

India: 2014 Stern Economic Growth Competition

1. Overview of Indian Economy

1.1. Brief history: The Republic of India is located in South Asia. It is the second most populous country and democracy in the world with 1.237 billion people. India, at one time, was a British colony and gained its independence in 1947. It is a federation with a parliamentary system that is guided by a constitution. Perhaps due to fear of foreign influence on domestic issues, India was a closed economy that restricted any foreign investment on its soil until the 1990s. This economic liberalization has allowed India to become one of the fastest growing economies in the world. The following table summarizes the growth in GDP per capita accounted by production inputs.

	Y/N	aK/L	L/N	TFP
1985-11	5.13	2.06	0.34	2.73
2001-11	6.86	2.68	0.65	3.53

Table 1: Historical Growth of GDP Per Capita

1.2. The Structure of the Economy

1.2.1. GDP by Consumption: The most recent estimate of GDP composition by expenditure (as of 2013), attributes¹ about 56.5% to personal consumption, ~12% to Govt. consumption, ~38% to investment and ~-7% to net exports².

1.2.2. GDP by Sectors: India is primarily a services-based economy with close to 2/3rd of production accounted for by the services sector, though only 1/3rd of the labor force is employed in this sector. The following table depicts the contribution to GDP by several sectors of the economy³. Over time, agriculture's contribution has reduced while services sector has grown.

	1992	2002	2011	2012
Agriculture	28.7	20.7	17.9	17.5
Industry	25.8	26.2	27.2	26.2
Manufacturing	15.4	14.9	14.7	14.1
Services	45.5	53.1	54.9	56.3

Table 2: Component of GDP by sectors

	1992-2002	2002-2012
Agriculture	2.7	3.8
Industry	6.1	8.3
Manufacturing	6.5	8.8
Services	8.1	9.5

Table 3: Average Annual growth rate

¹ CIA – The World Factbooks

² *The Economist*, Intelligence Unit's Country Intelligence

³ World Bank development data http://devdata.worldbank.org/AAG/ind_aag.pdf

2. Economic Factors Impacting growth

2.1. Institutions in India: India is developing into an open-market economy, yet traces of its past autarkic policies remain. Economic liberalization measures, including industrial deregulation, privatization of state-owned enterprises, and reduced controls on foreign trade and investment, began in the early 1990s and served to accelerate the country's growth.

Ease of Doing Business: DoingBusiness.org ranks India as 134th out of 189 countries in terms of the ease of doing business within that country. Among the key contributing factors to India's poor ranking are obstacles associated with contract enforcement, the tax system and starting businesses.

Enforcing Contracts: According to the World Bank, it takes 1400 days on average to enforce a contract in India. The same data source indicates that the cost of enforcing those contracts represents approximately 40% of claims; DoingBusiness.org ranks India in this category as 186th.

Starting a Business: India also ranks poorly in the category of starting a business. Due to the number of procedures, time burdens, and costs associated with starting a business, it is ranked 179th in this category.

Corruption: In terms of corruption, India ranks 94 out of 177 countries according to Transparency International⁴ suggesting that corruption is a major problem for the country. For example, McKinsey estimated that almost 50% of government spending does not reach its intended recipients, possibly lost in distribution due to inefficiencies in execution and governance.

India fares much better in other categories. It ranks 34 in protecting investor rights and 28 in providing credit, for instance.

2.2. Investments (Capital): India has had healthy savings and investment rates in the past – especially after the liberalization of the economy in the 1990s. However, a decline in investments has recently been the prime reason for the slowdown of India's economic growth.

Infrastructure: One of the major avenues that requires public and private investments is Infrastructure, especially in the power sector. India currently has to import electricity to meet its internal demand. Of the total electricity produced, almost 30% is lost within the system because of inefficient distribution networks.

Transportation: Even though India has a very large network of roads and railways, they are inefficient and outdated. There has been a recent revamp of some of the major airports in the country, which are now world class. Still, there remains a need for investment in roads to connect the major cities of India. Fortunately, plans are in the works to construct national highways and special corridors to connect major trade hubs like Mumbai and New Delhi. Industrial townships are planned along those highways and

⁴ Corruption Perceptions Index 2013, Transparency International

trade corridors. These projects would generate significant jobs for the unskilled labor force in India, and are expected to spur economic growth in the country.

Logistics: Supply chain logistics are almost non-existent in India. This limits the connection of rural farms with urban markets. Along with roads and a transportation network, better logistics would also require a setup of warehouses and cold storages to efficiently market farm products.

Farm Productivity: India has one of the lowest farm yields and still uses very traditional methods of irrigation and farming. Production is highly dependent on rainfall.

Manufacturing Technology: Most of the manufacturing units in India are family owned with limited ability to use sophisticated technology.

2.3. Health and Education: *Health:* The World Health Organization estimates that over 2M Indian people died from infectious and parasitic diseases in 2008. If diagnosed and treated, many people with diseases such as diarrhea, malaria, and measles could be cured. Deficiencies in health care, sanitation, and nutrition abound, particularly in India's rural areas, which host about 68.34% of the country's population. India accounts for more than 20% of the world's diseases. This is largely concentrated in its rural regions, where 50% of inhabitants do not have access to adequate health care.⁵

Education: India's literacy rate was 74% in 2011, according to census data. Ten years prior, that rate was just over 65%. Literacy rates have been climbing steadily in India, and the gap between literate men and women (there are more literate men than women) has been narrowing. India also enjoys high levels of education enrollment. According to the 2011 Annual Status of Education Report⁶ (ASER), 96.5% of all rural children between the ages of 6-14 were enrolled in school. It should be noted, however, that The Right to Education Act of 2009 mandated free and compulsory education for that age group.

When compared to the other BRICs and G7 countries, India lags in terms of basic education. The labor force, as a result, is largely ill suited for sophisticated economic activities. The growth of productivity in the labor force displays volatile behavior, with no clear indication of sustainable growth – the mean over the past three decades has been roughly 4.3%

2.4. Labor: The majority of the Indian population lives in rural areas and labor is focused on farming and extractive activities. Because these activities are performed inefficiently, they account for only a small impact on GDP.

The World Bank has described India's Labor Market as one of the most rigid in the world. Relating to this, India's Industrial Disputes Act of 1947 requires all firms with over 100 employees to seek government permission before dismissing a worker. To sidestep this lengthy and difficult process, firms hire contract employees and part-time workers.

Roughly 94% of India's labor force is within this "unorganized sector"; this figure is closer to 40% in most developed countries. As a result of this policy, those workers

⁵ World Bank's World Development Indicators

⁶ http://img.asercentre.org/docs/Publications/Inside_Primary_School/Report/tl_study_print_ready_version_oct_7_2011.pdf

receive low pay and no benefits, the general quality of work is poorer, and business investment is disincentivized.⁷

2.5. Trade: Over time, India has increasingly become a net-importer of goods and services and the gap is widening. The value of India's merchandise exports was US\$300B and imports were \$490B. Between 2012-2013, the trade deficit increased to \$190B from \$183B the year before. This is partly to do with growing energy demands. Petroleum imports amounted to 45% of total imports. As a result, economic growth is limited by India's inability to be self-reliant in energy needs.

It should be noted that India does have comparative advantage in the services sector – specifically in Information & Communication Technology Services (ICT). Services exports increased to \$145B from \$140B in the previous fiscal year. India has developed as an outsourcing hub for many services enabled by information technology. Its population is largely English-speaking. In addition, its population is increasingly receiving the technical education needed to enable future growth.⁸

3. Overall Recommendations:

3.1. Making Government Work: First and foremost, government effectiveness must improve in order to make meaningful and lasting changes to policy. Implementing time-consistent policies (taxation, FDI policies), a robust framework to combat corruption and expediting access to the judicial system will better attract investors. Additionally, utilizing technology in governance will improve revenue collection and help prevent leakage in the system – particularly if taxation laws are harmonized and if the public distribution system is streamlined.

We recommend investments in technology to improve the public distribution system. The ongoing UID project to map the digital identity of every citizen should also be helpful in implementing government schemes.

3.2. Increase Investments in Infrastructure: Public and private spending must increase in order to improve basic infrastructure such as energy production and transportation. Energy self-reliance would significantly reduce India's import-expenditures. Further, investments should be made to improve farm productivity. Government policies should be enacted to facilitate FDI in retail and to establish a logistics supply chain to better link farm production with the market. This would free labor to engage in more productive activities. Finally, India should invest in manufacturing facilities to utilize unskilled farm labor.

3.3. Bolster Quantity & Quality of Labor: India should increase public healthcare spending to improve the quality of human capital. As mentioned previously, India should strengthen the quality of their primary/secondary education to improve its literacy rate. Providing unskilled farm workers with training would make them employable in more economically productive industries like manufacturing, construction, etc. Additionally, India must emphasize high-quality technical education to move up the value chain in

⁷ "Labour market reforms in India," by Gulzar Natarajan, *Pragati*, November 1, 2013.

⁸ "India," Intelligence Unit, *The Economist*.

services export and maintain the comparative advantage in information technology services exports.

4. Growth Forecast

4.1. We projected three possible scenarios using Solow’s GDP growth model, depending on the level of implementation of these suggested policy changes. Assumption of .33 for alpha and 30% as investment rate was assumed for India.

1. Base: same TFP growth as observed from 1985-2011 with the same labor participation growth as observed in the last decade.
2. Base + Plus One: increase TFP growth by 1% over the base scenario.
3. Base + Plus Two: increase TFP growth by 2% over the base scenario.

	Y/N	aK/L	L/N	TFP
Base	4.99	1.65	0.65	2.69
Base+1	6.24	1.93	0.65	3.66
Base+2	7.50	2.23	0.65	4.62

Table 4: Projected growth in GDP Per Capita

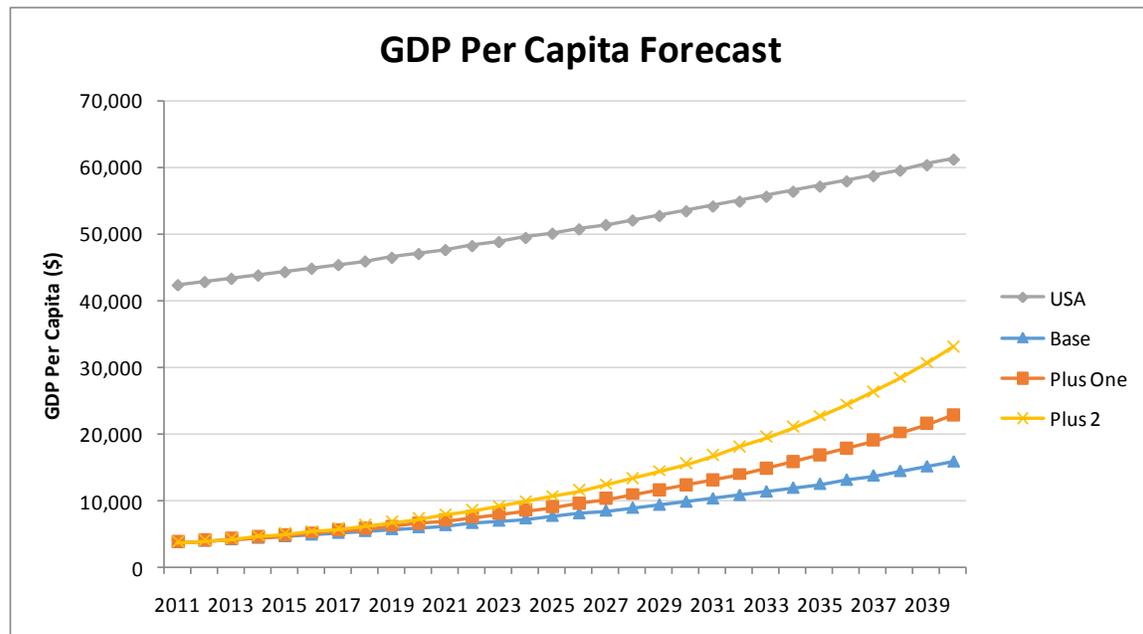


Figure 1: Forecast of potential GDP Per capita of India compared to US