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India's Light Combat Aircraft Programme: a Costly Delay

The inordinate delays in the indigenous production of India's Light Combat Aircraft (LCA) have taken a considerable toll of human lives, caused by the malfunctioning of the 'stop-gap' foreign flying machines that were deployed. Prime Minister Narendra Modi's 'Make in India' campaign also lends a new sense of urgency to the LCA programme now.

Jayant Singh¹

Make in India: for India's Prime Minister Narendra Modi this has become a maxim of state policy. Ever since he assumed office in 2014, his message to the world has been unchanged – come, make in India. From Day 1, the government's articulated policy has been clear; the way forward involves increasing manufacturing growth and raising it to global competitiveness standards. *Make in India* would not only revitalise India's ailing manufacturing sector, but it would also gainfully employ millions of young Indians who enter the workforce every year. Underneath the hype and the glib marketing campaign, *Make in India* offers enormous potential for India's stuttering defence industry. The policy has its rationale in the high levels of imports that currently make up India's military arsenal. A quick study of the *Make in India* website reveals that over 60 percent of India's defence requirements are met through imports.² The

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² *Make in India* website, accessed on 15th August 2015, <http://www.makeinindia.com/sector/defence-manufacturing/>

precincts of limited resources within which the armed forces' budget must operate makes the logic of *Make in India* even more compelling. Consider, even though the 2015-16 defence budget increased by 8 percent over the previous year, there was no increased allocation for capital expenditure. However, allocation for revenue expenditure increased by 13.2 percent and now accounts for 61.7 percent of the defence budget (a 3 percent increase from the previous budget cycle).³ Furthermore, revenue expenditure under the defence budget will continue to increase over the near future on account of the 'one rank, one pension' scheme and the raising of a new Mountain Strike Corps in the North East. The old model of military modernisation through foreign acquisitions is no longer sustainable, and indigenisation of defence production is the new imperative.

While *Make in India* may be the administration's new poster child, defence indigenisation is an old story. Achieving self-sufficiency in the defence sector has been an aspiration of the Indian defence establishment for many years. As early as 2004, the United Progressive Alliance (UPA) Government set up the Kelkar Committee to recommend changes in acquisition procedures to enable greater participation of the private sector in defence production.⁴ The Kelkar Committee Report – 'Towards Self-Reliance in Defence Preparedness' – was submitted in April 2005. It was the first to propose a direct offsets policy to bring in technology and investments into the Indian defence sector. And in 2013, during its biennial review of procurement procedures, the Ministry of Defence (MoD) tweaked policy and laid down a strict order of preference for military procurements. The objective of the Defence Procurement Policy (DPP) 2013 was to reduce India's dependence on imports by first trying to meet the requirements of the armed forces through Indian industry, and this required the MoD to explain why it chose not to buy from Indian sources in case they went in for a foreign acquisition. Although attempts to put in place structures and procedures for defence indigenisation have been evident for well over a decade, the establishment's long cherished target of 70 percent self-reliance through in-house development has remained elusive. Meanwhile, the downturn in foreign acquisitions and the absence of indigenous alternatives has affected the armed forces' preparedness.

³ Laxman K Behera, "India's Defence Budget 2015-16", *IDSa Issue Brief*, 02 March 2015. Available at: http://www.idsa.in/issuebrief/IndiasDefenceBudget2015-16_lkbehera_020315.html

⁴ "Kelkar Committee submits report on defence acquisition", Press Information Bureau of India website, accessed 10th August 2015, <http://pib.nic.in/newsite/erelease.aspx?relid=8386>

The administration's decision to encourage domestic industry, in line with its *Make in India* policy, is a major fillip for the Light Combat Aircraft (LCA) programme. Over the years, the Indian Air Force (IAF) has remained unconvinced about the LCA's capabilities and has been reticent to guarantee orders for the *Tejas* fighter aircraft as it is informally known. The renewed emphasis on the programme has come by virtue of the new administration which is unable to fiscally sanction large numbers of the Dassault Rafael aircraft and was thus forced to look into alternatives. Over the course of its development, the LCA programme has gone through many ups and downs, all well documented by the media. However, what has flown under the radar – and is now the focus of this paper – is the cost to human life caused by the failures of other platforms that were pressed into service on account of the delays in the LCA programme.

Failure to Launch

India's failure to develop a substantive defence industrial base comes at a time when Soviet-era equipment across all three services are becoming obsolete. Not only has this created critical security gaps but it has also adversely impacted the safety record of the armed forces. Nowhere is this more apparent than in the aerospace sector. Consider the Indian Government's LCA programme: the project was first conceived in 1969 in the wake of the Subramaniam Committee's recommendation that the Hindustan Aeronautics Limited (HAL) should design and develop an advanced technology fighter aircraft. The LCA programme was approved in July 1983 after the completion of design studies and allocated an initial budget of Rs 563 crores. It was believed then that the LCA programme would achieve across-the-board advancement of the domestic aerospace industry and replace India's ageing fleet of Mig-21 fighters which would be approaching the end of their life-cycle by the mid-1990s.⁵ Yet 32 years later, despite pouring Rs 17,269 crores into the LCA vortex, the IAF still doesn't have a fully functional fighter. Dubbed '*Tejas*' early on by the IAF, the LCA is still awaiting Final Operational Clearance (FOC) after which it can join operational service.⁶

In yet another setback for the *Tejas* LCA programme, a Comptroller Auditor General (CAG) audit report identified 53 "significant shortfalls" that have reduced operational capabilities and

⁵Raju GC Thomas (1986), "Indian Security Policy", pp 250, *Princeton University Press*.

⁶ The LCA was awarded Initial Operational Clearance (IOC) in January 2011. However, given its performance issues and weapons limitations the IAF asked for an IOC-2, which was granted in December 2013. Despite strict instructions from the government, HAL was unable to adhere to deadlines and ensure that FOC was achieved by December 2014. According to recent estimates, the re-revised deadline for achieving FOC is March 2016.

survivability in the Mark-1 version of the fighter aircraft.⁷ The Mark-II version of the LCA – which is expected to correct these shortcomings – is still approximately 5 years away from series production. Upon completion of the Tejas Mark-II the LCA programme would have been in development for over 35 years!

India's 'Flying Coffins'

The CAG report further noted that due to the delay in the LCA programme the IAF had to make temporary arrangements for upgrading its MiG fleet and revise its timeline for phasing out MiG-21 FL fighters. And it is the LCA programme's failure to address this issue that has brought the IAF to its knees. The Indian Government first opted to purchase the Russian-made MiG-21s in 1961, thereafter India introduced 872 MiG 21s into its Air Force, forming the backbone of its fleet. Having seen action in 1965, 1971 and 1999, many squadrons of this once venerable fighter have reached operational redundancy. However, the delay in the LCA programme and possible vulnerabilities due to force accretion compelled the IAF to push back the phasing out of its MiG-21 fleet. The MiG-21s, which were upgraded to 'Bison' standard in a last-ditch attempt to keep them in the air, are on "their last legs" warned Air Chief Arup Raha in 2014.

By all accounts the MiG-21 models are difficult to manoeuvre, they land too fast and the design of the window canopy means that the pilot cannot see the runway properly. These problems are exacerbated because the MiG-21 is not a forgiving aircraft; according to data from the Airworthiness Certification Branch of the Federal Aviation Agency of the United States, the fatality rates for MiG-21s in the IAF is about 45-49%.⁸ Which means that a MiG-21 pilot essentially has a 50-50 chance of surviving an accident. In 2012, India's then Defence Minister, A K Antony, in a written reply to the Rajya Sabha, confirmed that more than half of the 872 Mig-21s purchased by the IAF were lost in accidents, costing the lives of 171 pilots, 39 civilians and 8 persons from other services.⁹ Furthermore, according to a 2002 Public Accounts

⁷ "CAG Picks Holes in LCA Project, Says it Fails to Meet IAF Requirements", *Economic Times*, 08 May 2015. Available at: <http://economictimes.indiatimes.com/news/defence/cag-picks-holes-in-lca-project-says-it-fails-to-meet-iaf-requirements/articleshow/47204118.cms>

⁸ "Civil Airworthiness Certification: Former Military High-Performance Aircraft", Miguel Vasconcelos (September 2013) for United States Department of Transportation and Federal Aviation Department.

⁹ Vinay Kumar, "MiG-21bis likely to serve IAF until 2019", 16 June 2013. Available at: <http://www.thehindu.com/news/national/mig21bis-likely-to-serve-iaf-until-2019/article4819970.ece>

Committee report between 1997 and 2000 – around the time the Tejas LCA was originally meant to be inducted – 21 pilots had been killed in 55 MiG-21 crashes. In light of these statistics, the MiG-21 platform has been dubbed the “Flying Coffin” and the “Widow Maker” by the public. The situation became so dire that in 2013 Sanjeet Singh Kaila, a serving officer in the Indian Air Force, filed a petition in court stating that flying a MiG-21 amounted to "violation of his fundamental right to life, especially the right to work in a safe environment" under Article 21 of the Indian Constitution.

With the LCA programme entering a critical production phase soon, the IAF has announced an additional order of 100 modified Tejas fighter aircraft. The Tejas Mark-IA will be an upgraded version of the Mark-I but will fall short of the Mark-II version which is still in the design phase. As the Tejas Light Combat Aircraft nears operational service, it is important that India's defence research establishment does not forget the costly lessons it learnt during the course of the LCA's development phase. Defence indigenisation is a worthy ambition and one that India should strive for. However, the establishment's inability to actualise it in a phased manner has cost scores of lives.

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