

Country Studies: India

Rapid population growth, a corresponding growing demand for civil aviation services and a need for adequate supporting infrastructure to support this growth, represent the primary challenges facing India's civil aviation industry. While growing demand for civil aviation services is certainly an opportunity for manufacturers and service providers, lack of a supporting infrastructure threatens to limit the growth potential in this sector.

India's civil aviation market is predicted to expand significantly over the next twenty years. Domestic passenger traffic is expected to grow at 12.5 percent per year as the country's large and growing middle class spends more money on air travel. To feed this growth, several new domestic airlines have been started in India over the past several years, most following the low-cost business model. These new startup airlines have helped fuel a buying surge that began in 2005, with Indian carriers ordering 327 new aircraft.¹ This trend is expected to continue; in July 2011, Boeing India President Dinesh Keskar shared his company's forecast of a \$150 billion market for 1320 new passenger airplanes in India over the next 20 years.²

In addition to its civil aircraft acquisitions, India imports a majority of its aerospace products, with approximately 80 percent of aircraft and parts coming from foreign sources. Domestic production has largely centered on military aircraft, with the state-owned Hindustan Aeronautics Limited (HAL) anchoring the aerospace hub in Bangalore. Historically, most of India's aircraft have been derived from foreign technology, particularly from the former Soviet Union; the Light Combat Aircraft (LCA), which had its first flight in 2001, was the first indigenous fighter produced in India in nearly 40 years.³ India is attempting to grow its domestic industry by promoting it as a low-cost outsourcing site. In addition, the Indian government imposes a minimum 30 percent offset requirement on all defense and state-owned enterprise civil aviation acquisitions valued over 300 crores (\$65 million at current exchange rates).^{4,5}

In response to complaints over a lack of transparency in the defense acquisition process, the Indian Ministry of Defense published the Defense Procurement Procedure 2006 (DPP) regulations in June 2006. The DPP provides comprehensive policy guidelines for all capital acquisitions for the Indian Armed Forces (IAF) to include Requests for Proposal (RFP), a notional schedule for the acquisition cycle, offset requirements, a list of acceptable Indian defense vendors for fulfilling offset requirements and a schedule of penalties for noncompliance with offset arrangements. The DPP therefore codifies not only the offset policy but the overall acquisition process. While India possesses significant market opportunities in both civil and defense aviation sectors, capitalizing on these opportunities requires millions of dollars of investment by foreign companies and strict adherence to the government's procurement procedures. The DPP was revised in 2008, 2009 and 2011. The goal of the 2011 DPP is

¹ http://www.buyusainfo.net/docs/x_4342293.pdf

² [http://www.boeing.co.in/ViewContent.do?id=65402&Year=2011&aContent=Boeing%20values%20India%20Market%20for%201320%20New%20Airplanes%20at%20\\$150%20Billion%20Over%20Next%2020%20Years](http://www.boeing.co.in/ViewContent.do?id=65402&Year=2011&aContent=Boeing%20values%20India%20Market%20for%201320%20New%20Airplanes%20at%20$150%20Billion%20Over%20Next%2020%20Years)

³ Sukumar R. Iyer. "LCA: Impact on Indian Defense." Bharat Rakshak Monitor. Vol 3(5) March-April 2001. <http://www.bharat-rakshak.com/MONITOR/ISSUE3-5/sukumar.html>

⁴ <http://mod.nic.in/dpm/dpp2006.pdf>

⁵ At an exchange rate of \$1 = 46.15 rupees, which is the Federal Reserve Bank of New York spot exchange rate in effect on August 26, 2011. Available at <http://www.federalreserve.gov/releases/h10/current/>

expediting decision making, simplification of contractual and financial provisions and establishment of a “level playing field” for the Indian defense industry.⁶

Perhaps the single most critical factor that could limit growth of the domestic aviation industry is inadequate infrastructure. Problems persist across the system—air traffic control equipment is old and unreliable, there is not enough space to park airplanes or store cargo, and there are not enough area control centers to provide complete coverage of the airspace. Indian government officials have launched several multibillion dollar programs over the last several years to address problems throughout the country. One of these programs, announced in 2004, provided \$4 billion to upgrade the facilities at India’s two main hubs, Mumbai and New Delhi, along with \$5 billion for 23 other non-metro airports.⁷ A second program announced in 2006 made available \$12.5 billion for regional airport improvements.⁸ As a result of these programs, a third runway was installed at New Delhi’s Indira Gandhi International Airport to ease chronic congestion due to weather and growing passenger traffic, and significant upgrades were made to the airport’s international terminals.⁹ In Mumbai, land and facility constraints have compelled India’s civil aviation authorities to commission the construction of a completely new facility to be named Navi Mumbai International Airport.¹⁰ The new airport construction was approved in 2008 but has been delayed due to land acquisition and ecological issues. As of September, 2011, the Maharashtra state government has prepared the necessary documents to allow construction bidding process for the new facility to begin.¹¹ In addition to ongoing improvements in New Delhi and Mumbai, Bangalore and Hyderabad already have completely new, “greenfield” airports, and plans are underway to construct an additional 100 airfields in the next five years

In addition to infrastructure development initiatives launched by the Indian civil aviation authorities, the United States is also actively involved in aviation related cooperative ventures with the GOI. In April, 2007, the U.S-India Aviation Cooperation Program (ACP), a public-private partnership between the U.S. Trade and Development Agency (USTDA), the FAA and U.S. aviation companies, was established to provide a forum for unified communication between the Government of India and U.S. public and private sector entities in India. The ACP is designed to work directly with the Indian Government to identify and support India’s civil aviation sector modernization priorities, and the organization serves as a mechanism through which Indian aviation sector officials can work with U.S. civil aviation representatives to highlight specific areas for technical cooperation. The ACP currently has over 30 active corporate members. In March, 2010, the United States and India established a Civil Aviation Subcommittee under the umbrella of the U.S.-India High Technology Cooperation Group (HTCG). The Civil Aviation Subcommittee of the HTCG meets on a regular basis to identify areas for U.S.-Indian civil aviation cooperation in a manner complementary to the ACP. An Airport Infrastructure Working Group (AIWG) established by the joint recommendations of the HTCG Civil Aviation Subcommittee is a joint effort to promote U.S. private sector interest and investment in this \$20 billion market.

⁶ <http://mod.nic.in/dpm/welcome.html>

⁷ See U.S. Commercial Service Market Research. http://www.buyusainfo.net/docs/x_866852.pdf

⁸ “India Pushes \$12.5 billion Overhaul of Secondary Airports.” *Aviation Daily*. February 24, 2006.

⁹ “Delhi Airport Gets Third, and India’s Longest, Runway” available at <http://www.nerve.in/news:253500158879>

¹⁰ “Govt approves Navi Mumbai Airport”, available at <http://www.india-server.com/news/govt-approves-navi-mumbai-airport-1135.html>

¹¹ <http://www.indianexpress.com/news/Maharashtra-kicks-off-airport-bidding-process/840008/>

India has demonstrated a strong interest in the development of space technologies. The Indian Space Research Organization (ISRO) is the primary (government) vehicle for research and development, procurement and the provision of space-related services. ISRO built and operates the INSAT satellite system to provide television, meteorological, and telecommunications services. ISRO's Indian Remote Sensing (IRS) Satellite System provides satellite-imaging data for resource monitoring, infrastructure development, and exploration.

India has also developed two launch vehicles, the smaller PSLV rocket and the larger GSLV rocket, and is interested in partnering with foreign companies to expand its satellite technology. Once India enters the commercial launch market, India is likely to win an average of one launch per year, mainly through promotional pricing, package deals, and partnership programs with Europe.¹² Because India's launch vehicles are limited in terms of capabilities and size, India likely will not gain a significant portion of the market in the short term. India will be able to launch U.S. commercial satellites once it has signed a commercial space launch trade agreement with the United States. By guaranteeing the protection of U.S. technology, these agreements will allow India to work with U.S. products, something that currently is prohibited.

India intends to expand its communications satellite production capabilities to capture some of the commercial market. The Indian Government has already manufactured several communications and remote sensing satellites for its own use. India is now actively seeking international customers. India is exploring joint ventures with U.S. and European companies to build communications satellites. The HTCG is exploring areas in which cooperation in the space sector can be increased between the two countries. Some areas likely to be considered in the future are space research and development, joint satellite production and launch services for U.S. satellites and/or components on Indian rockets.

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¹² "2007 Year in Review", Federal Aviation Administration, Office of Commercial Space Transportation, January, 2008.