



# INDIA-US INSIGHT

*"Advancing the Strategic Potential of India-US Relations, Accelerating India's Economic Development"*

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## Prospects for India-US Defence Aerospace Collaboration

Ambassador Hemant Krishan Singh and Vijay K. Mathur



The rapidly evolving geo-political

situation in the Asia-Pacific region is driving strategic convergences between India and the US. Running parallel with this trend, the ongoing major expansion of India's air power over the coming decade offers an opportunity to reinforce bilateral relations with a strong US engagement in India's aerospace manufacturing and services infrastructure. This exercise has to some extent begun, but much remains to be done.

*"...the ongoing major expansion of India's air power over the coming decade offers an opportunity to reinforce bilateral relations..."*

Recent India-US defence aerospace contracts and orders under consideration are already projected at around \$16 billion. Looking at the bigger picture, estimates for cumulative fighter purchases over the next two decades are as high as \$100 billion, rising to \$150 billion if other air and naval aviation assets are included.<sup>1</sup>

*"...there is an urgent need to create new, greenfield capacity to bridge the gaps in India's existing aerospace industry..."*

Since this volume of acquisitions would entail massive offset commitments, there is an urgent need to create new, greenfield capacity to bridge the gaps in India's existing aerospace industry in order to expand indigenous aircraft manufacturing while also reducing costs.

With the accelerating pace of technological innovation and development, the accumulated strengths of various public sector entities engaged in India's military aerospace programmes are insufficient for the challenges ahead. Moreover, Indian design and development institutions have inherent limitations in their ability to productionise high technology equipment. Despite its many achievements, HAL is an overburdened monopoly.

*"Public sector outputs require to be supplemented by new private sector (both domestic and foreign) participation involving joint ventures and co-production..."*

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participation involving joint ventures and co-production to ensure higher levels of technology transfer and substantially improve the level and cost of after-sales support.

Additionally, India's civil aviation market up to 2025 is also estimated at around \$100 billion.<sup>1</sup> Our military aerospace capabilities should, therefore, be designed to have a positive spin-off for the requirements of the civil aviation sector.

***"The speed of build-up of India's aerospace industry must also match growth trends in the capabilities of neighbours like China..."***

The speed of build-up of India's aerospace industry must also match growth trends in the capabilities of neighbours like China, which is not only racing ahead but is also cooperating closely with Pakistan to accelerate the air power potential of both. We cannot afford to fall behind because of ideological constraints or vested interests that support the status quo.

In the limited timeframe dictated by national security needs, appropriate policies require consideration and implementation by India's defence and security establishment. In suggesting the way forward, let us examine the scope for India-US collaboration as well as the structural reform of India's aerospace sector.

***"...the US... cannot but recognise that future aerospace opportunities in India are too big to ignore."***

Our immediate and long-term need is for a wide range of aviation-related cutting-edge

technologies. That the US can be a leading source has been amply reflected in our recent acquisitions of military transport and maritime surveillance aircraft as well as pending orders for other categories of hardware such as attack helicopters. While the US practically excluded itself from the MMRCA contract by not offering its latest fighter aircraft, it cannot but recognise that future aerospace opportunities in India are too big to ignore. It is in mutual interest that both countries craft well considered policies and harmonise objectives that help create a new greenfield aerospace manufacturing and services sector in India.

***"Reform of India's defence industrial sector has frequently been mentioned but remains stalled."***

Reform of India's defence industrial sector has frequently been mentioned but remains stalled. Our long-standing preoccupation with equity holdings being limited is outdated and needs review. Restrictions appear to stem from the belief that opening up this vital but sensitive sector would adversely impact our Defence PSUs. There is also the belief that permitting majority foreign ownership would compromise national security in some way. The question, however, arises that if we can purchase complete equipment manufactured by an entirely foreign owned company based in another country, why cannot we accept the same equipment from the same company's wholly owned Indian subsidiary? In any case, permitting majority foreign ownership in these high technology areas will at least partially reduce complex issues related to protection of intellectual property rights and export control regimes. Under the current 26% equity cap, there has been only a trickle (\$30 million) in FDI inflows since 2002.

***"Strengthening aerospace manufacturing can hold the key to lifting India's technological progress to an even higher plane."***

In the wider context of India's defence industry, it bears mention that we keep talking about the public sector and the private sector as though they are two antagonistic entities. The fact is that this should be regarded as only one sector, which is the national defence sector, and it needs to be treated as such. Equity ownership is relatively unimportant. Several private sector companies are already playing a meaningful role in bolstering India's defence production and await an opportunity to contribute more, on their own or in partnership with foreign entities. Strengthening aerospace manufacturing can hold the key to lifting India's technological progress to an even higher plane.

***"We need a calibrated transition strategy that will help us move... to a new military industrial structure designed for the future with the minimal disruption."***

This is by no means to suggest a sudden change from our existing defence industrial base. We need a calibrated transition strategy that will help us move from the position on the ground today to a new military industrial structure designed for the future with the minimal disruption. For this to succeed, there must be a vigorous dialogue among all stakeholders to gain their support and confidence. India's defence and security establishment must be on board as also the political leadership on a

bipartisan basis.

*"...progress will require the Pentagon to evolve a customised approach for India..."*

Simultaneously, there is need for a parallel buy-in by the US Government. As India is not a member of the US alliance system, progress will require the Pentagon to evolve a customised approach for India that goes beyond inertial reticence towards sharing information and know-how. There are indications that the US Department of Defence wants to position the US as a reliable defence supplier of India over the coming years, deepen defence industrial ties and gradually upscale cooperation on sharing sophisticated technologies. This augurs well for the future.

*"...if we look at the record of LCA development,... our defence preparedness has taken a significant beating... we are still critically dependent on imports of major sub-assemblies ..."*

There is no doubt that HAL and DRDO's Aeronautical Development Agency (ADA) have overcome immense hurdles to build some of the infrastructure and technology needed to produce advanced fighter aircraft. However, if we look at the record of LCA development, the hard lessons include that our defence preparedness has taken a significant beating since promised delivery schedules have been repeatedly overshot. Also, even if we overlook the issues of cost and time overruns, we are still critically dependent on imports of major sub-assemblies, and have had to import significant numbers of complete aircraft, components and allied equipment. Apart from

HAL's in-house capability, there is relatively little production of any major sub-assemblies or complex components in India, and these continue to be imported to support existing aircraft programmes.

*"...we should consider the restructuring of HAL as well as the aerospace-related entities of DRDO (ADA) and CSIR... to build greater synergies and efficiencies."*

In this context, we must recognize that it is difficult to have design and development teams functioning (largely) independently of a production facility. The productionising of a design is an integral part of the product development process itself, as is the evolution of the life cycle servicing packages and training modules related to each product. Consequently, we should consider the restructuring of HAL as well as the aerospace-related entities of DRDO (ADA) and CSIR (National Aerospace Laboratories – NAL) to build greater synergies and efficiencies. This requires the concerted will of public policy makers to create new entities that meet the demands of the day and advance national interests.



A large proportion of the total cost of each aircraft comprises sub-assemblies sourced from specialist vendors. In most cases, these vendors own the intellectual property rights to their products, so the key to forward movement in India would necessarily involve bringing them into the country at greenfield sites. That can best be done under the overall umbrella of the

aircraft manufacturer selected as the primary supplier for a product.

*"One or more new aircraft manufacturers are required to supplement HAL's limited capacity."*

Moreover, since our long-term needs already exceed HAL's capacity, additional aircraft assembly lines are needed to support the development of multiple fighter programmes like AMCA and FGFA as well as other defence and civil aviation needs. One or more new aircraft manufacturers are required to supplement HAL's limited capacity. A broader-based aerospace industry will lead to higher efficiencies, cost reduction and accelerated outputs.

*"India's existing defence offsets policy lacks the strategic focus to link acquisitions to collaborative models..."*

The concept of direct offsets has been an integral part of US defence industrial exports since the late 1950s. Today, these offsets are part of virtually all major international arms transfer agreements and more than 130 countries have adopted offset policies. India's existing defence offsets policy lacks the strategic focus to link acquisitions to collaborative models involving joint production, technology transfer and aerospace manufacturing capacity that builds self-reliance. It bears mention that countertrade is regarded as the least meaningful element of offsets, whereas transfer of technology is perhaps the most beneficial.

The major purchases of defence aerospace equipment being envisaged would require tens of



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billions of US dollars in offsets from a range of unrelated options implemented through unidentified partners. The expansion of offset possibilities to include civil aviation and internal security falls short mainly because India's aerospace industry does not have adequate capacity to make this workable. It follows that potential suppliers will find it difficult to assume such large offset commitments and, in any case, may be unable to fulfill them even if they were offered. This makes stipulating large offsets under existing terms rather meaningless.

*"A comprehensive offsets policy that decreases costs and strengthens defence capability merits prioritised consideration."*

A more practicable approach would be to amend India's current offsets policy to enable the induction of high technology defence manufacturing and services through a multi-tiered vendor base. This implies offering a variety of flexible shareholding options for the establishment of local manufacturing by foreign companies linked to our proposed acquisitions. Conditions for entry should then include specific timelines for the creation of a pre-identified set of vendors. In other words, offset negotiations should provide for the progressive localisation of sub-assembly manufacturing by these vendors under a phased, time bound, programme. A comprehensive offsets policy that decreases costs and strengthens defence capability merits prioritised consideration.

*"...India needs to leverage its defence aerospace acquisitions to create an indigenous high technology aerospace industrial base ... India and the US have to engage on a pragmatic as well as aspirational platform that distinguishes between a strategic and a transactional relationship."*

To conclude, India needs to leverage its defence aerospace acquisitions to create an indigenous high technology aerospace industrial base that will underpin its national security and economic strength. For this to happen, the need for structural and regulatory

reform cannot be overstated. India and the US have to engage on a pragmatic as well as aspirational platform that distinguishes between a strategic and a transactional relationship. US manufacturers on their part need to focus more on establishing major aerospace production programmes in India rather than on hardware sales alone. The challenge from the US side is to carve out an India-specific defence transfer regime, and for India to allow majority equity holding linked to high technology transfers. Promoting partnerships between US aerospace companies and India's private (and where feasible public) sector to build local technological and manufacturing capacity can facilitate progress.

*"Going by the history of pathbreaking transformations in bilateral ties over the past decade, this will almost inevitably require leadership-led direction to materialise."*

Key decision-making levels in India and the US should consider specific steps that need to be taken to progress this collaboration, as it can open a new chapter of strategic defence partnership between India and the US in the years ahead. Going by the history of pathbreaking transformations in bilateral ties over the past decade, this will almost inevitably require leadership-led direction to materialise.

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