India Needs a Military Industrial Complex: Economic and Defence Imperatives for a Resurgent India

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ABSTRACT:

This paper reviews the sluggishness of manufacturing sector growth in India in comparative and historical perspective and argues that without accelerated growth in this sector India's industrial transition will be incomplete. We argue that, India faces multi-faceted threats to its security, particularly from China and Pakistan and from the new dispensation in Afghanistan. India has fought open wars with both China and Pakistan and faces further threats from the expansionist tendencies of China in countries in the immediate neighbourhood of India and from frequent terrorist activities directed toward India from Pakistan. India also needs to play a defence role in its extended neighbourhood. For all these reasons India needs a stronger military. The development of the military sector and enhanced arms exports will provide a ready market for expanded defence manufacturing. Thus, India needs a military Industrial Complex for augmenting economic growth and enhancing national security.

JEL codes: A12, L88, O53, O57.

Key words:
India, defence industry, economy, manufacturing, lead sector, security threat, China and Pakistan, great power, Indo-Pacific

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Since the industrial revolution, no country has become a major economy without becoming an industrial power.

Lee Kuan Yew, Delivering the 2005, Jawaharlal Nehru Memorial Lecture, New Delhi

" Changes happening around the world often become a matter of concern for us. We, as a nation, must keep our guards high during these times of uncertainties and upheavals around the world…. As such, we need to be vigilant at all times."

Rajnath Singh, India's Minister of Defence, after dedicating an indigenously-built Coast Guard ship in a keynote address at Defence Services Staff College in Wellington, Tamil Nadu, 28 August 2021

I. Introduction

There is no gainsaying the fact that India needs both a strong industrial base and a robust defence industry. World Bank data for 2020 reveal that the share of manufacturing in Gross Domestic Product (GDP) was 26% for China and precisely half that (13%) for India. China is India's predominant economic as well as military competitor. Indeed shares of manufacturing in GDP are higher than India's for many ASEAN countries. The share of manufacturing in total employment was 27% for China and 25% for India in 2019. In line with differences in the industrial structures in both these countries manufacturing employment in India is largely in the Micro, Small and Medium enterprises (MSME) whereas manufacturing employment in China is centred largely around medium-sized enterprises. Manufacturing, mining and electricity added together account for the industrial sector. In 2020, industry accounted for 37.8% of China's GDP and 23.2 % of India's GDP. Hence, a critical difference between the Indian and Chinese economies is the difference in the shares of the manufacturing sectors in the two countries (Jha and Afrin 2021).

Concurrently, defence sector manufacturing has been ignored in India and her defence needs have been met largely through imports. Despite its massive size, capability, and security concerns, India is among the world's largest importers of arms. A March 2021 report (SIPRI 2021; Pandit 2021) indicates that during 2011-15 India was the world's largest importer of major arms and accounted for 14 % of global arms imports. During 2016-20 India was the second largest arms importer behind Saudi Arabia. During this period, Saudi Arabia accounted for 11 % of total arms imports whereas India accounted for 9.5 %. However, India faces a very challenging security situation and excessive reliance on imports can be risky. India has fought open battles with Pakistan in 1947-48, 1965, 1971 and 1999 and Pakistan sponsored terrorist activity continuously since at least 1999. India has also fought an open war with China in 1962 and has had major skirmishes with its powerful northern neighbour several times since then, most recently in 2020-21. India's border disputes with China and Pakistan are not settled. Unlike the US, which has fought most of its wars outside its borders, India has fought all its battles on its border along which there has been a perpetual standoff. Thus, there are strong reasons for India to replenish both its manufacturing and its armaments capacity. Thus, India needs a Military-Industrial Complex (MIC).

We argue that akin to the MIC in the US in the post-World War II era, India needs a defence industry sector as a leading sector to develop its manufacturing sector and defence preparedness in an increasingly hostile security threat environment. We assess the significance of the domestic defence industry for developing the manufacturing sector in the context of the Modi Government's 'Make in India' initiative. The development of the domestic defence industry base will accelerate India's economic growth, generate employment, make India self-reliant, address security concerns, expand strategic engagement, and help India's ambition of playing a meaningful role in global leadership.

This paper is organized as follows. Section II develops the economic rationale for expanding India's manufacturing sector base, section III overviews India's security challenges and underscores the need to develop a strong armaments industry. Section III explores how the development of the manufacturing sector and the armaments sector could complement each other. Section IV concludes and suggests policy measures.

II. The Economic rationale for augmenting India's manufacturing sector

Although recent high economic growth in India has been accompanied by a sharp drop in the share of agriculture in GDP, this has not translated into a sharp rise in the share of manufacturing (Jha and Afrin 2021). Trends show that the share of manufacturing in GDP has been stagnating in India for quite some time, although prior to British rule in India the country recorded 25% of world manufacturing output (Jha 2018; Jha and Afrin 2021).

Because of the overhang of past restrictive policies (license quota raj) India's manufacturing sector has a large informal sector component. Even within organized manufacturing sector, there is a preponderance of MSME sector enterprises – which provide overwhelming bulk of India's formal sector employment. Figures for the growth of the manufacturing sector are deceptive since domestic value added in manufacturing represents a diminishing share of manufacturing output (Jha 2018). There are a few large firms that are basically multinational in character whence the sector overall is characterized by what has been called "the missing middle". The public sector still has a strong dominance in the manufacturing sector. Within this group, there is a strong concentration of profit and, particularly, loss making enterprises. Furthermore, there is strong regional concentration of manufacturing activity, particularly of unorganized manufacturing. India's industrial transition can thus be described as incomplete.

Several reasons have been cited for India's incomplete industrial transition. Chief among these are lack of adequate infrastructural facilities, rigid labor laws that prevent flexibility in labor markets and discourage firms from employing more labor, "missing middle" in Indian manufacturing, restrictive foreign trade policies and a plethora of product market regulations and tax structures.[1] Some of these constraining factors are being eased now.

On the other hand, China's early industrialization after the onset of Deng Xiaoping's reforms was impressive. China has had a strong record of manufacturing sector growth fueled largely by cheap labor and flexible capital and labor markets, market-friendly regulations and strong export orientation. As a result, after years of very high GDP and manufacturing sector growth wages in China's manufacturing sector are now rising strongly. Indeed Eurozone International estimates (Aleem 2017) that Chinese factory wages have nearly trebled over the past decade, are higher than wages in most Latin American countries and are closing in on wages in the weaker Eurozone countries. In comparison, Indian labor is much cheaper and India has the scale and capacity to replace China as the world's leading producer of inexpensive manufactured products.

For India to occupy low value-added manufacturing production space being vacated by China, it must deal with competition from other countries in South and South-East Asia, which are

[1] The country's indirect tax structure has been simplified considerably with the enactment of a comprehensive Goods and Services Tax (GST). This tax became operative on 1 July 2017.

clamouring for the same production space, although most of them have higher wages than those prevailing in India. In this context the Economic Survey 2016-17 of the Government of India says: “Clearly India has potential comparative advantage in terms cheaper and more abundant labor. But these are nullified by other factors that render them less competitive than their peers in competitive countries” (Ministry of Finance 2017, pp.132)

Bangladesh and Vietnam have emerged as tough competitors for India in the apparel sector; Vietnam and Indonesia are emerging as major production and export hubs for leather goods. Other countries in South Asia and South-east Asia are emerging as hubs for cheap electronic production and, hence, exports. Therefore, India’s window of opportunity to take advantage of rising wages in China to become a low value- added manufacturing hub is closing quickly. As part of its strategy to boost its manufacturing sector and exports India should make concrete efforts to integrate into Global Value Chains (GVC) which have been used very effectively by many countries including those in China and South-east Asia to boost manufacturing.

Prominent developmental economists such as Albert Hirschman, Benjamin Higgins and H.W. Singer have conceptualised this in the context of unbalanced growth for economic development. Hirschman believes that deliberate unbalancing of the economy is the best development strategy, and that if the economy is to continue progressing, development policy should manage tensions, disproportions, and disequilibrium. Instead of focusing on balanced growth, the primary goal should be to manage the existing imbalances, that can be seen in profit and losses. Hence, the sequence leading away from equilibrium is a perfect pattern for development. Inequitable development of different sectors frequently makes way for rapid development. Underdeveloped industries are encouraged to concentrate on encouraging more developed industries (Hirschman, 1958; Hirschman 1969). Benjamin Higgins propounds “Deliberate unbalancing of the economy, in accordance with a pre-designed strategy is the best way to achieve the economic growth”. H.W. Singer observes, “Unbalanced growth is a better development strategy to concentrate available resources on types of investment, which help to make the economic system more elastic, more capable of expansion under the stimulus of expanded market and expanding demand” (Rogers and Gentry 2019; Higgins 1954).

The lead sector generates dramatic technological progress in commercial and industrial leading sectors, which serve as a platform for global political leadership (Reuveny and Thompson 2001). Because of the presence of their leading sectors, the world's leading economies, e.g. Britain in the nineteenth century, experienced robust growth which enabled them to dominate the global economy.

A parallel view was that of the “big push” propounded first in the 1950s when the newly independent developing countries were looking to quickly attain high rates of economic growth in order to improve living standards. This was put forward first by Rosenstein-Rodan who argued that rapid industrialization of many sectors of the economy can be profitable for them all even when no individual sector can break even when industrializing alone (Rosenstein-Rodan 1943; Rosenstein-Rodan 1961). Kevin et al. (1989) explore conditions under which the theory of the big push can lead to rapid industrialization in a LDC. Such a big push is possible in economies in which industrialized firms capture in their profits only a fraction of the total contribution of their investment to the profit of other industrializing firms, thus generating positive spinoffs for each industry’s industrialization (Murphy, Shleifer and Vishny 1989). However, Easterly (2006) is sceptical of the possibility of the big push. In a related paper Sachs and Warner (1999) argue that if the theory of the big push is applicable then resource booms in developing countries should be accompanied by rising per capita incomes, which has not often been observed. However, this may have happened because of Dutch disease effects of resource booms (Pasaribu 2019). Matsuyama (1992) emphasizes the importance of market size and entrepreneurship in the success of big push, whereas Trindade (2005) stresses the key importance of exports and being open to international trade in ensuring the success of efforts at the big push.

In the present context, the development of MIC would form a key element of unbalanced growth and the contributions that this sector will provide to the rest of the economy suits well the requirements of the big push. Since the size of India’s market is large, the defence and armaments sector can potentially provide a committed market. This is because India’s internal security and external security environment require a much more pronounced military presence than has hitherto existed if India is to defend itself adequately and fulfil its role as an important bulwark of peace and stability in the Indo-Pacific and beyond. There are strong complementaries between India’s national security strategy and industrialization strategy. Thus, Matsuyama’s market size requirement will be fulfilled. India also has considerable entrepreneurship in the area of rocket and missile technology where it has significant cost advantage. This should also keep India's export options robust and the existing FDI regulations which allow for 100% foreign investment in defence would also satisfy some of the other conditions that the extant literature has stipulated to ensure the success of the big push strategy. Thus, the MIC could provide India the "big push" it still needs for attaining high industrial growth.

III. India's Security Challenges, Strategic Outreach and Great Power Ambition:

That India needs to develop a defence industrial base is evident given the mismatch between the security threat that India faces and its defence expenditure and capability.

Table 1 indicates US, China, India, Russia and the UK (in that order) are the top five spenders on defence.

Table I: Top five countries in terms of defence expenditure

Country	GDP/Nominal (Million $) 2020	Percentage Increase in 2019-2020	Defence Expenditure (Billion $) 2020	Defence % of Total GDP 2020
US	21,433,226	4.4	778	3.7
China	14,342,933	1.9	252	1.7
India	2,891,582	2.1	72.9	2.9
Russia	1,692,930	2.5	61.7	4.3
UK	2,826,441	2.9	59.2	2.2

Thus, the US continues to lead defence expenditure followed by China, India, Russia and the UK. In 2020, the US defence expenditure increased by 4.4 % to $778 billion, China by 1.9 % to $252 billion, India by 2.1 % to $72.9 billion, Russia by 2.5 % to 61.7 billion, and the UK by 2.9 % to 59.2 billion (SIPRI 2021). India increased spending but not commensurately with its security threat and the growing strategic interest beyond its periphery.

Table 2 and Table 3 provide historical and comparative information on India's manufacturing sector.

Table II: Manufacturing as a share of GDP and growth rates: India and select other countries

	Share of manufacturing in GDP (average)					Manufacturing sector growth (average)				
Country/country group	1970-79	1980-89	1990-99	2000-09	2010-15	1970-79	1980-89	1990-99	2000-09	2010-15
India	15.23	16.03	15.79	16.13	16.79	4.31	5.77	5.84	7.5	7.13
China[1]	36.75	35.69	32.61	31.91	30.80	11.31	10.60 (10.7)	12.93 (14.7)	11.24	8.86
East Asia and the Pacific (excluding high income)[2]		29.70	26.31	24.74	23.61					
Europe and Central Asia (excluding high income)[3]				17.82	15.22				3.82	3.82
Low and Middle income[4]	26.32	26.33	23.63	22.08	22.04					

Source: Authors' computation based on data from World Development Indicators 2017.
N.B. 1. Chinese industry, rather than manufacturing, growth figures are reported. Last figure for share of manufacturing in China's value added is average of 2010-2013. Figures in parenthesis indicate average annual growth rate of manufacturing for Chinese manufacturing in 1980-90 and 1990-98 respectively obtained from UNIDO (2001).
2. Manufacturing sector growth rate WDI data for these countries are not available for these countries.
3. Some data are missing for these countries.
4. WDI data on manufacturing sector growth rates is not available for these countries.

Table III: India's Manufacturing Sector in Comparative perspective for 2010

Country	Manufacturing Gross Value Added in 2010 ($ billion)	Rank in 1990	Rank in 2000	Rank in 2010	Manufacturing output as Percentage of world total in 2010
China	1,923	8	3	1	18.9
USA	1,856	1	1	2	8.2
Japan	1,084	2	2	3	
Germany	614	3	3	4	6.0
Italy	308	4	6	5	3.0
Brazil	282	12	12	6	
Korea	279	13	8	7	
France	268	7	7	8	2.6
UK	231	6	5	9	2.3
India	226	16	13	10	2.2
Russia	209	9	16	11	
Mexico	179	14	9	12	
Indonesia	176	25	10	13	
Spain	170	10	11	14	

Source: Authors' compilation from Twelfth Plan document, Planning Commission of India and other government documents.

Lemahieu and Leng compute an index of power for the Asia Pacific region based on a weighted average of eight indicators: (i) Economic capability, (ii) military capability, (iii) resilience, (iv) future resources, (v) economic relationships, (vi) Defence networks, (vii) diplomatic influence and (viii) cultural influence (Lemahieu and Leng 2021). The highest possible value for this index is 100. In 2020, the US with a score of 81.6 was the most powerful country in the region with power trending down. China was the second most powerful with a value of 76.1 for this index. China's power was relatively stable. Japan was at number 3 with an index value of 41, trending downwards. India was at number 4 with an index value of 39.7 (trending down). Russia was at number 5 with an index value of 33.6 trending down and Australia was at number 6 with an index value of 32.4 (trending upward). Apart from the large gap between the power positions of India and China, India does not yet cross the threshold value of being a major power.

India's defence industry readiness and modernization must be viewed in the context of its security threat environment. To begin with, India's relationship with Pakistan has been tense and hostile, since partition in 1947. This inimical relationship is characterised by three full-fledged wars, one implicit war in Kargil, two major incidences of military stand-offs, continuing low-conflict border skirmishes, and military deadlocks. Despite the diplomatic and political initiatives and confidence-building measures to improve the Indo-Pak relationship, attributes such as the memories of violent partition, unresolved complex border disputes, political incompatibility, mutually incompatible positions on nationhood, and the lack of substantial trade and business ties between the two countries, contribute to the rivalry's persistence (Paul 2006; Korbel 1954; Brecher 1968; Sharma 2012). Although neither India nor Pakistan, as nuclear power nations would fight a conventional or nuclear war, the possibility of war remains. Contrary to the deterrence theory, India and Pakistan's respective military strategies, such as India's Cold Start Doctrine (CSD) and Pakistan's Strategic Equivalence, differing views of Indian and Pakistani strategists about the dangers of war, asymmetrical expectations of how a war would develop, and miscalculation arising from ballistic missile defence systems, make them vulnerable to war (Sagan 2004; Sharma 2012; Sagan 2009). India's nuclear program, which goes beyond the nation's stated policy of credible deterrence and no first use of nuclear weapons to counter security threats from Pakistan's nuclear strategy, keeps the country vulnerable to a war-like situation (Clary and Narang 2018/19).

Pakistan's continued inaction in combating terror network on its soil, as well as its support for cross-border terrorism and border misadventure, is deteriorating India-Pakistan relations. Recently India has taken a tough stance on Pakistan's border misadventure, as evidenced by the surgical strike in response to the Pulwama terror attack, discrediting Pakistan in international forums for its financial support to terror outfits and failure to crack down on terror networks, and repealing Article 370, which granted Jammu and Kashmir special status. However, Pakistan's nuclear arsenal continues to expand, with new warheads, delivery systems, and a thriving fissile material industry. A review of a large collection of commercial satellite images of Pakistani army garrisons and air force bases reveals what appear to be mobile launchers and underground nuclear power plants. Moreover, Pakistan is developing numerous delivery systems, four plutonium production reactors, and expanding uranium enrichment facilities. Its stockpile is expected to grow significantly over the next decade (Kristensen, Norris and Diamond 2018). Pakistan's successful test of a nuclear-capable, submarine-launched cruise missile (SLCM), Babur 3, with a range of 450 km provides it a "credible second strike capability bolstering its nuclear force structure (Clary and Panda 2017). Pakistan possesses 160 nuclear warheads, surpassing India's 150 nuclear warheads (SIPRI June 14, 2021).

The failure of the establishment of regular diplomatic dialogue between the two countries perpetuates hostility between the two nations. Peace process efforts are stalled since the 2008 Mumbai terror attacks. The Indian government, with its strong political base, frowns on granting concessions or having a soft approach to any of Pakistan's misadventures. It advocates a tough stand on Pakistan and zero tolerance on terrorism as a core principle of the Bharatiya Janata Party (BJP). Pakistan's continued anti-India rhetoric and postures, and deepening security partnership with China to contain India continue to dim the long-time peace prospects. With the overwhelming support for the Modi government's surgical strikes and Balakot airstrikes on the LoC in 2017 and 2019, any terror incident could lead to war between the two countries.

There is a strong possibility of China joining Pakistan. A comprehensive China-Pakistan All-Weather Friendship, in addition to China's India encircling strategy and growing defence power, adds to India's security concerns. The possibility of future conflict with both China and Pakistan is not mere speculation. India has clashed with both countries. China endorses Pakistan's claim to J&K and continues to block UN resolutions against Pakistan on terrorism, including the resolution designating Masood Azhar as a terrorist (The Times of India November 2, 2017). Pakistan backs China's territorial claims to Tibet, Taiwan, Hong Kong, and Xinjiang. This trend is visible in recent years in the diplomatic spat between India and the combined efforts of China and Pakistan at international forums, particularly UN, as well as China's use of veto power against India at UN Security Council. China has in the past stepped in on many instances to block the listing of Pakistani terrorists at the UNSC sanctions committee. China raised the Kashmir issue at the UN Security Council at least three times in 2019 and 2020, calling for discussions after India repealed Article 370 (Krishnan 2020).

The friendship between China and Pakistan is also visible in their arms trade, military drills, and nuclear ties. Since 1963, when the two countries signed a border agreement that divided territory in Pakistan-occupied Kashmir (POK), China has provided Pakistan with missile and nuclear technology. Over the last decade, Pakistan has become China's client state, and is the largest recipient of the Chinese arsenal (Gao 2020).

Both countries have increased their joint military exercises in recent years, and target India. The two countries have developed a series of joint exercises spanning navy, army, and air force, including the recent “Sea Guardians-2020,” the first joint naval exercise featuring anti-submarine and marine rescue training in the north Arabian Sea in January 2020, the Shaheen (Eagle)-IX air drill in Sindh province less than 200 kilometres from the Indian border, and joint military exercises in Tibet marking 70 years of their friendship along the Line of Actual Control (LAC), weeks ahead of the first anniversary of the bloody clash in Ladakh’s Galwan valley (The Global Times 2020). These military drills, which are intended to improve cooperation, interoperability, and mutual trust amid tensions surrounding the common enemy, also send a blunt message to India. During his November 2020 visit to Islamabad China's defence minister, signed a Memorandum of Understanding (MoU) between China and Pakistan aimed at strengthening defence ties between their armies (Aamir 2020). The China-Pakistan defence cooperation has accentuated amidst the deteriorating China-India relationship, and the deepening India-US comprehensive strategic partnership.

The worst scenario could be both China and Pakistan joining forces to form a hostile alliance against India. Emphasizing this concern, Chief of Indian Army Staff, Manoj Mukund Naravane, remarked in January 2021, “There is no doubt that Pakistan, China threat exists not just in theory, but very much on the ground. Their collusive approach against India poses a challenge” (The Economic Times 12 January 2021). On March 4, 2021, Chief of Defence Staff Gen Bipin Rawat reiterated the growing China-Pakistan threat, emphasizing the importance of studying transformational concepts and being prepared for threats to military primarily from China and Pakistan (The Indian Express 5 March 2021).

Despite growing bilateral trade ties (in which India has a large balance of trade deficit), India's relationship with China has been strained since the 1962 Indo-China War. The 2013 border standoff in Ladakh, the 2017 Doklam standoff, and the most recent Galwan Valley clash in June 2020 all demonstrate their long-standing tense and managed rivalry. Despite peace talks, this relationship remains marred by fundamental conflicts of interest, border disputes, and security quandaries (Raghavan 2019; Bloomfield 2021).

Furthermore, China is using multiple strategies including diplomatic manoeuvring, favourable economic aid and investment, port and base construction, and arms sales to encircle India in the Indian Ocean and small island nations. What is concerning is that these commercial ports and bases could be used for military purposes by hostile economically and militarily assertive China next door to India.

China is encircling India through its String of Pearls: a network of military and commercial facilities in the nations along its sea lines of communication, which stretche from the Chinese mainland to Port Sudan in the Horn of Africa. The sea lines run through several major maritime choke points such as the Strait of Mandeb, the Strait of Malacca, the Strait of Hormuz, and the Lombok Strait as well as other strategic maritime centres in Pakistan, Sri Lanka, Bangladesh, the Maldives, and Somalia. The String of Pearls is now being pursued as part of the larger and more ambitious Belt Road Initiative (BRI), of which the China–Pakistan Economic Corridor (CPEC) is a key component. Through these strategies, China has made inroads into India's South Asian neighbours and the island nations of the Indian Ocean Rim by establishing ports and bases in Pakistan, Sri Lanka, the Maldives, Myanmar, Thailand, Seychelles, Mauritius, and a military base in Djibouti. Under CPEC, China's Gwadar Port in Pakistan threatens India from the Arabian Sea. The CPEC passes through the Gilgit-Baltistan region in the POK, which India claims as its integral part, located close to the Siachen Glacier as well as to Ladakh, the current flashpoint between India and China. This has consolidated China’s strategic position and can be used to launch an offensive in the event of a Sino-Indian conflict. China’s help in the development of the port of Chittagong, in the heart of the Bay of Bengal, and its request to Bangladesh to allow a naval base near Chittagong; the development of a multi-billion-dollar deep sea port by China in Kyaukphyu Port in Myanmar on the coast of Bay of Bengal; China’s move to construct a canal in Thailand across the Isthmus of Kra connecting the South China Sea to the Bay of Bengal, and the Hambantota port in Sri Lanka helps China to consolidate its position in encircling India and give its forces immediate and unfettered access to the Bay of Bengal and Indian Ocean (The Global Times 8 November 2018; Chinoy 2021; Patranobis 2018). BRI, as a whole, lacks transparency and is geared toward advancing China’s interests through “debt trap” financing. The Hambantota port fiasco in Sri Lanka is an example and has exposed China's debt trap financing strategy which is concerning for India as China, (unsuccessfully) pushed for a naval base and requested Sri Lanka to allow one of its nuclear submarine dockings at Hambantota. The commercial rationale of its String of Pearls, CPEC, and other projects under BRI around India's periphery do not hold ground and can be used for military purposes during conflict, posing a serious security threat for India.

Some portray China as a benign emerging world power and goods providing nation with an obligation to the Asia-Pacific region's stability, suggesting that China's grand strategy is defensive rather than offensive (Wang 2016). In his address to the Belt and Road Forum for International Co-operation in Beijing, Xi framed the BRI in terms of "peace and co-operation", "openness and inclusiveness", "mutual learning", and "mutual benefit" (CGTN,15 May 2017). Notwithstanding China's interests and claims of benign power, its posture in the Indian Ocean and its naval presence in these waters is seen by India as a security threat (Brewster 2018; Lintner 2019). Since BRI's inception, India has been opposed to it and views it as China's expansionist agenda, an India encircling strategy and China's challenge as a viable alternative to US in terms of global leadership. This is concerning for India and China's debt diplomacy is intended to lure India's South Asian neighbours (Mohan 2012).

China has recently emerged as a major player in the defence industry along with US, Russia, France, and Germany, and a top arms exporter since 2014 (Wezeman, Fleurant, Kuimova, Tian and Wezeman 2019). What concerns India is that a significant portion of China's defence products are exported to Pakistan. Between 2007 and 2018, China exported 16.2 billion units of ammunition, mostly to Asia, the Middle East, and Africa, with Pakistan topping the list with 6.57 billion units. The majority of China's arms exports are to countries covered by the BRI and India's South Asian neighbours (Shao 2019).

Developments in Afghanistan have increased India's security concerns. Taliban has overtly taken a neutral stance on Kashmir, stating that it is an 'internal and bilateral' matter between India and Pakistan, and has praised India's contribution to Afghanistan's reconstruction efforts, but India's security threat remains. Pakistan has played a key role in the ascension of the Taliban to power in Afghanistan. Major figures in the newly established government in Afghanistan are on terror watch lists of the US and the UN. Pakistan's link with the Taliban goes back to the 1990s, and the Pakistani state, with its strong Islamist motives, has allowed Islamist forces within the Pakistani community and state agencies to grow ties with the Taliban(Behuria 2007). Despite being at war with the forces of radicalisation and Talibanisation within the country, Pakistan supports peace talks while maintaining ties with the Taliban amid efforts to counter spillover of Afghan civil war into Pakistani territory. Islamabad's strategic security objectives in Afghanistan continue to mitigate Indian influence.

The evidence of Pakistan's mounting support for Taliban insurgents, its military and intelligence agencies' ties with Taliban leadership, and the celebration of the Taliban takeover of Afghanistan by the Lashkar-e-Taeba (LeT) and Jaish-e-Mohammad (JeM)- terror outfits responsible for numerous terror attacks in India - are all concerning for India (Ganguly 2021). There are genuine concerns about some of the weapons and military equipment left behind by US forces, as well as trained terrorist cadres from Afghanistan making their way into J&K as a result of ISI's ties to the Taliban and groups active on the state's western border (Ali, Zengerle and Landay 2021).

The US exit from Afghanistan and possibility of Pakistan and China cooperating to gain a stronger foothold in Afghanistan will erode India's influence and pose serious security challenges on India’s northwestern border. China has been eyeing Afghanistan to pursue its larger geopolitical goals and has been actively collaborating with Afghanistan on the construction of the Peshawar-Kabul motorway which would benefit China's trade in the region as well as the extraction of natural resources in Afghanistan (Grosman 2021). Afghanistan may have nearly a trillion dollars in extractable rare-earth metals within its mountains (Choi 2014). A sustained positive China-Taliban engagement may further enable Beijing to make broad economic and security inroads into Afghanistan and Central Asia. China has already engaged Pakistan in its ambitious BRI under the CPEC and will seek to team up with Islamabad to engage or perhaps control Taliban to achieve their economic and strategic goals. All these undermine Indian interests and pose security challenges.

Afghanistan has also become a testing ground for India's ambition of a big power and ability as a security provider, as the region requires India to demonstrate its influence and play a constructive role in the region's stability. India has made significant investments in Afghanistan's reconstruction efforts, including assistance in the development of infrastructure, schools, and hospitals. India’s $3 billion aid since 2001, the largest regional aid and the fifth largest in the world, and its commitment of approximately 150 projects totalling $80 million for Afghanistan in November 2020, demonstrating New Delhi’s stake in the country (Roy, 2020). India is only rational in wanting to be prepared to deal with both countries at the same time, lest its hostility toward either of the two nuclear rivals escalate into a war (Sharma 2012).

Notwithstanding de-escalation overtures, China’s military preparedness along LAC continues to increase, e.g., integration of army and air force elements with 10 additional PLA air defence units in its Western Theatre (Tibet and Xinjiang), forming a combined Air Defence Control System (PLAAF) that can potentially control all air defence network assets along the LAC. Furthermore, China-Pakistan joint defence drills in Tibet near LAC include targeting warships, planes, missiles, and unmanned aerial vehicles (UAVs), the deployment of Chinese air-defence system of low-to-medium altitude (LY-80), anti-ship cruise missiles (YJ-81, YJ-82, and C-802) .pose serious security risks to India (Banerjee 2021). Though India has offensive capability against Pakistan, its defense capability is asymmetric when compared to China. India has an advantage in some sectors, but overall remains vulnerable to China, not to mention the joint Chinese-Pakistani force.

India’s quest for a rightful place and desire to play a meaningful role in global governance for a secure and stable world, also underscore India's need to emphasise development of arms industry. India's ambition of great power is driven by a combination of factors including the need for the development to lift millions of people out of poverty, quest for energy and resources for its growing economy, address security challenges, protect its economic and strategic interests, and in tradition of its ancient civilisational glory .

Though achieving a great power status has not been an explicit agenda of India since independence in 1947. All Prime Ministers from Nehru to Modi have expressed India’s desire for a great power status to play a meaningful role in the global affairs (Colley and Suhas 2021). The French Indologist Sylvain Levi on the eve of India’s independence, argued that the “indelible imprints” that India has left on “one quarter of the human race” from Siberia to Java and Borneo, and from Oceania to Socotra, over its several millennia long history had given it “the right to reclaim in universal history the *rank* that ignorance has refused her for a long time and to hold her place among the *great nations*.” For Nehru, India was one of the four great powers of the postwar and post-colonial international system along with the US, the Soviet Union, and China (Nehru 1946). Almost half a century later, Prime Minister Vajpayee took the decision to make India a nuclear power with Pohkran Atomic Test in June 1998 (Vajpayee 1998) which was nurtured by the self- exceptionalism and belief of civilisational superiority by Indian elites and average Indians alike (Cohen 2000), the first step towards great power status. Since then, India's political and defence class have concurred that India must progress to great power status. From the beginning of his prime ministerial campaign in 2013, Modi has been explicit about making India a great power and has often invoked the ancient glory of India to motivate Indians towards progress and glory, and engaged the world for India's rightful place in the world (Modi 2013), and since 2015 India's intent to be a great power became clear (Horimoto 2017).

India has expanded its strategic reach beyond its region, especially in the Indo-Pacific—the hub of economic activity and great power competition in the twenty-first century and (Medcalf 2020; Ladwig III 2010; Pardesi 2015; Brewster 2012) a key strategic player in the US-backed Indo-Pacific strategy, and a re-emerging great power capable of playing key roles in ensuring a rules-based order and a free, open, prosperous, and secure Indo-Pacific. India's strategic outreach in the region began with the Look East Policy in the 1990s and is now being pursued vigorously under the Act East Policy, as evidenced by the frequency of military exercises under bilateral, trilateral, quadrilateral, and multilateral security arrangements with major stakeholders in[i] the region, including the United States, France, Japan, Australia, and Vietnam. In the face of the emerging strategic challenges posed by a militarily assertive and expansionist China to both India and the Indo-Pacific order, India's commitments and expectations as a re-emerging great power have grown in the region(Bekkevold and Kalyanaraman 2021; Sharma 2019; Mohan 2012; Malik 2011). A growing economy, as well as the "push factor" of Chinese rivalry and the "pull factor" of the US's rebalancing strategy toward the Indo-Pacific, all contribute to the focus on defence.

India's quest for great power is challenged by China. The India-China great power tussle became visible during the passage of the US-India nuclear deal (strongly opposed by China). Beijing's campaign against India's inclusion in the Nuclear Suppliers Group (NSG) and blocking of India's inclusion in the NSG in 2016 reflecting China's stalwart strategy to undermine India's rise added to the intensification of their competition. (Lee, Kim, & Ji 2021; Sharma 2017; Tellis 2015). On the strategic level, the emergence of the Indo-Pacific geopolitical construct and the revival of the Quadrilateral security arrangement -US, India, Japan and Australia- and the US and advanced industrialised nations' move to fix the over-reliance of global supply chain on China during the COVID-19 outbreak have further intensified India-China great power competition. India is considered as significant in the great power balance, both economically and strategically.

Furthermore, India is seen as a security provider (Medcalf 2012) and a significant strategic balancer in emerging security concerns arising from the China's growing power and assertion in the Indo-Pacific. President Trump's November 2017 articulation on the Indo-Pacific was widely seen as something that would usher in a new (US-China) Cold War. This led to the Indian PM spelling out the Indian vision of Indo-Pacific as an enabler for a common pursuit of progress and prosperity, which is not directed against any country and based on principled commitment to rule of law.

Though the recent Galwan Valley clash is seen primarily in the context of a long-standing border dispute, the conflict is driven by the India-China strategic rivalry in the Indo-Pacific. China views India as an imperial rival, though not at par, interfering in Tibet and obstructing China's ambition of the dominating the Indo-Pacific and eventually the world (Pardesi 2021). India has emerged as a significant strategic and economic player, and the re-emergence of the Quad and the combined efforts of the like-minded democratic nations to play India a significant role in the Indo-Pacific, requires India to be militarily powerful.

The defence industrial base is significant. Yale historian of international relations Paul Kennedy says, a credible great power must have a solid defence industry base (Kennedy 1987). Despite being highly ranked on several major indicators considered to be great power status, the larger perception of India's international stature appears to be undermined by a lack of its strategic culture which is further reflected in inadequate defence industrial base, one of the foremost conventional attributes to measure a country's great power status (Cohen and Gupta 2012; The Economist 2013). Studies show that defence capability stemming from economic development helped Western democracies to defend their interests and overcome their adversaries during security challenges (Beckley 2010). India is no exception.

IV. India's Defence Sector: Lacking a Clear Cut and Long-Term Policy for Structural Reforms and Policy Implementation

Despite the continuing security threat, India's defence industry struggles to keep up with multiple security challenges and expanding strategic interests. India occupied the top arms importer position for over a decade till 2013. Between 2004-08 and 2009-13 India's share of the volume of international arms imports increased from 7% to 14% (SIPRI 7 March 2014).

Since 2014 Saudi Arabia with 12 % share in the global arm imports has been topping the list followed by India with a share of 9.5%. Indian arms imports fell to 24% between 2009-13 and 2014-18. This has been partly due to delays in deliveries of fighter jets and submarines produced under license from Russian and French original equipment manufacturers. Some analysts believe that this is because of India's focus on developing indigenous defence industry. However, defence experts caution against this view. The domestic defence production as factor in the arms import reduction will be significant only if India stops importing a particular weapon system because it was being manufactured locally under the 'Make in India' initiative.

Another noticeable trend in India's defence industry is the diversification of India's arms acquisition sources. Russian arms products continue to dominate India's armoury, estimated to be more than 70 percent, though there has been a consistent decline in India's arms import from Russia falling 42% between 2009-13 and 76 % in the years between 2014-18 . Between 2014-18, India's arms import origins shifted to the US, France and Israel (The Hindustan Times 12 March 2019), with the US becoming India's top arms supplier (Rossiter and Cannon 2019; Sharma 2013). American defence giants such as Lockheed Martin and Boeing have been exploring potential business partners in India, attracted by the low-cost, well-educated, English speaking and technically sound workforce. The defence industry ties have also seen a robust strategic partnership of India with the US, France and Israel (INDIA Today 7 January 2021).

Though relying on imports from first-tier arms-producing countries has enhanced India's defence capability, it has constrained indigenous research and development. Despite technology transfer and offset arrangements, India's defence industry continues to lag behind that of developed nations.

SIPRI report also shows that India's arms imports decreased by 33 % between 2011-15 and 2016-20 (Business Standard,15 March 2021). However, this drop seems to have been mainly due to its complex procurement processes, combined with attempts to reduce dependence on Russian arms.

For a long time, India's defence industry has been struggling to meets its demand and modernize despite this being the stated focus for more than a decade. Several factors contribute to this budgetary pressures, lack of clear cut and long term policy vision, bureaucratic hurdles, ignorance of military perspective in policy making, limitations on research and development (Cohen and Gupta 2010). Even the defence procurement process has been hindered by the lack of infrastructure and resources in the domestic procurement, and bureaucratic hurdles resulting friction and increased transaction costs where the Ministry of Defence deals with foreign suppliers (Kundu 2021) The excessive dominance of bureaucrats, foreign affairs personnel and politicians in defence planning have created a disconnect between the military capability and foreign policy goals, incompatibility between bureaucracy and military establishment, resulted in a delayed defence policy and often lacked a clear-cut assessment of India's defence needs.

India's current military structure is inherited from British rule and is resistant to change without long-term policy effort (Pant 2016). Currently there is no sign of noteworthy systemic transformation. Indian defence industry is marred by research and development works exceeding time frames and huge cost and time overruns in domestic production. The Indian government took a significant step in 2002 by opening defence industry to private players which welcomed 100 percent private equity and 26 percent FDI. Since then, India has increased FDI limit to 100%, allowing 74% through the automatic route and the remainder through the government route. Despite spending nearly 10% of its 2020 government budget on defence, India has only been able to attract a handful of foreign companies to set up manufacturing plants in India in partnership with an Indian company and has lagged behind other countries in attracting foreign investment, despite an attractive defence market.

India's defence industry business model, in which products are designed before potential buyers are found, creates uncertainty; national security concerns, particularly when complex technology is involved, and approval is time consuming and uncertain. The government also encourages public sector procurement and promotes domestic production while also aiming to attract FDI from the US-based companies. The US has the world's five largest arms manufacturers aiming to tap India's defence market. However, these are constrained by the US Arms Control Export Act 1976, which makes it difficult for them to share critical technologies. These factors hamper FDI flow into India's defence sector (Choudhury 2021).

V. **Conclusion:**

The term "military industrial complex" was popularized by President Eisenhower to describe the nexus of legislators, businesses, and government officials, as well as their powerful lobbying clout and emphasized the importance of defence industry as leading contributor to US economic growth. The US MIC witnessed enhanced production of weapons and defense technologies, which was backed by increased military spending by the US federal government. During the first half of the twentieth century arms manufacturing in the US shifted from public corporations to private firms. These businesses not only contributed to GDP growth but also created a large number of jobs.

In popular parlance, MIC has some unfavorable connotations since it is associated with an expansion of war outside US borders. In sharp contrast, India faces serous security challenges all along its land borders with China and Pakistan, an incipient threat from the Taliban in Afghanistan and Chinese intrusions into a number of areas in the Indian Ocean. India also has a major role to play in maintaining peace and security in South and South-east Asia region and, potentially, globally. Furthermore, except for its role in liberating Bangladesh from Pakistan in 1971 independent India has never engaged in wars on foreign soil. At the same time, India’s industrial sector also needs urgent rejuvenation. Thus, the MIC takes on a different meaning in the current Indian context.

In India’s case, the defence industry has the potential to take the lead, propelling India's economic growth and generating employment. India requires a MIC. The role of manufacturing in job creation has been significant. The ‘Make in India’ initiative is designed to create jobs. India needs a strong domestic manufacturing sector which will protect it from the international economic and political disruptions. This is important from national security perspective where the risk of manufacturing incapability can make country vulnerable. A country’s over-reliance on imports and substantial manufacturing trade deficit further exposes a country’s national security which may occur due to exchange rate fluctuations, trade embargoes, supply chain disruptions, natural disasters, climate change or pandemics as evident during the COVID-19 outbreak. India is not immune to these disruptions given its weak manufacturing sector and over-reliance on defence imports.

Recently steady progress has been made in the development of India's indigenous military industry, including exports. India's defence exports for 2019 entered in the global top 25 arms exporting nations. India is now exporting arms to 42 countries. Under the "Make in India" program launched in 2014, India set an export target in February 2020 of $5 billion annually within five years (Roche 2020). India managed more than double value of its arms exports between FY2018 and FY2019. In 2021-22, India's defence export touched the highest ever witnessing an increase of 54.1 over the year 2019-20 (The Economic Times 2022). India has upped its target even higher, with a $5 billion defense export target by 2025. India has a strong capability for producing weapons that, if correctly utilised, could make the nation a major player in the world arms market (Behera 2022).

The recent developments in India's defence industry under the Modi Government is a shift from the defence v/s development debate to a more inclusive policy of defence and development. However, India's goal of self-reliance in the defence sector and the development of defence sector as the lead sector will need much more government and private sector focus. Despite the emphasis on privatization and public-private partnerships, the goal of producing 70% of defence products domestically is difficult. India needs to reinvent its military and manufacturing strategies in an integrated manner.

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