Transportation Infrastructure in India: Build and They Will Grow?

Sector Snapshot

According to the OECD report titled “Infrastructure to 2030”, global infrastructure investments needed between 2009 and 2030 is estimated to be US$ 5000 for rail infrastructure, US$2200 billion for airports, and US$830 for ports. Rapid Economic Growth, global trade, population growth and urbanization in India have been placing heavy demands on a weathered transportation infrastructure (air, sea, road and rail). It is no wonder that infrastructure spending especially those that are transportation and energy related has played a central role in India’s budget.

After the liberalization of Indian aviation sector in 1991 and as a result of the country’s rapid economic growth, passenger air traffic in India has been on a steady growth trend. Between 2004 and 2008, the number of air passengers grew at an average annual growth rate of 35% between 2004 and 2008 but dropped during the Global Financial Recession years (fig 1). In fiscal 2009 (ending in March) the number of air passengers dropped particularly for domestic flights. Since then growth in air passenger traffic has partially recovered with an annual average growth rate of 15%.

Fig 1

Source: Airport Authority of India
While causality is not being claimed, Delhi which has perhaps the best and most modern international airport in India has become the nation’s leader in air passengers, leaving behind Mumbai in second place (fig 2). The rest of the regions combined recorded a 3-point gain over the past five years. Tens of minor airports, like the ones of Chandigarh, Amritsar, and Bhubaneswar, which individually represent a marginal fraction of the country’s traffic, experienced annual growth rates well above national average over the past five years, suggesting a gradual decentralization of the Indian air passenger traffic.

**Fig 2**

![Passenger Air Traffic by Location](image-url)
Over the last decade, the aviation market saw a proliferation of low-cost, new entrant carriers. Jet Airways, which was the leader in 2007 with 28% of the air passenger market, served only 19% of the market during fiscal 2012. New low-cost carriers Spicejet Airways (2005), Kingsfisher (2005), and Indigo (2006) rapidly gained market share and currently are in the top four by number of domestic passengers (fig 3). The industry has in recent years witnessed a shake up with airlines such as Jet Airways expanding their wings to international routes while others such as Kingfisher have found it difficult to maintain their financial viability.

![Air Passenger Carriers Domestic Traffic](source: Airport Authority of India)
Air cargo, which also experienced a 2009 drop, recorded 2.28 million tons in 2012, a surprising 0.07 ton drop compared to the previous year (fig 4). Economists often point to these cargo numbers from companies such as UPS as leading indicators of the economy and that seems to have been the case again here for the Indian economy.

Fig 4

![Air Cargo Traffic](image)

*Source: Airport Authority of India*

Rail services in India are provided by the state-run Indian Railways. Annual cargo has been growing at an average rate of 8% over the past five years. During fiscal 2011, 922 million tons were transported in the country, of which 46% was coal (fig 5).

Fig 5

![Railway Cargo by Type of Good](image)

*Source: Ministry of Railways*
The Indian railway network currently has 64460 kilometers, ranking 4th in the world, after United States, Russia, and China. In 2011, it carried 7.7 bn passengers and passenger growth rate has been around 6%. Between 2006 and 2011, 1128 kilometers of new rail lines were added to the existing infrastructure, of which 25% was in Bihar, 19% in Uttar Pradesh, and 16% in Orissa (fig 6).

**Fig 6**

**Top 10 Regions by Contribution to New Rail Lines 2006-2011**

Source: Ministry of Statistics and Programme Implementation

The highways network which is managed by the Government of India reached a total length of 70934 km in 2011, including 1000 km of limited-access expressways. During the previous 5 years, 4344 km of new routes were added to the national highway network, from which 37% were for Arunachal Pradesh alone (fig 7).

**Fig 7**

**Regions by Contribution to New Highways 2006-2011**

Source: Ministry of Statistics and Programme Implementation
About 95% of foreign trade by volume and 70% by value are transported through Indian state ports. Over the past five years, the cargo traffic recorded an average growth rate of just 4%. Fiscal 2012 observed a drop in cargo volume for the first time in a decade (fig 8), after a steep reduction in the loading of iron ore.

Fig 8

Port Cargo Traffic

Source: Indian Ports Association

Kandla port became the main Indian port by volume in fiscal 2012 with 15% of national port traffic, followed by JNPT and Vishakhapatnam with 12% each (fig 9). Around 61% and 39% of the port traffic by volume were imports and exports respectively during fiscal 2011, respectively, indicating a slight shift in shares from 57% and 43% recorded in 2006.

Fig 9

Cargo Traffic by Port

Source: Indian Ports Association
In June of 2012, Prime Minister Singh laid out an ambitious Public-Private Partnership plan of infrastructure spending of over US$ 1 trillion over the next five years including sea ports in Andhra Pradesh and West Bengal and airports in Kerala, Goa and Mumbai. Energy and transportation infrastructure are key engines of growth and major investments are necessary in order to avoid being derailed.