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Defence Partnership**

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INDIA AND THE UNITED STATES: **New Directions in Defence Partnership**

ABSTRACT

Over the last decade, defence cooperation between India and the United States has become one of the centrepieces of the two nations' bilateral relations. Indo-US defence ties are driven by the imperatives of not only commerce but, more importantly, geopolitical strategy. This paper analyses the structural, legal and policy challenges that limit deeper cooperation between India and the US and identifies potential areas for both countries to leverage each other's strengths. It argues that the strategic interests of both India and the US lie at the intersection of a military-strong India, complementing shared security goals of a stable and a multipolar Indo-Pacific.

INTRODUCTION

The past decade has been a period of constant, strategic flux for Asia. Such changes have been driven partly by the rise of India and China, and the relative decline of the US has also had its own impact on the Asian security balance. Of enormous concern is the rise of China, particularly its rapid military modernisation, which has created uncertainty in the region. This in turn has led to the strengthening of India-United States relations. The US Rebalance to Asia, in the backdrop of its military engagement in Afghanistan and Iraq, relies heavily on a strong India that is able to serve as a net security provider in the region. This has led to India and the US strengthening their defence ties. A corollary pattern is that of India diversifying its military procurement: while there used to be a predominant dependence on Soviet supply, India is beginning to look to the US as a favoured partner.

In the current context of shifting power equations, this paper argues that Indo-US defence partnership is not only about defence commerce; rather, it flows from the rationale of geopolitics. This essay examines the changes in the security environment in the post-Cold War era which have led to the ebbs and flows in India-United States defence partnership. While arguing that both India and the US have a huge potential to leverage each other's strengths to expand defence cooperation, the paper analyses the structural, legal and policy challenges that impede deeper cooperation. Possible cooperation in the realm of air power diplomacy and aircraft carriers is also discussed. The paper concludes by arguing that the US would continue to play a central role in Asian geopolitics and thus would be a critical player in bolstering India's military preparedness. Strategic interests of both countries lie at the intersection of a military-strong India, and the complementary security goals of America of a stable and multipolar Indo-Pacific.

AFTER THE COLD WAR

Before examining the contours of India-US defence cooperation, it is important to highlight how the end of the Cold War brought structural and political changes that led both countries to overcome mutual suspicion and start becoming 'strategic plus partners'.¹ The end of the Cold War marked a major shift in world politics. It was assumed shortly after the collapse of the Soviet Union that the old bipolar world order would beget a multipolar world with new power centres in Japan, Germany, China and a diminished Russia. This did not happen, however, and global politics continued to witness the US as the unchallenged super power.²

Over the four decades of the Cold War, the sole determinant of US foreign policy was the containment of Soviet ideological expansion. As the US sought its anti-Soviet allies, however, India chose to chart an autonomous path and uphold the principle of neutrality in world politics.³ In the 1950s and 60s, the US regarded Pakistan as a useful ally in its crusade against communism while India under then Prime Minister Jawaharlal Nehru viewed the sale of US military hardware to Pakistan as a form of 'intervention' that brought the Cold War to South Asia.⁴ As India established principal defence relations with the Soviet Union, importing MiG-21 aircraft, several policy-makers in the US viewed India's policy of non-alignment as, indeed, partisanship with the

Soviet Union.⁵ Thus, several strands of US policy-making towards India seemed to have stemmed from this implicit belief among US policy-makers that India may be a revisionist power bent on restructuring the international system at the expense of America's global interests.⁶ The lack of congruence on security objectives was one of the central reasons that defined India-US estranged relations during the Cold War period. American diplomat and foreign-policy expert, Dennis Kux, in his seminal work, *Estranged Democracies* argued that the estrangement of security goals thus far prevented India and the United States from active cooperation in several spheres of security, including defence and military sales.⁷

As the 1980s came to a close and the Cold War thawed, India's external strategic environment was dramatically altered, compelling the country to make adaptations to its foreign policy orientation. The fall of the Berlin Wall in 1989, and the absence of a great power challenger to the US led India to warm up to Washington, especially in the most sensitive realm of politics: economics and defence cooperation. India's own liberalisation process that started in the early 1990s also helped cement closer partnership between New Delhi and Washington. From the US side, there was a greater understanding of India's important role in ensuring stability in South Asia. Moreover, after the Cold War, the two countries derived ideological strength from shared values including democracy and rule of law.

In the realm of defence cooperation, the first comprehensive effort to define a new defence relationship came with the proposal of army-to-army cooperation put forward in 1991 by Gen. Claude Kicklighter of the US Pacific Command. The 'Kicklighter proposal' focused primarily on consultative mechanisms, strategic dialogue, training and other exchanges, and visits by both senior and staff officers.⁸

The Kicklighter proposal of 1991 eventually paved the way for the first broad-based strategic cooperation between India and the US known as the 'Agreed Minutes on Defence Relations' between the United States and India, and signed in January 1995. The Agreed Minutes of Defence was referred to as the 'getting to know you' phase of cooperation as it continued with the procedural emphasis of the Kicklighter proposal. It provided a framework for enhanced level of defence cooperation with some modest sales and collaboration on testing and evaluation of defence hardware.⁹ However, this early beginning of cooperation received a major setback after India's nuclear

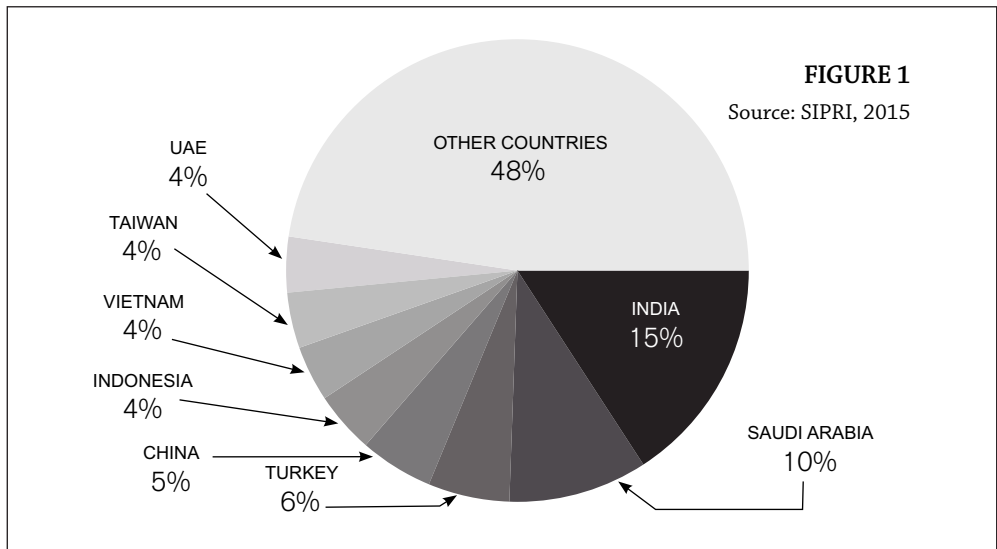
tests of 1998. India-US military cooperation immediately came to a halt and the US imposed economic sanctions on India and barred export of defence and technology to India. Indian weapons systems of US origin lay non-operational because spare parts were denied. India's international isolation seemed absolute.¹⁰

Although India faced sanctions, its nuclear tests provided a basis for intensive engagement with the United States and an opportunity to engage Washington in discussions relating to nuclear non-proliferation. The two countries benefitted from the extended series of talks between then Indian Minister of External Affairs Jaswant Singh and the US Deputy Secretary of State Strobe Talbott. The talks between Jaswant Singh and Strobe Talbott established the goal of a multifaceted partnership between the two countries, ranging from security and non-proliferation issues to disarmament. The two sides agreed to establish a Joint Working Group on Counter-Terrorism and underlined the need to broaden and intensify Indo-US discussions on security issues.¹¹ The progress in the talks culminated in then US President Bill Clinton's visit to India in March 2000.

EXPANDED ENGAGEMENTS: THE NEW FRAMEWORK OF 2005

The early green shoots of deepening India-US partnership first became visible as George W. Bush was elected to the US presidency in 2001. Even as he campaigned for the presidency, Bush already articulated the need for closer ties with India and Japan, as against President Clinton's focus on China during his tenure. Once in office, the Bush administration viewed India as a strategic partner in the Asian security balance as it treated China as a strategic competitor. The Bush administration saw it fit that India occupy an increasingly important position on the US foreign policy agenda as it pertained to Asia. India became a potential partner in maintaining stability in the Indian Ocean Region, particularly in fighting Islamic fundamentalism and checking China's ambitions.¹² It was the Bush administration's efforts that set the stage for civil nuclear cooperation between India and the US, which would eventually change the complexion of the partnership. The civil nuclear agreement dramatically sealed the evolving strategic collaboration between Washington and New Delhi, enabling the two countries to jointly address global security challenges.

Soon after the signing of the civil nuclear agreement, India and the US signed the New Framework Defence Agreement on 28 June 2005, signaling a new era for India-US relations reflecting their common principles and shared interests. These interests included maintaining regional stability and security, defeating terrorism and violent religious extremism, preventing the spread of weapons of mass destruction, and protecting the free flow of commerce via land, air and sea lanes. In pursuit of this shared vision of an expanded and deeper India-US strategic relationship, the defence establishment of both countries pledged that the two shall conduct joint and combined exercises and exchanges, collaborate in multinational operations in their common interests, strengthen the capabilities of the military, expand interactions with other nations in ways that promote regional and global peace and stability, and enhance capabilities to combat the proliferation of weapons of mass destruction.¹³



Under the aegis of the Framework Agreement, both countries strengthened cooperation in the field of defence supplies as well as industrial and technological cooperation. Between 2000 and 2013, some of the major items India procured from the US include Troop Carrier Ships INS Jalashva (1); C-130 J-30 Hercules (12); C-17 Globemaster III Heavy Lift Transport Aircraft (10); P-8 A Poseidon long range maritime reconnaissance aircraft (12); AN-TPQ37 Fire-finder Artillery locating radars (12); Harpoon Missiles

(20); Mk-54 MAKO ASW Torpedos (32); CBU-97 SFW Guided bombs (512); S-61/H-3A Sea King Helicopter (6); Apache Attack Helicopters (22); Chinook Heavy-Lift Helicopters (15); M-777 Light Artillery Howitzers (145); AGM 114K Hellfire Anti-Tank Missile (542); AGM 114L Hellfire Anti-Tank Missile (812); AN/APG- 78 Longbow Combat Helicopter (12); and FIM-92 Stinger Portable SAM (245).¹⁴ These major Indian acquisitions led the US to become the largest supplier of the most advanced munitions. However, cooperative defence production and joint research and development lagged behind in comparison.

Furthermore, India and the US regularly convened meetings under the India-US Defence Policy Group (DPG) to jointly review reports and progress of the four sub-groups – Military Cooperation Group, Joint Technology Group, Senior Security Technology Group, and the Defence Procurement & Production Group.¹⁵ Along with defence trade, there was an intensification of joint exercises, personnel exchanges, collaboration and cooperation in maritime security, and counter-piracy exchanges between the three services of India and the US.¹⁶ In September and October 2005, India and the United States conducted Malabar naval exercise on a large scale, which included for the first time both US and Indian aircraft carriers. In November of the same year, the US and Indian Air Forces conducted the third Cope India air exercise at Kalaikunda Air Station, West Bengal, signalling an immediate surge in military-to-military cooperation following the signing of the new agreement. The third Cope India exercise involved for the first time Airborne Warning and Control System (AWACS).¹⁷

It is estimated that since the end of the Cold War, India has conducted the most number of bilateral military exercises with the US—including Operation Geronimo, Yudh Abhyas, Cope India, Malabar, and Vajra Prahar.¹⁸ The extent of progress in defence cooperation stands as a noteworthy development in the history of India-US relations as this level of cooperation was unimaginable during the Cold War.

STRENGTHENING COOPERATION

The transformation in India-US relations has manifested most conspicuously in one of the sensitive spheres of defence cooperation. In the domain of defence engagement, the two sides have marched ahead towards achieving

strategic intimacy measured through the number of military exercises, record-level frequency of visits by senior defence officials, and heightened access to training and education programmes. The growing value of India-US defence trade—primarily through Indian purchase of US military equipment—is even more remarkable given the long history of Indian suspicions over the US' reliability as a defence supplier. If military-to-military cooperation and defence sales have thus far defined the success of bilateral defence cooperation, high-level state visits of Indian Prime Minister Narendra Modi to US, and of US President Barack Obama to India, have only added to the momentum of growing ties.

In January 2015, President Obama's visit to India as chief guest at the Republic Day celebrations reflected a new high in the evolving India-US Strategic Partnership; no other US head of state before Obama has been invited to the same occasion. Such renewed partnership is giving particular impetus to cooperative defence production. Henceforth, bilateral defence cooperation is posited to mature to one between 'equal partners' and move beyond a mere transactional buyer-seller equation. In January 2015, Obama and Modi renewed the 10-year Defence Framework Agreement entered into in 2005 by the governments of George W. Bush and Manmohan Singh.¹⁹ Reaffirming commitment to expand and deepen the bilateral defence relationship, Defence Minister Manohar Parrikar and the US Defence Secretary Ashton Carter signed the 2015 Framework for the India-US Defence Relationship as the two countries reviewed the existing and emerging regional security dynamics. On the renewal of the Framework Agreement, the former Defence Secretary Chuck Hagel stated that both countries would build on the growing momentum in defence cooperation over the last decade and simultaneously establish a new military education partnership to shape the next generation of military leaders.²⁰ Even though the text and the lexicon of the Defence Agreement signed in 2015 remained, to a high degree, the same as that of 2005, it is important to note the significance attached to the Defense Technology and Trade Initiative (DTTI). The DTTI, designed to resolve procedural issues to increase the flow of technology and investments, provided strategic heft to the renewed defence agreement. Along with four 'path-finder' projects, the two countries also worked on expediting the cooperation on jet engine, aircraft design, and construction and other areas.²¹

To sign the defence agreement in June 2015, Secretary Ashton Carter visited India's Eastern Naval Command in the port city of Vishakapatnam where he met with senior naval officials and toured the INS Sahyadri – India's indigenous stealth frigate.²² Carter's trip to India found a good fit with the US rebalance to Asia strategy, with underpinnings attached to the choices of countries he visited. The trajectory of Carter's visit through the Indo-Pacific – the Pacific Command in Hawaii, Singapore, Vietnam and India – is interesting to note as it reflects an unfolding of America's action-oriented engagement in the region. Also, Carter in his speech at the Shangri La Dialogue mentioned that his visits are a reminder of the regional demand for persistent American attention to the critical Asia-Pacific region.²³ In India, his visit to Vishakapatnam showcased his commitment to the growing cooperation of the two countries in the domain of maritime security.

If the Bush Administration steered US foreign policy in a direction which viewed India as a critical anchor of security in South Asia, the Obama administration encouraged India to play a more expansive role: that of net security provider in the Indian Ocean. A broader constituency exists beyond the White House that articulates on the need for India to undertake a more pronounced role in maintaining security and stability in Asia. The spirit of bipartisanship in the US Congress on cooperation with India is remarkable. Senators John Cornyn and Mark Warner, co-chairs of the India Caucus, for example, introduced an amendment to the US National Defense Authorization Act which expressed that the “upgraded, strategic-plus relationship with India” requiring Washington to “welcome the role of the Republic of India in providing security and stability in the Indo-Pacific region and beyond”.²⁴ The National Defense Authorization Act is a mechanism through which Congress oversees the defence budget expenditure each year. Through the amendment proposed by Cornyn-Warner, if the US Congress passes the amendment, the Pentagon would find it easier to access finances for US-India defence cooperation.²⁵ Thus, grounded in shared interests the renewal of defence agreement for another period of ten years reflects an elevation of strategic ties to “two-way defence engagement”.

EMERGING DRIVERS

While there are various inputs that guide India-US defence relationship, two factors in particular – Asian geopolitics and defence commerce – provide greater momentum.

Asian Geopolitics and Strategic Cooperation

India seeks to rapidly bolster its defence capabilities to limit geopolitical threats confronted by nuclear armed neighbours and the spectre of international terrorism. In this regard, the rationale for deeper India-US defence partnership emanates from the logic of geopolitics. Both India and the US recognise the strategic flux in Asia owing to an increasingly assertive Chinese international conduct. Heightening security concerns in the region are China's rapid military modernisation and unilateral aggressive activities in the South China Sea. Other concerns on China abound: its non-transparent regime, its continuing violation of human rights, movements challenging the United Nations Convention on the Law of the Sea (UNCLOS), expansive assertions along Sino-Indian border, and attempts to rewrite the rules of global economic order. Both India and the US realise that a multipolar Asia has to include all the major stakeholders in the region such as India, Japan, South Korea and China. Given the interdependent nature of economic ties that most Asian countries have with China, it is unthinkable to contain China. As a result, ensuring a rules-based multipolar Asia-Pacific would involve balancing, rather than containing, China's geopolitical ambitions.²⁶ In this regard, India recognises Washington's crucial role in checking China's assertiveness while engaging it economically. Washington, for its part, is increasingly interested in including India in its strategic calculus, thereby enabling India to become a regional stabiliser – 'lynchpin' to US Pivot to Asia policy. Thus, in order to maintain stability and retain the status quo in the region, it is essential to have greater synergy between foreign-policy orientation and military coordination between India and the US. Both the countries are simultaneously posited towards greater commitment in strengthening India's military capabilities. A militarily strong India would be able to provide stability in the immediate region and become a net provider of security in the Indian Ocean and beyond.²⁷

Both India and the US are committed to maintaining a stable and peaceful Indo-Pacific. The two are proactively assuming responsibilities to protect and maintain open seas and uphold international law.²⁸ Being drivers of growth across the region, there are overlapping convergences in India's Act East policy and US Rebalance to Asia as evidenced through the Asia-Pacific Vision Document.²⁹ During the March 2015 visit of Admiral Harry Harris Jr., Commander Pacific Fleet, to New Delhi, he underscored the importance of India's pivotal role in the American re-balance to Asia as shared economic future lies in the confluence of the Pacific and Indian Ocean. Admiral Harry Harris' discussion with Admiral R K Dhowan, Chief of Indian Naval Staff, included enhancement of training exchanges and participation of the US Navy in the prestigious International Fleet Review being organised by the Indian Navy off Visakhapatnam in February 2016. Both navies are positioned to cooperate regularly in the fields of technical training and anti-piracy patrol and interaction at various multilateral fora such as Western Pacific Naval Symposium (WPNS).³⁰ Thus, intensification of India-US defence cooperation is by and large strategic in nature, driven by external factors such as China. India and the US together can play a vital role in creating an environment where peace and prosperity, rather than instability and hegemony, are accelerated by China's economic growth.

Defence Commerce

The other aspect of India-US defence cooperation is driven by achieving national interests through trade and commerce. As India continues to modernise its military—recently increasing its defence outlay by 11 percent over the 2013-14 Budget³¹—American defence contractors find that Indian markets present opportunities for investment and trade. The Indian defence sector has size, steady growth and longevity of opportunity and return ratios which work in favour of American global defence giants. India has registered a burgeoning defence trade with the US of more than \$9 billion.³² Over the past five years, there has also been an explosion in the number of Joint Ventures (JVs) and Memorandum of Understanding (MoU) signed between Indian and American companies. It is expected that India's defence sector would benefit from the offset demands of these partnerships and joint ventures. As the nature of warfare increasingly becomes more software intensive, it is likely to

play into the strengths of India's competent IT sector. Eventually, it is hoped that in the long run, Indian companies could move up the order to become independent systems integrators across the global value chain.

The US is also fast consolidating its position as the top arms supplier to India and has already overtaken Russia, Israel and France to become India's leading arms supplier (See Figure 2). Factors such as relaxation of export controls on defence technologies by the US and significant cuts in American defence spending, have led defence contractors to look for investment opportunities in the Indian market.

Recently, the Indian army announced its decision to buy 16 Sikorsky S-70 Seahawk Helicopters for its multi-role helicopter requirement which is estimated to be worth \$1 billion.³³ After inking deals worth some \$9 billion, the US has various projects in the pipeline. Defence Minister Manohar Parriker-led Defence Acquisition Council (DAC) is set to clear the acquisition of four P8-I long-range maritime patrol aircraft for almost \$1 billion that would be used for maritime patrols in the Indian Ocean in the backdrop of growing Chinese naval presence in the IOR.³⁴ India and the US are also negotiating an \$885-million deal for 145 M-777 ultra-light howitzers which will be made in India. There is a 'Made in India' clause which is being discussed for the ultra-light weight Howitzers because 145 guns is a paltry number if one were to look at the requirements of the Indian army. Hence, the 'Made in India' template would be useful if India could buy 145, but in addition start co-developing them indigenously as well. The other upcoming deals include 22 Apache Longbow gunships with another 39 Apaches to be ordered later for the Indian army; six more C-17 Globemaster-III aircrafts; and 15 CH-47F Chinook choppers from Boeing.³⁵

Majority of these deals are being negotiated as government-to-government contracts through the Foreign Military Sales (FMS) route. The FMS route is untenable in the long run as it is not based on competitive market principles and hence stymies the development of Indian indigenous industries. To mitigate some of these challenges of defence acquisitions without the element of indigenisation, there is a genuine willingness on both Indian and American sides to make co-development and co-production work. India-US co-production of defence equipment is aimed at moving from a patron-client relationship to that of equal-partner. As the Indian defence sector is in the cusp of an inflexion point, wherein the future growth of the

sector will depend on indigenous manufacturing, India-US co-production is expected to prove symbiotic. Thus both strategy and commerce combine to lead India and the United States partnering in active defence production, and joint research and development.

DTTI: MAKING CO-PRODUCTION WORK

During the inauguration of Aero India 2015, Prime Minister Narendra Modi made a strong pitch for ending India's dependence on defence imports and called on foreign firms to be not just sellers but rather strategic partners.³⁶ Current US Defence Secretary Ashton Carter, during his tenure as Deputy Secretary of Defence, recognised this opportunity and argued that increased trade cooperation with India can be achieved through US technology transfer and co-production. He promoted the 'Carter Initiative' which has come to be known as the Defence Trade Technology Initiative (DTTI). In 2013, while visiting Lockheed's Tata plant in Hyderabad, he stated, "In the United States, with the US industry...we identified and put forward to the Indians a truly groundbreaking new collaborative proposal to co-develop with India".³⁷

The DTTI aims to strengthen defence cooperation between India and the US by elevating defence cooperation to the most senior levels of government. The DTTI is expected to reduce bureaucratic obstacles, promote technology transfer and co-production and co-development of select defence systems.³⁸ For India, the DTTI is expected to expand bilateral defence ties and unlock doors for transfer of advanced US defence and dual-use technologies. Co-production of arms and weapons systems with the US would inject the much needed vitality to India's indigenous defence manufacturing base. And for the US, co-production and co-development in India would provide a large employment base and also sustain several thousands of jobs for American companies. Co-production has been the thrust of discussion in all the dialogues between India and the US. The idea of co-production also resonates well with PM Modi's 'Make in India' initiative to strengthen India's defence industrial base. India is one of the largest importers of conventional defence equipment and spends about 40 percent of its total defence budget on capital acquisitions and about 60 percent of its defence requirements are met through imports.³⁹ In 2015, India, for the third year in a row, became the

world's largest arms importer accounting for 15 percent of global arms import.⁴⁰

This import dependence needs to change with a focus on 'Make in India' so that India makes at least 50 percent of its defence equipment in less than a decade. It will save foreign exchange, build technological capacity for civilian and defence manufacturing, and grow new skills. If India exports defence equipment, it would also bolster Indian currency and provide an impetus for Indian private companies. As Indian defence industry is highly import intensive, successive Indian governments have on occasion initiated policies such as the Defence Production Policy (2011), raising Foreign Direct Investment to 49 percent, and the 'Make in India' initiative that has focused on greater indigenisation and making India a favourable manufacturing hub. However, the challenge has always been on the side of implementation of the policies that support defence indigenisation.

Acknowledging the US promotion of DTTI matches India's long-time penchant for a vibrant and self-sufficient defence industrial base. Both India and the US have agreed in principle to pursue joint development and production projects under the aegis of the 'rapid reaction team' to develop newer areas of cooperation. Four technology defence hardware have been identified as 'pathfinder' defence projects: RQ-11B Raven Unmanned Aerial System; Roll on/roll off kits for the C-130J aircraft; Mobile Electric Hybrid Power Sources; and Uniform Integrated Protection Ensemble Increment, along with cooperation on aircraft carriers and jet engine technology.⁴¹ According to Indian and American officials, all the projects have a stand-alone value and simultaneously lay down the foundation for future co-development and co-production initiatives. It is reported that in the domain of potential cooperation on jet engine technology and aircraft carrier technology, there is significant promise for technology transfer.⁴²

It is expected that co-production of these hardware would provide an opportunity to explore deeper levels of cooperation between Indian and American businesses, militaries and people, thereby laying the foundation for deeper defence cooperation. As India is trying to move up from just manufacturing 'screwdriver technology' to building complex military hardware, this would also provide an opportunity for both the countries to identify the different structural challenges in the path of co-development.

Along with identifying structural constraints in co-development, pathfinder projects would also help in exploring the potential for creating a proper ecosystem of indigenisation in Indian domestic defence industries. Achieving breakthroughs in defence co-production would also require attention from senior leadership on both sides along with new institutional mechanisms that prevent the new initiative from falling into bureaucratic hurdles. The DTTI commands an extraordinary level of attention and commitment both in the US Department of Defense and is directly overseen by the Under Secretary of Acquisition, Technology and Logistics, Frank Kendall and by his Indian counterpart Ashok Kumar Gupta, Secretary, Defence Production, and Ministry of Defence.⁴³ To fructify the jointly agreed vision of co-production, India and the US have tried to move quickly under the aegis of DTTI. Reportedly, on 17 February 2015, an Indian company, Dynamic Technologies and an American company Aero Vironment, developer of unmanned aerial vehicles (UAVs)—officially inaugurated a facility in Bangalore to start work on a 'pathfinder project'.⁴⁴

Whilst both Indian and American strategic and defence experts, and industrialists have expressed enthusiasm regarding Indo-US co-production, the question that looms large is whether DTTI would be able to deliver on its promise of co-development and co-production, and when the two countries would jointly co-produce defence equipment that are higher in the technology value chain. For instance, as contended by an industry report, the Raven Unmanned Aerial System (UAV) being co-produced by India and the US is not an advanced spy or combat drone⁴⁵ but rather only a small hand-launched, remote controlled UAV. As UAVs are increasingly gaining importance in modern-day warfare, Indian scientists at DRDO are also simultaneously developing homegrown UAVs – UAV Panchi – which is designed to run on solar power and is capable of taking off and landing from semi-prepared runways.⁴⁶ Along with the Raven, India could also take advantage of making better use of US expertise in developing state-of-the-art drone technologies such as the MQ-8 Fire Scout and/or long-range drones such as the MQ-9 Reaper.⁴⁷ Similarly, the 12 C-130 J acquired by India from the US for some \$2billion did not have the requisite surveillance modules that they will now get.⁴⁸ An announcement that Boeing and Tata Advanced Systems have signed a framework agreement to collaborate in aerospace and manufacturing of UAVs have provided a boost to both the institutional framework of DTTI and

PM Modi's Make in India initiative.⁴⁹ Since co-production also involves domestic integration of various sub-systems and modules, a key take-away for the Indian side during the initial DTTI phase could be internalising the engineering expertise necessary to first reproduce an artefact, then adapt it, and finally create new designs altogether.⁵⁰

However, in spite of the critical advancement of India-US defence industrial cooperation, some outstanding concerns remain. There is the question, for instance, of whether the DTTI would enable the kind of collaboration between India and the US as witnessed in defence relations between India and Israel, or India and Russia. It would thus be important for India and the US to quickly resolve the procedural difficulties in the path for co-production as defence hardware runs the risk of obsolescence. Several analysts criticise India and the US for not being set on the path of co-developing and co-producing high-end technologies. For instance, close cooperation between India and the US on jet engine technology has registered minimal progress. Reportedly, India's Defense Research and Development Organization (DRDO) wanted to partner with GE on the latest F-414 engine for the future Tejas Light Combat Aircraft. However, so far the US has been reluctant despite the scope of future engine deals which may leave India no choice but to consider an international tender.⁵¹ Several US officials have noted that whilst progress is not being expedited as envisioned, the two countries are still witnessing incremental changes, gaining exposure to each other's bureaucracies and gradually achieving technical collaboration.

The next section discusses two potentially creative areas of cooperation between India and the US to strengthen security and defence capabilities: aircraft carrier technology and air power diplomacy.

POWERING COOPERATION IN AIRCRAFT CARRIER TECHNOLOGY

The Indian Ocean Region (IOR) has traditionally been India's strategic backyard and the country has held a special role in maintaining its stability. The Indian Ocean is an important geopolitical space and an arena of systemic importance with bearings on India's security and economic prosperity. Protecting and maintaining the stability of IOR thus naturally becomes one of India's primary security motivations. In the past several years, the IOR has seen a significant rise in Chinese naval forays in the region. China's massive

infrastructure development projects across the periphery of India threatens the status quo in the IOR. As India conducts nearly 40 percent of its trade with littoral nations along the Indian Ocean rim and depends on shipping lanes for its growing energy needs, it is imperative that India has the ability to exercise naval supremacy in the Indian Ocean. To extend India's ability to bolster its reach in the Indian Ocean, India is rapidly reinforcing power projection capabilities, strengthening deterrence and consolidating its maritime domain awareness. As India's strategic interests converge with those of the US, both countries have security and economic incentives to project power jointly in the IOR. In this context, the US government has also shown willingness to support an Indian purchase of an electromagnetic launching system for aircraft carriers, specifically the San Diego-based General Atomics' Electromagnetic Aircraft Launch System (EMALS).⁵²

India currently operates two aircraft carriers, the INS Viraat and the INS Vikramaditya. The former is a Centaur-class carrier, purchased from the United Kingdom, while the latter is a modified Kiev-class carrier, purchased from Russia and entered into service with the Indian Navy in 2013. India is currently constructing an indigenous carrier, the INS Vikrant, a 40,000-tonne carrier which is expected to enter service in 2017. The Vikrant-class carriers will use a ski-jump assisted Short Take-Off But Arrested Recovery (STOBAR) launch system for jets aboard the carrier; only Russian, India, and Chinese carriers use this system for their carriers. However, the US has offered to help India adopt EMALS which would entail a switch from STOBAR to a more complex Catapult-Assisted Take-Off But Arrested Recovery (CATOBAR) launch system. EMALS are used to refine the US Navy's existing CATOBAR launch systems by imposing less stress on aircraft chassis.⁵³ In operational terms, it is expected that when Indian carriers are equipped with EMALS, they would enjoy greater flexibility in carrier operations. In spite of EMALS technology being costlier, it would allow Indian carriers to operate a wider range of aircraft and deploy them with greater ease.⁵⁴ Two developments are significant should India choose to partner with the US in developing EMALS technology for aircraft carrier. First, the shift to EMALS would mark a shift away from India's traditional reliance on Russia for military hardware. Second, the switch from STOBAR to CATOBAR technology would also provide a fillip to the process of India's incremental modernisation of existing defence hardware.

A report authored by Ashley J. Tellis focuses on the efforts by the two countries to form a working group to explore the joint development of India's next generation aircraft carrier. In the report, Tellis discusses the prospects of a major Chinese naval presence in the Indian Ocean which has transformed India's previously secure rear into a springboard from where coercive power could be threatening to India's security. To offset and deter Chinese navy from coercive actions in the IOR, the report makes a case for India-US joint development of India's next-generation aircraft carrier which would increase the Indian Navy's combat operations. One of the advantages of the EMALS technology-powered aircraft carriers is that it is markedly superior to its Chinese counterpart, Liaoning. The report indicates that through joint cooperation of the aircraft carrier, the US could offer India access to various advanced aviation systems such as the US Navy's E-2C/D Hawkeye or airborne early warning and battle management and the fifth-generation F-35C Lightning strike fighter, aiding the Indian Navy to secure a combat advantage over its rival's air wings.⁵⁵ However, there is stiff criticism from some quarters of Indian defence analysts and private sector over the enormous cost-burden of an aircraft carrier and the overhaul change from STOBAR to CATOBAR features. Security analysts are debating the rationale behind acquiring different aircraft carrier type which would add to the cost of maintenance, acquisition of spare parts and other additional expenditures of maintenance crew.⁵⁶ While it is true that India needs to be more pragmatic when it comes to acquiring new systems to enhance defence capabilities, the central question remains: Can India afford to understate security challenges emanating from an assertive China with little concerns about India's vulnerabilities? While the increased Chinese naval presence is an uncontested reality, the challenge is to manage the rise of China. If addressing the rise of China in the IOR is hinged on establishing India's dominance in the region, it seems working together with the US on aircraft carrier technology holds the key to both interoperability and power projection.

PROSPECTS FOR AIR POWER DIPLOMACY

Both India and the US want to contain China's assertive behaviour while engaging the country economically. This has led to both countries playing a crucial balancing act between cooperation and containment of China's

unilateral posturing. Within this security rubric, several strategic options available to New Delhi and Washington become limiting in their own ways. However, one domain which creatively bolsters India-US military interoperability is air power diplomacy. A report authored by Adam Lowther and Rajeswari Pillai Rajagopalan focuses on the importance of air power diplomacy in the India-US context.⁵⁷ The report explains how air power diplomacy is ideally suited for India and the US whilst being critical of supporting Indian and American foreign policy objectives without resulting in major anxieties and disruptions.

Expanding the scope of cooperation between the United States Air Force (USAF) and the Indian Air Force (IAF) would lead to the conduct of soft power and incentive-based diplomacy. Simultaneously, air power diplomacy is effective as it takes into consideration cost-effective and non-kinetic means of defending India-US interests in the Asia-Pacific region and in the larger global context.⁵⁸ The fact that air power provides for no real boots on the ground option is particularly attractive. Thus, air power diplomacy would hinge on coherently and effectively leveraging on the USAF and IAF capabilities to hedge strategic vulnerabilities while enhancing interoperability in the skies. In 2016, India would be participating with the US allies in Exercise Red Flag, well known for its complex war gaming. Previously, in 2008 India had participated in Exercise Red Flag at Nellis Air Force Base and had sent its top-of-the-line Su-30MKI fighter to participate in the exercise.⁵⁹ Pre- and post-exercise, Red Flag 2016 would give an impetus to the Air Forces of both countries to learn about each other's strengths and vulnerabilities and, accordingly, embark on interoperability.

ENDURING CHALLENGES

The growing defence cooperation between India and the US is considered to be one of the brightest spots in the tapestry of bilateral relations. Both sides view each other as partners and there is growing congruence on important issues such as maritime security, freedom of navigation, and the need to maintain rule of law in the Indo-Pacific. The Indian government has been taking steps to develop a proper ecosystem for domestic defence industry to achieve self-sufficiency. This has led the Indian government to enact reforms in the defence sector. One of the first steps in this direction was undertaken by the

Modi-led government – to increase the Foreign Direct Investment (FDI) in the defence from 26 percent to 49 percent with an option to increase it to 100 percent if the deal involves high-end technology transfer and is approved by the MoD.⁶⁰ Obama welcomed Modi's initiative to liberalise FDI policy in defence to the current limit of 49 percent. As India and the US are posited to move beyond defence commerce to an 'equal partners' relation, several scholars have pointed out that the current limit of 49 percent may not enable India to acquire state-of-the-art technology from the US. However, increasing the FDI limit is not the ultimate remedy for addressing the core issue of 'Transfer of Technology' (ToT) as there are other significant challenges that hinder closer cooperation between the two countries.

US laws mandate that for better military-to-military cooperation and transfer of sophisticated technology and weapons, four 'foundational documents' must be signed by India: the Logistics Support Agreement (LSA); Communications Interoperability and Security Memorandum Agreement (CISMOA); Basic Exchange and Cooperation Agreement (BECA); General Security of Military Information Agreement (GSOMIA); and End User Monitoring Agreement. Of the four, GSOMIA has already been signed by India in 2002.⁶¹ India's hesitation to sign the other three 'foundational agreements'—which provide for sharing classified information, logistics and geo-spatial cooperation—remain understandably tied to the notion of strategic autonomy. On the Indian side, there is a perception that signing these foundational agreements amounts to India's integration into the US global military network. While Washington insists that signing of foundational agreements is routine and these four have been signed by all of its allies and partners, New Delhi remains uncomfortable with the idea as it would presumably undermine India's concept of strategic autonomy. Without resolving issues around signing the CISMOA and BECA, the US cannot transfer advanced communication and guidance technologies.⁶² Along with transfer of credible technologies, the Pentagon has stated that these agreements are aimed at facilitating better military-to-military cooperation. The agreements do not infringe on the country's sovereignty and similar such 100 agreements have been signed by the US with its partner countries around the world.⁶³ Hence, the two countries should exercise their imagination and find new ways to resolve the deadlock on the matter of these foundational agreements which are deterring both countries from active defence cooperation.

However, steps are being taken by the Modi-led government to induce some breakthroughs in deepening this partnership. The government has asked the defence establishment to resurrect an 11-year-old proposal from the Pentagon that will enable India and the US to grant mutual access to each other's military bases, refuel and replenish warships and fighter planes and, in a contingency, participate jointly in multi-nation military operations. In an interview in January 2015, a senior Indian defence official stated, "The US has given us non-papers on LSA. We are now ready to look at the fine print. We have asked them to explain how these 'foundational' agreements benefit us. Yes, we have the political nod".⁶⁴ There is hope that the Modi-led government would take a second look at weighing the importance of signing the foundational agreements in order to bolster defence cooperation. Resolving the gridlock on signing the foundational agreements would to a great extent depend on the political will to undertake a sharp departure from previous policy of not signing the agreements. Several Indian and American officials also indicate that the success of the co-development and co-production projects would be critical and be based on India's decision to sign these foundational agreements. Another possible factor determining India's decision would be the success of the Modi government's 'Make in India' initiative, receiving the expected impetus from American defence contractors ready to invest in India.

Indeed, India and the US have come a long way in balancing their interests and understanding on Asian strategic issues. The US has promoted itself as a major arms supplier to India with the objective of strengthening India's power projection capabilities and helping the country kickstart its indigenous defence manufacturing base. However, enthusiasm for defence trade has outpaced the speed of progress on the same. Both countries have huge potential and scope to leverage each other's strengths – strategic posturing to ensure multipolarity in Asia and strengthening defence trade to generating more jobs. The progress has been slow due to the US legal hurdles and the ponderous nature of India's defence acquisition system. Despite a steady rise in licensing of the US defence hardware to India, applicability of stringent laws like Technical Assistance Agreements (TAA) and Manufacturing Assistance Agreements (MAA) has failed to incentivise co-development between the two countries. Resolving these issues would necessitate more

flexible American regulatory frameworks in order to allow US defence contractors to share technologies with their Indian partners expeditiously.

Building trust in defence cooperation is another significant aspect of deepening bilateral ties. To remain wedded to the concept of strategic autonomy, India would continue to diversify its defence arms imports. Hence, the logic of deepening bilateral defence cooperation between India and the US would only get an impetus if the two countries as equal partners commence the process of building military hardware technology. As and how the two countries would increase co-development and co-production to higher technology threshold, the scale and scope of transfer of technology (ToT) interaction between the two countries would gradually increase. Issues of Intellectual Property Rights (IPR) would simultaneously gain significance and hence, greater harmonisation of the Validated End-User agreements needs to be encouraged. In this regard, US Senators John Cornyn and Mark Warner have noted that India's heightened expectations for ToT outpaces India's offset absorption capacity, often leading to oversaturation of offset market. Thus, from the Indian side, ToT proposals need to be approached from a perspective of sensitivity with regards to what can be achieved with the US technology received. As far as India's concerns are concerned, due to lack of credible transfer of US technologies, it is imperative that the US should attach great value and remain cognizant of India's impeccable record in terms of intellectual property rights and non-proliferation. Both countries, being democracies, remain adherent to the rule of law and procedures. It would thus take patience on both sides to synchronise the legal challenges of ToT. However, these procedural challenges should only be viewed as short-term bumps along the way of genuine Indo-US partnership in defence. As argued by noted strategist, C. Raja Mohan, "For the United States, India is of course more than a market for weapons. Delhi is increasingly seen in Washington as the lynchpin of any American strategy to secure a balance of power in Asia".⁶⁵

Other challenges that act as impediments are the lack of synchronisation of India's control lists with the arms control policies of multilateral regimes – the Wassenaar Arrangement and the Australia Group. While an End-User Verification Agreement was signed in 2009, other agreements required under the US domestic law for the transfer of sensitive defence technology are still being negotiated. A majority of the defence deals between India and the US from 2000 to 2014 were conducted through the FMS route. The FMS route in

the long run would be untenable, as they are not based on competitive market principles and thus stifles the Indian industries to a great extent. Furthermore, FMS route is not conducive for Indian industries as it is always a one-time purchase and does not add any 'know how' to the Indian partner. This is one challenge that needs to be addressed, or else it would dampen the innovation spirit of Indian private industries and entrepreneurs.

For the United States, a military supplier relationship which necessarily includes and involves an enhanced interoperability and institutional partnership is a normal way of building a broader security relationship. The use of US-supplied equipment creates linkages up and down the chain of command through training and other joint activities. It is often expressed by US defence officials that whilst US-India military-to-military relations are reportedly excellent, the Indian Ministry of Defence tries to keep a tight rein on contracts. According to one US diplomatic cable in 2009, "The uniformed leadership of the entire three services - in particular the Navy - appreciates their improving ties with the US military, but bureaucratic inertia and recalcitrant officials in the Ministry of External Affairs (MEA) and the Ministry of Defence (MOD) continue to complicate attempts to improve the relationship."⁶⁶

The lack of eagerness on the part of Indian bureaucracy to foster closer relationship with the US military is deep-rooted and emanates from the Cold War mindset when the two countries' security goals were so diverse. Such wariness from Indian bureaucracies to enable a full bloom of India-US military-to-military becomes clear when the Indian Ministry of Defence bars the permanent presence of an Indian officer posted to US Pacific Command (USPACOM) headquarters. An Indian liaison officer was temporarily posted at USPACOM headquarters in the wake of the 2004 Tsunami, reflecting the Indian bureaucratic sentiment that India-US military cooperation would be issue-based, context-driven and not under the aegis of combatant commands.⁶⁷

It is expected that both countries would take pragmatic approaches to resolve outstanding issues on ToT and other hurdles along the way in order to retain the focus on the grand strategy of a militarily strong India at the heart of the American strategic and security calculus in Asia-Pacific. Commensurate with India's non-proliferation record and commitment to abide by multilateral export control standards, the US government should examine

whether licensing entire defence projects to India can be permitted rather than a stage-wise process. The issue of multiple levels of technology clearance is time-consuming and often staggers business-to-business cooperation between Indian and US companies. India and the US should therefore undertake proactive measures in decision-making to work through and resolve the complex policy challenges.

SHIFTING ASIAN GEOPOLITICS AND OPPORTUNITIES

Both India and the US face common security challenges like a rising Chinese power, terrorism, continued nuclear proliferation and new dangers to global commons. With a declining US defence budget and a generally restrictive budgetary environment, the US government is increasingly hard pressed to keep up with its global commitments. At the same time, China's economic rise, coupled with its military expansion and territorial claims, pose a direct threat to the delicate security fabric of the Asia-Pacific region. These developments create an opportunity for India to undertake a more dominant role while hardening its presence in the Indo-Pacific. Consequently, in the face of growing Chinese aggressive unilateralism, both India and the US should leverage on the shifting geopolitics to send a powerful message of multipolarity in the Indo-Pacific.

Over the years, the gap between India and China has widened from a military capability perspective with China surging ahead in a number of areas (including stealth weapons and anti-satellite weapons) driven largely by domestic R&D and reverse engineering as western technology has been denied to it since 1989. Simultaneously, there has been surging growth in the sense of innovation of Chinese defence industry. In 1998, it filed for 313 patents, whereas in 2008, it filed 11,000 patents and in 2010, 15,000 patents. Strong economic growth and high savings rate have helped China register progress on indigenous defence manufacturing capabilities.⁶⁸ The surge in capabilities has been accompanied by a geopolitically assertive China, leading to a sense of competition and trust deficit and heightened military spending by most Asian countries.

China has been issuing Defence White Paper biennially since 1998 and recently in May 2015, it issued its ninth White Paper titled, 'China's Military Strategy'. The present document signifies the increased self-confidence of an

emerging global military power, albeit maintaining its earlier stance of avoiding war through its military strategy of 'active defence' (that envisages an 'offensive' only at the operational and tactical levels). What is most interesting to note in the paper is the mention of Russia indicating the imminence of a China-Russia quasi alliance – “exchanges and cooperation with the Russian military within the framework of comprehensive strategic partnership...to promote military relations in more fields at more levels”.⁶⁹ These emerging new trends of China-Russia nexus and China's desire to change the status quo and the existing regional security order established by the US in the post-World War II period, are particular concerns for India as it complicates New Delhi's desire of being an indispensable power in the regional balance of power dynamics.

The US pivot to Asia provides an unprecedented opportunity for India to catapult itself as an integral part of the Asian security calculus. As the US recalibrates its Asia-Pacific policy, it would find India as an anchor of its policy of ensuring peace and stability by upholding international laws and norms. India has long sought to balance Chinese power and an expanding India-US security cooperation has only raised India's profile in East Asia. India's Act East Policy is also complimentary to the US focus on a rules-based order in the Asia-Pacific.⁷⁰ Both countries are opposed to unilateral aggressive activities of one country trying to change the status quo in the region. The two countries' overlapping interests to shape the reordering of power in Asia is a major push factor. A similar sentiment was shared by India's Foreign Secretary S. Jaishankar as he mentioned in his Fullerton speech in July 2015 that the interplay of India, US and China is “among the key factors that will determine the key balance in Asia and beyond”.⁷¹


There is a visible transition in India's expression of greater self-confidence and an aspiration to become a leading power and, consequently, with adequate willingness to shoulder more global responsibilities. This was demonstrated in relief operations such as those following huge disasters in Yemen and Nepal. It is also reflected in India's role in peacekeeping operations in various conflict areas, as well as in maintaining security of the maritime commons. At the intersection of a restrained American power looking for allies and partners to share global responsibilities, and India's ambition to become a global power, there remains a favourable opportunity for both countries. The US could assist India's political and economic rise and

embolden India's security, while India can share responsibility in ensuring a stable and secure Indo-Pacific along with American allies such as Japan and South Korea. President Obama's 2015 Budget embodies the administration's ongoing commitment for a broad set of defence programmes to consolidate American power in the Asia-Pacific. The Budget of 2015 proposes \$64.4 billion for DoD and R&D, representing a \$574-million or 0.9-percent increase over the 2014 funding level.⁷² This increase in budget for US' Asia Pacific commitments offers a window of opportunity for India to proactively undertake the mantle of engaging East Asia and play the role of a net security provider in the Indian Ocean. In this context, the coming years would witness greater cooperation and coordination between the two countries in defence. Defence ties emanate from the logic of strategy and geopolitics and gives credence to the vast arena of practical cooperation between India and the US in shared interests of safeguarding maritime security, ensuring freedom of navigation and over-flights throughout the region. However, while India and the US are natural allies, partnership between the two countries should not be taken for granted. It is imperative for both sides to be sensitive to each other's challenges and nurture their strategic partnership.

CONCLUSION

Indo-US defence cooperation is an important aspect of the two countries' bilateral relations. Cooperation on defence would not be one without challenges. However, in spite of procedural difficulties and short transactional obstacles along the way, there are immense possibilities for deeper Indo-US collaboration on co-production of technologies that are higher in the value chain. During the February 2015 visit of US Defence Undersecretary Frank Kendall to New Delhi, he stated that the best way to build a partnership is by building something together. Kendall stated that he envisions a day in the near future when American and Indian engineers would sit side by side to produce cutting edge designs in partnership.⁷³

Both countries should aim to realise this vision as it addresses two aspects of cooperation: Asian geopolitics and commerce. It is important that both countries take efforts at the highest level to oversee that India-US defence becomes increasingly less transactional and instead, be strengthened through the complementarity of strategic interests. India-US bilateral

relations emanate from the logic of geopolitics and would continue to flow with the logic of diplomacy and strategy. Deeper military cooperation would thus ensure a geopolitical message of multipolarity that resonates well and is the need of the hour in the Indo-Pacific region. 

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