India's stature as a major power capable of producing its own military technology. India's concentration on self-sufficiency will strengthen its security of supply, particularly in relation to geopolitical threats from China and Pakistan. Connon ety al (2025) argue that these changes manifest as a result of security concerns, economic motivations, and desire for global standing; all these factors combine to define a defense policy that not only safeguards national interests but also advances India's global standing.

The aim of government policies, such as participation of foreign firms in joint ventures and co-production agreements, is to bring sophisticated technology to Indian defense manufacturers. This step is intended to develop a self-reliant defense industry. With the extension of Foreign Direct Investment (FDI) in defense manufacturing from 26% to 49%, Yadav (2024) points out that there is now greater opportunity to access advanced technology and specialized knowledge. In addition, the introduction of the "Buy Indian" policy is meant to stimulate domestic production, giving equal opportunity to public and private sector manufacturers, and reducing the innovation gap. These policies are designed to not only strengthen the military capabilities of India, but also improve the status of India in the global defense marketplace. Through civil-military integration, India is able to use its advantages in information technology, aerospace, and electronics to enhance defense production, which also advances the national security of the country.

In terms of regional security, the importance of India's modernization efforts is underscored by its increasing cemented capabilities for deterrence. Enhancements to India's military, and, for that matter, its strengthened missile defenses, like Ballistic Missile Defense (BMD) systems, geographically situated near nuclear-armed rivals Pakistan and China, are crucial in the South Asian security context. Furthermore, missile defenses remain crucial to counter adversarial missile threats and show a departure from a deterrence-by-punishment to a deterrence-by-denial posture (Khan & Saeed, 2021). India's growing BMD systems coupled with advances in missile defense systems are also indicative of a widening BMD

gap. Chaudhry (2022) states that these changes also reset the regional strategic equilibrium and can increase India's confidence in pursuing conventional military aggression. The changes in South Asia's security order incited by improvements in India's military posture interpose doubts in Pakistani defense planners, shifting its nuclear posture to preempt the emerging gap, including the refinement of tactical nuclear arsenals (Sadiq & Ali, 2022). Furthermore, the incorporation of military AI (Khurshid, 2023) could also further India's deterrence and reshape regional security dynamics. Nonetheless, the growing advancements in AI could also worsen the possibilities of Pakistan-India strategic miscommunities, thus calling for regional stability (Khurshid, 2023; Chen, 2022).

Partnerships with nations such as Israel, the United States, and France have greatly influenced the advancement of India's military technology and capabilities. India's defense posture has been strengthened, and foreign dependence has declined due to knowledge transfer in cyber capabilities, space and missile technology (Abdel-Khalek et al., 2019; Sinha, 2023). India has achieved greater self-reliance in developing its military industrial complex, ensuring strategic autonomy in its defense capabilities. This marks a broad shift to a self-sufficient military framework that integrates advancements in naval, aerial, and land warfare (Ganguly, 2015). For example, India's domestically produced aircraft carriers and submarines will enhance its ability to project power in critical maritime areas and counter China's increasing influence in the Indian Ocean (Kwon, 2015).

India actively seeks to improve its military readiness across the entire spectrum of warfare capabilities. Modern communications and information technologies are becoming ever more important in strengthening the country's military defenses. The incorporation of more sophisticated cyber capabilities allows the Indian military to deal with cyber incursions, which have become more prominent in the current warfare paradigm (Poornima, 2023). The increasing dependence on cyber capabilities, whether for defense or offense, makes it imperative to put in place effective measures to guard essential military infrastructure in order to enhance India's deterrence posture (Poornima, 2022).

India also faces gaps in personnel readiness and strategic coherence for defense modernity. Mukherjee (2017) explains that the rapid pace of technological change in India's military requires more advanced training programs, which means the personnel on the ground will need more sophisticated devices. Moreover, in a country with pervasive economic disparities like India, the socio-economic consequences of military expenditure need to be thoughtfully analyzed. The relationship between military expenditure and the economy also continues to be a matter of concern, especially with the increasing strain of military modernization on the budget. Emerging threats require a comprehensive approach to defense modernization. As newer hypersonic and aerospace systems are developed, India is bound to adapt to the changes. Such advancements escalate the arms race in the region (Raza & Mehmood, 2023). India requires a proactive and vigilant approach to strategy designed to mitigate threats and responsive to shifting dynamics, allowing a balance between military might and diplomacy to ease tension within the region (Ladwig, 2015).

The "No First Use" policy has been a cornerstone of India's nuclear strategy, but in the wake of increasing rivalries, it is also under growing scrutiny. As regional conflicts evolve and neighbors acquire advanced military hardware, India's nuclear strategy is under increasing rethink (Sundaram & Ramana, 2018). The possible emergence of counterforce capabilities is likely to alter some of the doctrinal approaches and disrupt the current deterrent balance in South Asia (Clary & Narang, 2019).

India's defense modernization and strategic alliances, especially with the United States, are areas of concern in a global context. The growing US-India defense partnership offers a framework for collaboration and technology transfer, which strengthens India's ability

to counterbalance China's increasing influence in the Indo-Pacific. These strategic alliances, while beneficial in some ways, pose security concerns, especially with respect to Pakistan's strategic calculations. These relationships pose complex challenges, and thus require careful consideration as India strives to harmonize its defense goals with regional relations.

The development and integration of unmanned systems and robotics into India's military systems will undoubtedly influence the country's defense capabilities in the years to come. Such technologies promise a revolution in operational effectiveness and will reshape the conventional doctrines of warfare. While India seeks to further develop its military-industrial complex, maintaining a leadership position will be essential to reducing the challenges posed by asymmetric warfare (Agarwala, 2023; Khan et al. 2021).

CONCLUSIONS

This research looks at how India has changed its strategy and modernized its defenses in reaction to the growing geopolitical assertiveness of China, especially after 2014. Primary conclusions underline India's adapting military doctrine, which has expanded its focus from South Asia to the wider Indo-Pacific region. This is indicative of India's attempt to balance regional dominance with strategic equilibrium against China. Also, India has been focusing on self-sufficiency in defense through the "Make in India" and "Atmanirbhar Bharat" initiatives which seek to diminish foreign arms dependence and expand indigenous defense production. Emerging technologies, especially in AI, autonomous systems, and cybersecurity, are vital to the upgrade of India's military infrastructure. Also, strategic allies such as the United States, Israel, and Japan have strengthened India's defense with advanced technology and increased diplomatic and military collaboration. India's defense spending has been rising sharply alongside increased military procurement and research and development, demonstrating the country's strategic intent to bolster its deterrence posture. Despite these advancements, India continues to face persistent issues such as bureaucratic inefficiencies, technological gaps, and less integration of domestic defense industries.

These findings indicate that India's defense modernization efforts are not merely an externally motivated initiative, but are driven by the desire to attain greater regional influence and autonomy. This study enriches the available literature by offering a comprehensive analysis of India's defense strategy, incorporating both military modernization and the intricacies of international alliances, competitive global politics, and technological advancement. Further study could examine the debate on the domestic political economy and defense policy, alongside the the incorporation of artificial intelligence into the military and the resulting moral concerns.

BIBLIOGRAPHY

Abdel-Khalek, G., Mazloum, M., & Zeiny, M. (2019). Military Expenditure And Economic Growth: The Case Of India. *Review of Economics and Political Science*, 5(2), 116-135. https://doi.org/10.1108/reps-03-2019-0025

Abraham: Abraham, J. C., & Purushothaman, U. (2024). Limits of India–US Relations: Balancing Through Strategic Autonomy and Multi-alignment. *Journal of Asian Security and International Affairs*, 11(4), 496-514. https://doi.org/10.1177/23477970241282071

Agarwala, N. (2023). Robots And Artificial Intelligence In The Military. *Defence & Strategy*, 23(2), 83-100. https://doi.org/10.3849/1802-7199.23.2023.02.083-100

Ali, I. and Sidhu, J. (2023). Strategic Dynamics Of The Arms Race In South Asia. *Journal of Asian and African Studies*, 59(8), 2284-2302. https://doi.org/10.1177/00219096231153150

Amir-ud-Din, R., Waqi Sajjad, F., & Aziz, S. (2019). Revisiting Arms Race between India and Pakistan: A Case of Asymmetric Causal Relationship of Military Expenditures. *Defence and Peace Economics*, 31(6), 721–741. https://doi.org/10.1080/10242694.2019.1624334

Arora, A. (2024). Role Of MSMEs In The 'Make In India' Campaign: Challenges And Opportunities: A Case Study Of Bharat Electronics Limited. *PJ*, 15(02), 123. https://doi.org/10.59467/pj.2024.15.123

Aryal, S. (2021). India's 'Neighbourhood First' Policy And The Belt & Road Initiative (BRI). *Asian Journal of Comparative Politics*, 7(4), 744-756. https://doi.org/10.1177/20578911211014282

Ayob, A. (2023). Pragmatism In India's Myanmar Policy Since 1991: Defense And Security Implications For India. *International Journal of Academic Research in Accounting Finance and Management Sciences*, 13(2). https://doi.org/10.6007/ijarafms/v13-i2/18018

Azam, M., Khan, F., Zaman, K., & Rasli, A. (2015). Military expenditures and unemployment nexus for selected south asian countries. *Social Indicators Research*, 127(3), 1103-1117. https://doi.org/10.1007/s11205-015-0993-7

Bharti, M. (2023). China's Belt And Road Initiatives (BRI) In South Asia And Its Policy Challenges To India In The Region. *South Asian Survey*, 30(2), 154-174. https://doi.org/10.1177/09715231231218827

Bhat, S., Antony, J., Gijo, E., Koul, R., Cudney, E., & Chakraborty, A. (2022). A Study On Critical Failure Factors Of Design For Six Sigma In Indian Companies: Results From A Pilot Survey. *The TQM Journal*, 35(4), 1072-1093. https://doi.org/10.1108/tqm-03-2022-0103

Bhattacharyya, S., Rupainwar, M., & Kumar, A. (2021). Indian Telemedicine Industry: Evolving Nature Of Business Models And Customer Interactions. *South Asian Journal of Business and Management Cases*, 10(3), 327-343. https://doi.org/10.1177/22779779211036962

Bisai, S. and Mazumdar, D. (2018). FDI Liberalization In Defense Industry And The Question Of Self-Reliance In India. Dalam Das, R.C (Penyunt.), *Handbook of Research on Military Expenditure on Economic and Political Resources*. New York: IGI Global.

Bitzinger, R. (2015). Comparing Defense Industry Reforms In China And India. *Asian Politics & Policy*, 7(4), 531-553. https://doi.org/10.1111/aspp.12221

Bode, I., Huelss, H., Nadibaidze, A., & Watts, T. (2024). Cross-Cultural Narratives Of Weaponised Artificial Intelligence: Comparing France, India, Japan And The United States. *Big Data & Society*, 11(4). https://doi.org/10.1177/20539517241303151

Borzillo, L., & Deschaux-Dutard, D. (2020). Secondary Analysis Of Qualitative Data In Defence Studies: Methodological Opportunities And Challenges. Dalam L. Borzillo, & D. Deschaux-Dutard (Penyunt.), *Research Methods in Defence Studies: A Multidisciplinary Overview*. London: Routledge.

Butt, A. (2015). Do Nuclear Weapons Affect The Guns-Butter Trade-Off? Evidence On Nuclear Substitution From Pakistan And Beyond. *Conflict Security and Development*, 15(3), 229-257. https://doi.org/10.1080/14678802.2015.1055120

Cannon, B.J., Sim, Li-Chen, Aminjonov, F. (2025). Central Asia And The Indo-Pacific: Bridging The Divide In An Age Of Great Power Rivalry, *International Affairs*, 101(4), 1177–1191, https://doi.org/10.1093/ia/iiaf102

Castro, C., & Carreiras, H. (2012). Introduction. Dalam H. Carreiras, & C. Castro (Penyunt.), *Qualitative Methods in Military Studies Research: Experiences and Challenges*. London: Routledge.

Chaudhry, A. (2022). Addressing Nuclear Challenges, Misperceptions And Geopolitics In South Asia. *National Security Journal*, 3(4). https://doi.org/10.36878/nsj20220227.09

Chen, K. (2022). Evaluating The Intersection Of Technology And Nuclear Escalation In South Asia. *National Security Journal*, 3(4). https://doi.org/10.36878/nsj20220301.10

Chmyr, V. and Bhinder, N. (2023). AI In The Higher Military Institutions: Challenges And Perspectives For Military Engineering Training. *Rupkatha Journal on Interdisciplinary Studies in Humanities*, 15(4). https://doi.org/10.21659/rupkatha.v15n4.11

Cho, S., Shin, W., Kim, N., Jeong, J., & In, H. (2020). Priority Determination To Apply Artificial Intelligence Technology In Military Intelligence Areas. *Electronics*, 9(12), 2187. https://doi.org/10.3390/electronics9122187

Clary, C. and Narang, V. (2019). India's Counterforce Temptations: Strategic Dilemmas, Doctrine, And Capabilities. *International Security*, 43(3), 7-52. https://doi.org/10.1162/isec_a_00340

Damayanti, A. and Aurelia, Z. (2022). India’s Role In The Quadrilateral Security Dialogue In Countervailing China. *International Affairs and Global Strategy*, 96, 10-19. https://doi.org/10.7176/iags/96-02

Das, S. (2015). India’s Maritime Strategy And The Emerging Relation With Australia. *International Studies*, 52(1-4), 86-98. https://doi.org/10.1177/0020881717714678

Deschaux-Dutard, D. (2020). Why Methods Matter In Defence Studies. Dalam D. Deschaux-Dutard (Penyunt.), *Research Methods in Defence Studies: A Multidisciplinary Overview*. London: Routledge.

Emamifar, A., Bahareh, S., & Falarti, M. (2023). Enhancing Neorealism: Lessons From India-Russia Defense Cooperation For Iran In The Aftermath Of The 2014 Russo-Ukraine Conflict. *Journal of Eurasian Studies*, 16(1), 74-93. https://doi.org/10.1177/18793665231224486

Fang, S. (2024). The Belt And Road Initiative: Geopolitical Implications For South Asia. *Lecture Notes in Education Psychology and Public Media*, 71(1), 34-39. https://doi.org/10.54254/2753-7048/71/2025lc0006

Frederick, B., Gunness, K., Lin, B., Cooper, C., Rooney, B., Benkowski, J., … & Ellinger, E. (2022). Managing Escalation While Competing Effectively In The Indo-Pacific. *RAND*. https://doi.org/10.7249/rra972-1

Freitas, M. (2024). China And India In The Indian Ocean: A Study Of Strategic Importance And Its Influence On Geopolitical Dynamics And Security Policies. *Cognizance Journal of Multidisciplinary Studies*, 4(3), 152-174. https://doi.org/10.47760/cognizance.2024.v04i03.014

Ganguly, R. (2015). India’s Military: Evolution, Modernisation And Transformation. *India Quarterly a Journal of International Affairs*, 71(3), 187-205. https://doi.org/10.1177/0974928415584021

Hadlington, L., Binder, J., Gardner, S., Karanika-Murray, M., & Knight, S. (2023). The Use Of Artificial Intelligence In A Military Context: Development Of The Attitudes Toward AI In Defense (AAID) Scale. *Frontiers in Psychology*, 14. https://doi.org/10.3389/fpsyg.2023.1164810

Hussain, I. (2023). The Indo-Us Strategic Nexus: Policy Options For Pakistan. *Journal of Globalization Studies*, 14(2), 129-142. https://doi.org/10.30884/jogs/2023.02.08

Irfan, M., Rahman, S., Azis, Y., & Widianto, S. (2023). Defense Industry Business Performance Model In Developing Countries. *Problems and Perspectives in Management*, 21(2), 172-186. https://doi.org/10.21511/ppm.21(2).2023.20

Jacob, G. and Bhatta, N. (2024). Factors Influencing Self-Reliance In Defence Capabilities Of India: A Systematic Literature Review. *JME*, 18(3), 9-25. https://doi.org/10.70906/20241803009025

Jacob, G. and Bhatta, N. (2025). The Conundrum Of Self-Reliance In Defence Capability In The Indian Context: A Qualitative Study. *JME*, 18(4), 74-88. https://doi.org/10.70906/20241804074088

Jain, B., Surana, G., & Yadav, N. (2024). Government Initiative “Vocal For Local”: Opportunities And Challenges For Indian Economy. *IJGRIT*, 02(02), 215-219. https://doi.org/10.62823/02.02.6716

Jain, V. and Gill, S. (2024). Evaluating India’s Neighbourhood First Policy: Decoding The China Factor In South Asia. *International Journal of Political Science and Governance*, 6(1), 27-33. https://doi.org/10.33545/26646021.2024.v6.i1a.299

Jana, S., Karmakar, A., & Maiti, A. (2018). Military Expenditure in India. Dalam Das, R.C (Penyunt.), *Handbook of Research on Military Expenditure on Economic and Political Resources*. New York: IGI Global., 367-381. https://doi.org/10.4018/978-1-5225-4778-5.ch019

Jaya, A. and Rukmono, L. (2021). The Biomimetic Fin Performance Evaluation For An Efficient Autonomous Underwater Vehicle (AUV) To Support The Revolution In Military Affairs (RMA) In Underwater Defense. *Jurnal Pertahanan Media Informasi*, 7(3), 376. https://doi.org/10.33172/jp.v7i3.1262

Kapoor, N. (2023). Multi-Alignment Under "Uneven Multipolarity": India’s Relations With Russia In An Evolving World Order. *Mgimo Review of International Relations*, 16(2), 15-32. https://doi.org/10.24833/2071-8160-2023-2-89-15-32

Kaur, K. (2023). Atmanirbhar Bharat Abhiyan And National Education Policy - 2020: Opportunities And Challenges For India's Sustainable Development. *Indian Journal of Social Science and Literature*, 2(4), 1-4. https://doi.org/10.54105/ijssl.d1063.062423

Keerthiraj & Takashi Sekiyama, 2023. The Rise of China and Evolving Defense Cooperation between India and Japan, *Social Sciences*, 12(6), 1-14. https://doi.org/10.3390/socsci12060333

Khalid, M. and Mustapha, A. (2014). Long-Run Relationships And Causality Tests Between Military Expenditure And Economic Growth In India. *The Economics and Finance Letters*, 1(4), 49-58. https://doi.org/10.18488/journal.29/2014.1.4/29.4.49.58

Khan, F. and Saeed, K. (2021). Threat Asymmetry And Transition In Deterrence: Technical Assessment Of India’s Ballistic Missile Defense Shield. *Journal of South Asian Studies*, 8(1), 13-24. https://doi.org/10.33687/jsas.008.01.3319

Khan, F. and Saeed, K. (2021). Threat Asymmetry and Transition In Deterrence: Technical Assessment Of India’s Ballistic Missile Defense Shield. *Journal of South Asian Studies*, 8(1), 13-24. https://doi.org/10.33687/jsas.008.01.3319

Khurshid, T. (2023). The Impact of Artificial Intelligence Militarization On South Asian Deterrence Dynamics. *BJ*, 2(2), 130-144. https://doi.org/10.61732/bj.v2i2.76

Koser, N. and Wani, D. (2024). Dynamics In India-Russia Strategic Partnership. *Educational Administration: Theory and Practice*, 30(5), 4762–4769. https://doi.org/10.53555/kuey.v30i5.3175

Kumar, P. (2021). India Balancing China: Exploring Soft Balancing Through Indo-Pacific. *Millennial Asia*, 13(2), 339-359. https://doi.org/10.1177/0976399621998274

Kumar, R., Bindlish, M., & Garg, R. (2024). Atma Nirbhar Bharat: An Elaborate Study Including Cases From Northern And Southern India. *Shodhkosh Journal of Visual and Performing Arts*, 5(6). https://doi.org/10.29121/shodhkosh.v5.i6.2024.3954

Kwon, J. (2015). China's Military Build-Up And India's Response*. International Relations and Diplomacy*, 3(9). https://doi.org/10.17265/2328-2134/2015.09.004

Ladwig, W. (2015). Indian Military Modernization And Conventional Deterrence In South Asia. *Journal of Strategic Studies*, 38(5), 729-772. https://doi.org/10.1080/01402390.2015.1014473

Li, Z. and Li, S. (2023). Deconstructing Media Narratives Of The Indo-Pacific Strategy: Exploring India's Ontological Security And National Identity In The Times Of India. *Humanities and Social Sciences Communications*, 10(1). https://doi.org/10.1057/s41599-023-01826-4

Loc, T. (2023). India's Regional Security And Defense Cooperation: A Study Of Sino-Indian Rivalry In Sri Lanka. *Journal of Social and Political Sciences*, 6(2). 31-45 https://doi.org/10.31014/aior.1991.06.02.408

Luqman, M., & Antonakakis, N. (2021). Guns Better Than Butter In Pakistan? The Dilemma Of Military Expenditure, Human Development, And Economic Growth. *Technological Forecasting and Social Change*, 173. https://doi.org/10.1016/j.techfore.2021.121143

Madutharanga, K., Timur, F., & Surjaatmadja, S. (2024). India's Defence Diplomacy In Peace Time To Build Defence Capabilities (Study Case: Quad). *International Journal of Humanities Education and Social Sciences (IJHESS)*, 3(5). https://doi.org/10.55227/ijhess.v3i5.816

Malhotra, A. (2022). *India in the Indo-Pacific: Understanding India's Security Orientation towards Southeast and East Asia*, Berlin: Verlag Barbara Budrich

Mallick, S. (2024). China's Belt And Road Initiative: Impact On South Asia's Geopolitical Landscape And Regional Dynamics. *Jadavpur Journal of International Relations*, 28(1), 7-30. https://doi.org/10.1177/09735984251327850

Mehta, R. (2024). Education Investment And Human Capital Development In India. *Journal of Poverty Investment and Development,* 9(1), 50-63. https://doi.org/10.47604/jpid.2587

Menon, R, 'India and Russia: The Anatomy and Evolution of a Relationship', in David M. Malone, C. Raja Mohan, and Srinath Raghavan (eds), *The Oxford Handbook of Indian Foreign Policy*, Oxford Handbooks (2015; online edn, Oxford Academic, 10 Dec. 2015), https://doi.org/10.1093/oxfordhb/9780198743538.013.37

Mishra, V. (2018). India–Us Defence Cooperation: Assessing Strategic Imperatives. *Strategic Analysis*, 42(1), 1-14. https://doi.org/10.1080/09700161.2017.1420121

Mohanty, D. (2007). Making Sense of The Indian Arms Dynamic: A Survey Of Military Efforts. *Sicherheit & Frieden*, 25(3), 139-146. https://doi.org/10.5771/0175-274x-2007-3-139

Mukherjee, A. (2017). Educating The Professional Military. *Armed Forces & Society*, 44(3), 476-497. https://doi.org/10.1177/0095327x17725863

Nandan, B. and Ganesh, A. (2023). Make in India Initiative: Boon To Reduce Lobbies With Respectto Defense And Aerospace Manufacturing Technologies. *BIJCS*, 2(1), 89-94. https://doi.org/10.54646/bijcs.2023.25Sanbad

Narlikar, A. (2019). Regional Powers' Rise And Impact On International Conflict And Negotiation: China And India As Global And Regional Players. *Global Policy*, 10(S2), 22-28. https://doi.org/10.1111/1758-5899.12673

Nisar, R. (2019). Chinese Perception Of Indo Us Nexus: Implications For China In South Asian Region (Brief Overview). *RUDN Journal of Political Science*, 21(2), 311-322. https://doi.org/10.22363/2313-1438-2019-21-2-311-322

Nuruzzaman, M. (2022). Conflicts, Strategic Divergences And The Survival Of Economic Groupings: Will China–India Rivalry Make Brics Obsolete?. *Asian Journal of Comparative Politics*, 7(4), 1025-1044. https://doi.org/10.1177/20578911221108800

Pant, H. V., & Saha, P. (2020). India, China, and the Indo-Pacific: New Delhi's Recalibration Is Underway. *The Washington Quarterly*, 43(4), 187–206. https://doi.org/10.1080/0163660X.2020.1850593

Patel, P., Patil, S., & Vishwanathan, A. (2023). India's Quest For Defence Indigenisation: A Case Study Of The Indian Navy. *Journal of Asian Security and International Affairs*, 10(3), 364-394. https://doi.org/10.1177/23477970231207255

Poornima, B. (2023). Cyber Preparedness of The Indian Armed Forces. *Journal of Asian Security and International Affairs*, 10(3), 301-324. https://doi.org/10.1177/23477970231207250

Prabhakar, A. (2024). India's Industrial Revolution: Navigating Job-Oriented Growth Amidst Global Geopolitical Realities. *Mediterranean Journal of Social Sciences*, 15(6), 33. https://doi.org/10.36941/mjss-2024-0052

Purja, A., Sulistyadi, E., Sudiarso, A., Asvial, M., Gultom, R., & Afpriyanto, A. (2023). The Prospect Of Using Artificial Intelligence In TNI Ship Information Systems As A Manifestation Of A Resilient Maritime Defense Industry. *International Journal of Humanities Education and Social Sciences (IJHESS)*, 3(3). https://doi.org/10.55227/ijhess.v3i3.659

Rajagopalan, R. (2020). Evasive Balancing: India's Unviable Indo-Pacific Strategy. *International Affairs*, 96(1), 75-93. https://doi.org/10.1093/ia/iiz224

Rashid, A., Kausik, A., Sunny, A., & Bappy, M. (2023). Artificial Intelligence In The Military: An Overview Of The Capabilities, Applications, And Challenges. *International Journal of Intelligent Systems*, 2023(1). https://doi.org/10.1155/2023/8676366

Rashid, S. (2023). Emerging United States-India Strategic Partnership: Implications For Pakistan. *Journal of Development and Social Sciences*, 4(III). https://doi.org/10.47205/jdss.2023(4-iii)33

Raza, I. and Mehmood, N. (2023). Hypersonic Weapon Systems – A New Wave Of Arms Race In The Indian Ocean Region. *Margalla Papers*, 27(1), 28-39. https://doi.org/10.54690/margallapapers.27.1.149

Rizvi, A.T., Haleem, A., Bahl, S., Javaid, M. (2021). Artificial Intelligence (AI) and Its Applications in Indian Manufacturing: A Review. In: Acharya, S.K., Mishra, D.P. (eds) *Current Advances in Mechanical Engineering . Lecture Notes in Mechanical Engineering*. Springer, Singapore. https://doi.org/10.1007/978-981-33-4795-3_76

Roy, R. (2023). India-Russia Defense Partnership: New Challenges And Future Prospects. *Mgimo Review of International Relations*, 16(2), 120-141. https://doi.org/10.24833/2071-8160-2023-2-89-120-141

Sadiq, M. and Ali, I. (2022). Challenges Of Nuclear Deterrence Stability In South Asia. *Journal of Asian and African Studies*, 58(8), 1511-1527. https://doi.org/10.1177/00219096221090636

Sadiq, M. and Ali, I. (2022). Challenges Of Nuclear Deterrence Stability In South Asia. *Journal of Asian and African Studies*, 58(8), 1511-1527. https://doi.org/10.1177/00219096221090636

Sagar, R. (2009). State Of Mind: What Kind Of Power Will India Become?. *International Affairs*, 85(4), 801-816. https://doi.org/10.1111/j.1468-2346.2009.00828.x

Salam, M., Bhuiyan, M., & Shahjalal, N. (2020). China's Approach Towards Bangladesh: Development Of Partnership Or Claw Of Subjugation?. *Journal of Social and Political Sciences*, 3(2). https://doi.org/10.31014/aior.1991.03.02.183

Sanbad, L. (2024). From Dependency To Autonomy: Revamping The Defense Acquisition. *Electronic Journal of Social & Strategic Studies*, 05(06), 149-160. https://doi.org/10.47362/ejsss.2024.5608

Sekiyama, T. (2023). The Rise Of China And Evolving Defense Cooperation Between India And Japan. *Social Sciences*, 12(6), 333. https://doi.org/10.3390/socsci12060333

Sharif, A. and Afshan, S. (2017). Does Military Spending Impede Income Inequality? A Comparative Study Of Pakistan And India. *Global Business Review*, 19(2), 257-279. https://doi.org/10.1177/0972150917713523

Shettigar, Jagadish, and Pooja Misra, 'Agenda for Atmanirbhar Bharat', Resurgent India: The Economics of Atmanirbhar Bharat (Oxford, 2022; online edn, Oxford Academic, 20 Oct. 2022), https://doi.org/10.1093/oso/9780192866486.003.0031

Sholademi, D., Akinbi, I., Iwuh, A., Gbadamosi, O., & Sonubi, T. (2024). Cybersecurity Innovations Against Terrorism. *International Journal of Research Publication and Reviews*, 5(10), 12-24. https://doi.org/10.55248/gengpi.5.1024.2703

Singh, N. and Milan, R. (2023). Assessing The Awareness Of The 'Make In India' Initiative And Its Impact On The Manufacturing Sector: A Study Of Stakeholders In India. *International Journal of Research in Finance and Management*, 6(1), 330-335. https://doi.org/10.33545/26175754.2023.v6.i1d.222

Sinha, S. (2023). India's Military Modernisation: Role And Impact Of France. *Journal of Asian Security and International Affairs*, 10(3), 325-341. https://doi.org/10.1177/23477970231207256

Sundaram, K. and Ramana, M. (2018). India And The Policy Of No First Use Of Nuclear Weapons. *Journal for Peace and Nuclear Disarmament*, 1(1), 152-168. https://doi.org/10.1080/25751654.2018.1438737

Syed, A. (2021). The Asymmetric Relationship Between Military Expenditure, Economic Growth And Industrial Productivity: An Empirical Analysis Of India, China And Pakistan Via The NARDL Approach. *Revista Finanzas Y Política Económica*, 13(1). https://doi.org/10.14718/revfinanzpolitecon.v13.n1.2021.4

Thangamani, B. (2020). Defense Budget: Insufficient Allocation For Modernization Of Forces. *Shanlax International Journal of Management*, 7(3), 28-30. https://doi.org/10.34293/management.v7i3.1438

Yadav, D. (2022). Act East Policy: A Review Of India's Trade, Investments, Cultural Exchange, And Strategic Alliances. *Tuijin Jishu/Journal of Propulsion Technology*, 43(4), 140-147. https://doi.org/10.52783/tjjpt.v43.i4.1759

Zahra, S. and Liaqat, S. (2023). India-Israel Strategic Cooperation: Implications For Pakistan. *Progressive Research Journal of Arts & Humanities (PRJAH)*, 5(1), 51-62. https://doi.org/10.51872/prjah.vol5.iss1.233

Zohuri, B. (2024). AI Revolution: Safeguarding Tomorrow's Frontiers - Transforming Cybersecurity Across Industries (A Short Approach). *Current Trends in Eng Sc*, 4(2), 1-4. https://doi.org/10.54026/ctes/1057