



## Centre for Air Power Studies (CAPS)

Forum for National Security Studies (FNSS)

### **GEO-POLITICS, GEO-ECONOMICS & AEROSPACE POWER: THE NEW FORM LINES CHANGING THE FACE OF INDIA'S AEROSPACE INDUSTRY**

*Wing Commander Kiran Krishnan Nair  
Research Fellow, CAPS*

---

#### **Examining the New Form lines**

The terms geopolitics, geoeconomics and aerospace Power are extraordinarily important, as also wide in their significance and impact for national growth at present and in the future. Their relevance would only rise further as our nation's comprehensive power grows in the years to come. Economic growth is one of the foremost indices of development and numerous international reports ranging from McKinsey to Global Policy predict a shift of the world's economic centre of gravity to Asia, particularly India and China by around 2025<sup>1</sup>. As the economic matrix shifts, the dynamics of geo-politics and aerospace power would also shift since all three factors are intrinsically linked and impact each other in many more ways than one. For instance, a vibrant economy in the global context automatically implies an increased geo-political role for India in the comity of nations. An increased role implies an increased area of influence that demands support by instruments of national power that are equally far-reaching, rapidly responsive and flexible. These characteristics are intrinsic to the nature of Aerospace power. Elements in Air and Space are sought precisely for these capabilities. As India rises, its sphere of influence across the globe would rise and the dynamics of geo-politics would demand a variety of tasks ranging from humanitarian tasks like disaster relief, casualty evacuation to military power projection across the world. Our national instruments of power, both military and otherwise would need to be supported by Aerospace capabilities that are equally far-



## Centre for Air Power Studies (CAPS)

Forum for National Security Studies (FNSS)

reaching, responsive and flexible. These capabilities would seminally impact all three military services and the other security forces. They would also greatly impact the national economy, the diplomatic apparatus, administrative apparatus and most importantly-the common man. Aerospace capabilities need to be viewed in the wider context of overall national development and growth; they are the perfect glue enabling jointness not only amongst the services but across the nation. As in case of national airpower, that includes both civil and military aviation, Aerospace power today is a matrix of total national capability and when viewed through the national prism, it represents an extraordinarily potent force that impacts across the geo-politic, geo-economic and security spectrum. Consequently, Aerospace power needs to be employed in pursuance of national objectives with great wisdom, acumen and clarity of purpose. The endeavour is complex it would be essential to comprehend the complexities, challenges and options in our particular context for national advancement.

It would hence be imperative to adapt and organize for the changed present and future. India is at the threshold of a revolution, it has demonstratively powerful and growing capabilities impacting all the three factors of geopolitics, air and space. Across the world, it is acknowledged that India is on the upsurge, its economy is on the upswing, and its air and space capabilities essential to any transformation are also modernizing. All of these components are in a process of intense change and adaptation. Organising for the same involves much more than changes in technology and also involves alterations in the traditional concepts, inter-service relations as well as force structures. It would also involve a greater inter-action between military and civilian institutions. The above is particularly true since the essential adjuncts of the prevailing change are air, space and allied information systems. All three impact the civilian realm in equal, if not greater measure. The revolutionary impact of information on the nation is well known, what is less well known is the impact of air and space in revolutionizing geo-politics. The above is of



## Centre for Air Power Studies (CAPS)

Forum for National Security Studies (FNSS)

particular relevance since national airpower is by definition, the total aviation capability of a nation, “*military and civilian, existing and potential*”. As a matter of fact, the inherent flexibility of airpower allows it to promote all the three primary constituents of national power. It is inherently knowledge sensitive; it impacts and promotes economic, political and military power.

### **Harnessing the new form lines of Commerce & India’s Air & Space Revolution**

#### ***The Opportunities in the Symbiotic Rise of Commerce, Industry & Indian Airpower***

Apart from national air forces which enable military power projection, it also needs to be borne in mind that national civil aviation as well as the industry and infrastructure supporting aviation is one of the most powerful drivers of national economies. Growth in national aviation is a catalyst to economic growth and vice-versa. The above is particularly relevant in view of the fact that our national economy grew at a rate of 9.1% during the first half of 2006-07, GDP growth rate spiked to 9.7 in 2008, spiked again to 9.4 in 2011. The GDP rates have fallen since, but the fall is not expected to last<sup>2</sup> in view of the fact that India has been the 9<sup>th</sup> fastest growing economy since 1980 and it is expected to sustain growth till at least 2020. The sustained growth is expected to lead to an unprecedented rise on the demands on civil aviation. Aircraft orders to meet the growing demand are expected to continue rising till 2020. Secondly, India’s burgeoning middle class, which drives the booming economy, are increasingly choosing air over rail travel. The above has led to an increased demand for civil aviation. For example, during the Paris air show in 2005, India’s order for 400 aircrafts was the largest in the world. The boom in demand may not rise consistently, but it certainly would increase in the future. To put matters in perspective, passenger traffic is expected to rise by more than 50%. India’s forecast growth of passenger traffic at 7.7% is well above the global average of 4.8% and even above China’s 7.2%<sup>3</sup>. India is currently the 9th largest aviation market handling 121 million domestic and



## Centre for Air Power Studies (CAPS)

Forum for National Security Studies (FNSS)

41 million international passengers.<sup>4</sup>Overall, air transport (including air freight) in India has attracted foreign direct investment (FDI) worth US\$ 456.84 million from April 2000 to July 2013, as per the data released by Department of Industrial Policy and Promotion (DIPP)<sup>5</sup>. All of the above is considering that the domestic regional aviation market is yet to open up. The potential, at present is only unfolding and as time progresses and when the economy stabilizes; the demands on civil aviation can only be expected to increase.

It is hence not surprising that while most of the globe post September 11 experienced a draw-down in civil aviation, India registered a reverse trend. At the same time, the present global recession complicates future projections. The future is always fraught with uncertainty. The Indian economy would not be immune to the global meltdown and the impact would certainly be felt. However, since the Aviation market and industry is characteristically capital-intensive and cyclical with long lags between investment decisions and project completions, the impact of short term recession would be cushioned.

With regards to the military component of national airpower, India's military aviation sector is also amongst the fastest growing in the world. Around 500 aircrafts and acquisitions worth billions are expected within the next few years<sup>6</sup>. The IAF as part of its modernization drive is expected to procure air assets worth over \$ 38 bn by 2020.<sup>7</sup>

### ***Harnessing the Indian Space Revolution***

With regards to space, its impact on revolutionizing national development and commerce is apparent to the entire nation. India ranks among the top six space faring nations of the world in terms of budget and technological capabilities. In 2009, ISRO's budgetary allocation was 41.67 billion (USD 0.91 billion), in 2010-11 it rose to 57.78 billion (USD 1.26 billion) accounting for about 0.14 percent of GDP and continues rising<sup>8</sup>. The commercial-aerospace industry plays a progressively larger role in the space missions and



## Centre for Air Power Studies (CAPS)

Forum for National Security Studies (FNSS)

taps the outsourcing work offered by ISRO. As evidenced from the successful launch of GSLV D-5 in Jan 2013, it is demonstrably evident that India's cryogenic technologies have matured. This augurs well for all the three prime components of national power. It serves the needs of knowledge and information, the economy as also the military. Apart from launch, India's national space programme is focused primarily on space based telecommunications and observation which form the back-bone of modern information systems. The Indian Navy has obtained its dedicated military satellite for communications<sup>9</sup>. With the successful launch of GSLV D-5, the other services would soon receive their much sought communication capabilities. A complement of observation satellites serves a certain amount of military and civil purpose, navigation satellites are on the anvil and overall the major components enabling air and space based 'informationalisation' are in place. Purposeful and efficient utilization would demand integration of these components.

### Conclusion

Quite evidently, the forecast growth of our national air and space capabilities lends credence to the fact that our nation's comprehensive power is also poised for dramatic change and growth. It also demonstrates the fact that the growth is largely unsynchronized. The individual components are apparently not in concert. All revolutions carry with it the attendant perils of chaos and self-interest. Our case may be expected to be no different. The opportunities would be enormous; the attendant chaos would also be so. Left disorganized, significant national gains may be frittered away.

*(Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the position of the Centre for Air Power Studies [CAPS])*



## Centre for Air Power Studies (CAPS)

Forum for National Security Studies (FNSS)

---

### End Notes

<sup>1</sup>See Mckinsey Global Institute, "The Bird of Gold: The Rise of India's Consumer Market" *McKinsey Report* May 2007 and Charles A Kupchan, "Getting Ready for a World Transformed", *Council on Foreign Relations*, Nov 2012 available at <http://www.cfr.org/politics-and-strategy/getting-ready-world-transformed/p29392> accessed on 07 Feb 2015.

<sup>2</sup> See, "Economy, market on high octane", *Times of India*, January 13, 2007 and World Bank GDP growth rate data at <http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG> and India GDP Annual Growth rate at <http://www.tradingeconomics.com/india/gdp-growth-annual>.

<sup>3</sup> As revealed by Airbus's global market forecast in Press Trust of India report, "India to face \$105 Bn demand for aircraft", *The Financial Times*, December 07, 2006.

<sup>4</sup> See, Indian Brand Equity Foundation Report dated 13 Sep 2013 at <http://www.ibef.org/industry/indian-aviation.aspx>

<sup>5</sup> Ibid.

<sup>6</sup> Ref RajatPandit, "Aviation majors eye Indian defence market", *Times of India*, December 21, 2006.

<sup>7</sup> Ref FICCI Report, "Indian Aviation: Spreading its Wings" Feb 2013.

<sup>8</sup> Ref Deloitte Report, "Overview of Indian Space Sector-2010" August 2010.

<sup>9</sup>Ref PTI News Report, "India's First defence Satellite GSAT-7 launched successfully", *Times of India*, Aug 30, 2013 and Madhumati D.S. "Navy's First Satellite GSAT-7 now in Space", *The Hindu*, Aug 30, 2013.

---