



India's economic growth and market potential: benchmarked against China

India's economic growth

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G.K. Kalyanaram

GK Associates, New York, New York, USA

Abstract

Purpose – In the context of India's growth and development benchmarked against China, this paper aims to address two important research questions: How do the growth models and market potential of China and India compare? What are some policy lessons to be learned?

Design/methodology/approach – This paper presents a critical analysis and review of the empirical results.

Findings – While India has adopted policies that have stimulated consumer demand and fostered entrepreneurship, China has adopted policies that have encouraged resource-mobilization. China's physical infrastructure, while impressive, may have come at the cost of social investments (e.g. primary and secondary education). Empirical result shows that social investments are important for an economy's sustained growth, more than incentives to attract foreign direct investments. While the structure of the economy appears to be more promising for India, there is one enigmatic issue yet to be understood: China's path of economic development (agriculture to industry to services) has been demonstrated to be viable but India's path of development (almost directly agrarian to services-based) may or may not be viable (the jury is still out). Finally, data from China and India are not yet discriminating enough to answer the question: is growth driven by greater export-import trade recommended for long-term and stable growth?

Originality/value – This study shows that while China and India have adopted two different models of growth, India's model is likely to be more sustainable.

Keywords China, India, Economic growth, Entrepreneurialism, International investments, Corporate governance, Democracy

Paper type Research paper

Introduction

India has made significant strides in economic growth and the development of markets for businesses in the last two decades. So has China. India's growth and market potential have been compared to China's breathtaking development over the last three decades. The scope, size and the rates of growth of both these economies have inspired the keen interest of scholars, practitioners and public policy makers.

There is little doubt that today China is significantly ahead of India in all the defined economic and market metrics. China's economic annual average growth rate has been about 10 percent over the last 20 years, compared to India's average annual growth rate of about 6-7 percent during the same time period. During the period (1990-2000), the foreign direct investment (FDI) in China was about \$200 billion and the comparative number for India was about \$10 billion (Yallapragada and Madhu, 2001). China's infant mortality rate – a measure of society's welfare – is about 27 per 1,000 live births, and India's rate is about 61. Poverty is lower in China. Per World Bank estimates, about 100 million Chinese live below poverty line but in India this estimate is about 350 million. China's economy is estimated to be over \$2 trillion but India's



economy is just barely \$1 trillion. China enjoys a strong political structure and that is considered to be an asset compared to India's sometimes loud and energetic democracy.

However, there are empirical facts and strategic elements that appear to suggest that while China may offer immediate certainty to business investment, India may offer greater potential for medium- to long-term investments. For example, the per capita incomes in India and China were about \$317 and 461 in 1990 but in 2006 those numbers were surprisingly \$634 and 635, respectively. In 16 years, India made remarkable strides contrary to the general belief that China ran away with the growth in the 1990s.

So there are two important empirical questions:

RQ1. How do the growth models and market potential of China and India compare?

RQ2. What are some policy lessons to be learned?

This paper addresses some aspects related to these two important research questions, and thus builds on the base of knowledge. The paper is organized as follows. First, we discuss the economic growth models of China and India and specifically, the role of FDI, poverty alleviation programs and pluralism, and entrepreneurship and structure of the economy in the growth models adopted by the two countries. Then, we discuss the arguments relating to physical infrastructure, social investments, governance institutions, and level of export-import trade. Finally, we conclude with an exploratory empirical analysis.

Economic growth models

Role of foreign direct investment

India has been growing about 6 percent annually, compared to China's much more impressive 10 percent average annual growth rate. India has achieved its growth through a combination of improvement of skill sets, diversification of the economy, stimulation of consumer demand, entrepreneurship and competition. China's growth comes from almost twice the amount of domestic investment in new factories and equipment, and almost ten times higher (compared to India) FDI. China has adopted the model of investing resources to propel growth and India has adopted a model of efficiency and productivity to stimulate growth (Huang and Khanna, 2003; Khanna, 2007).

Empirical studies have shown that the relationship between economic growth and the amount of FDI is ambiguous at best. FDIs in primary sector appear tend to have a negative effect on growth but investments in manufacturing sector appears to be positive. But the impact on the service sector is ambiguous (Alfaro, 2003). There are several macro-economic illustrations of the tenuous relationship between FDI and growth. For example, Japan, Korea, Taiwan and others achieved remarkable growth with relatively low-FDIs. On the other hand, Brazil which was the darling of FDIs in 1960s stumbled. In the 1980s, China received very little FDI, and yet the country grew faster and more virtuously than its later growth.

Thus, FDI appears to be neither strongly correlated to nor be causative of the economic growth. Generally, FDI is a result of growth. In summary, China may have achieved substantial growth in 1990s and in the last decade through huge (but not so efficient) infusion and utilization of FDI.

Role of poverty alleviation programs

While India has been consistent in liberalizing its economy in the last two decades, it has also kept its attention on the challenge of poverty. Accordingly, India has designed and implemented poverty alleviation programs with varying degrees of success. India's focus on alleviating poverty as growth program is both effective and prudent given the large numbers – over 300 million Indians live in poverty (the comparable number for China is about 100 million). China, on the other hand, has focused more on top-down economic trickle down with aggressive tax rebates and other incentives to large firms.

Per recent World Bank Reports (World Bank, 2007; Dutz, 2007; Commission on Growth and Development, 2008) a 10 percent reduction in poverty would both boost the growth rate by about 1 percent and increase the FDI by about 8 percent. If India is to continue its impressive growth, one of the critical components of the strategy has to be poverty reduction programs that add assets to the society (Prahalad, 2004; Sen, 1997). And this is where political pluralism has been so advantageous. The relentless focus on the poor and disfranchised by various political parties particularly the Indian socialist and regional parties has been very beneficial for economic growth. The balance that the Indian political and economic policy makers have achieved is now the recommended economic strategy by the recent World Bank Reports (World Bank, 2007; Dutz, 2007; Commission on Growth and Development, 2008). This policy is a direct result of the wonderful pulls and pushes created by the political democracy.

Overall, political pluralism and democratic polity have proved to be excellent prescription for India's economy (Huang, 2008). Sure there have been many false starts and erroneous policies but there have been no calamitous decisions. The country has not gone through traumatic experiences of Latin America (where many economies collapsed because they followed market-economy without adequate supervisory mechanisms) or other parts of Asia (Asian currency crisis) or East European countries (inflation and stagnant growth). As Sen (2005) has observed, "India's long argumentative tradition and toleration of heterodoxy, going back thousands of years, has greatly helped in making democracy flourish with such ease." China does not have the benefits of political pluralism.

Role of entrepreneurship and structure of the economy

In the last 15 years or so, India and China have taken to distinctly different approaches to growth. India has relied more on small business and entrepreneurial ventures for its growth. But China, though it has welcomed private capital, has relied more on large-scale enterprises. In India, private sector and entrepreneurial efforts get almost 80 percent of all financial credits and loans, and in China the comparative figure is about 10 percent (Das, 2006; Khanna, 2007). India's recent economic success has come largely from newer industries, with a large component of intellectual capital and skills, such as the information technology industry and pharmaceutical research. From India, a group of world-class companies (competitive global brands) such as Infosys in software, Ranbaxy in pharmaceuticals, Bajaj Auto in automobile components, and Tata in car innovation have emerged. All or almost all these companies started as entrepreneurial efforts. Out of *Forbes* 200 of the world's best small companies in 2002, there were 13 Indian firms as compared to China's four (Huang and Khanna, 2003; Huang, 2006).

Furthermore, India's growth has been driven by domestic consumer consumption. Consumer consumption accounts for about 64 percent of India's gross domestic

product (GDP) compared to 42 percent for China (the comparative numbers are about 70 percent for the USA, 58 percent for Europe, and 55 percent for Japan, Das, 2006). Almost all the sustained prosperous societies – the USA, Western Europe, and Japan – are economies driven by consumer demand and consumption. So, empirically, India appears to be in the right mix.

In summary, India's growth is consumer-driven, while China's is resource-driven. India has adopted policies that stimulate consumer demand and foster entrepreneurship, and China has adopted policies that have encouraged resource-mobilization.

Finally, there is one anomaly that requires further study. China's path of economic and market development is consistent with other successful economies (e.g. the USA and Western Europe). China has grown from an agrarian economy to an industrial economy and then to a services-based economy. For example, industry now accounts for almost 50 percent of current China's GDP. Based on empirical evidence, we know that this trajectory/path is sustainable.

But, India's arc has been intriguing, and the question is whether India's path is also sustainable. India has been moving directly from an agricultural economy to a more of services-based economy. Services now account for almost 50 percent of India's economy, and the agriculture and industry contribute about 22 and 27 percent, respectively, (Das, 2006). Time and experimentation will educate us about the viability of India's approach.

Infrastructure, social investment, governance institutions, and export-import

Arguments regarding physical infrastructure

India's physical infrastructure (e.g. roads, bridges, ports, and airports) has come under serious criticism, and has been adjudicated to be one of the reasons for India's relative slower growth. Again, the benchmark has been China. However, it is not clear that this criticism is empirically valid. China has built impressive infrastructure – roads, bridges, power states, and transportation links. But again, like FDI, it appears that the role of infrastructure has been overstated and sometimes misunderstood. For example, China had only about 91 miles of expressway in 1988, and the bridges and roads were in disrepair. However, China's growth in the 1980s was strong and arguably more productive than the subsequent decades. Compare that with India which unarguably had superior infrastructure – particularly, railways but even roadways – in the 1980s but the growth rate was tepid. It appears that economic reforms and social investments are better explanatory variables of Chinese growth than physical infrastructure or FDI.

The one oft-cited justification for building massive physical infrastructure is attraction of FDI. However, since FDI follows not precedes economic growth India can triple or even quadruple its FDI inflows from its current levels if it sustains an annual growth rate in the 6-7 percent range. Growth can self-finance the infrastructure directly related to business and economic development.

Since the late 1990s, China has poured massive resources into infrastructure. However, there have been two evident costs to this massive investment in infrastructure, and India has avoided both these costs.

The first point is that the capacity utilization of the infrastructure is important in a resource-constrained economy. While China's infrastructure is relatively under-utilized (this is the case in both the metropolis such as Beijing, Shanghai, Shenzhen and

Guangdong, and in interior provinces such as Nanchang in Jiangxi Province), India's infrastructure is over-utilized (again this is the case both in urban and rural areas). India's model, again, has focused on efficiency and productivity while China's model has focused on scale and size.

Arguments regarding social investment

The second point relates to trade-off choices in investments: investment in physical infrastructure has to be prioritized in the total composition of all the investments. Social investments have a statistically significant effect on growth and income but FDI does not have such an effect (Sen, 1997; Alfaro, 2003; Wu, 2008). China's social investments such as primary and secondary education have been consistently lower than India's comparable investments. So, it appears that China's infrastructure investment may have come at the cost of other important social investments. India has quietly and persistently improved its educational provisions, especially in rural areas (Huang and Khanna, 2003).

While there are many flaws to the Indian educational system, there is a fair amount of autonomy and freedom and entrepreneurship in primary, secondary, and higher education. And this has increasingly created a more relevant and market-oriented education (be it teaching of English language or the content of the curriculum). For sustainable economic development, the quantity and quality of human capital will matter far more than those of physical capital. India seems to have adopted the right education policy, and China is also beginning to rethink its investment in primary and secondary, and rural education.

Arguments regarding institutions

In addition to the democratization of its polity, and liberalization of its economy, the autonomy and democracy of India's financial institutions and corporations make India a more alluring investment destination. The norms and regulations of the financial markets, and the enforcement and supervision by Securities Exchange Board of India of these regulations are credible, if not perfect. They have made the Indian stock and bond markets transparent and investor-friendly (Swamy, 2005). India's stronger infrastructure in terms of far more efficient and transparent capital markets is enabling the growth of entrepreneurship and free enterprise (Huang, 2006).

Empirical research (Khanna *et al.*, 2006) now shows that each successful society develops its own set of governance institutions, standards and practices. While there may be some *de jure* similarity in standards, there is no *de facto* convergence. India has evolved fairly robust and indigenous governance institutions and standards (e.g. dispute resolution bodies such as courts, recognition and protection of private and intellectual property rights, a well-developed private sector, and a modestly better score on corruption and rule of law in World Bank's governance indicators) over the last 50-60 years (Swamy, 2005; Wolf, 2006). It may take China the next 30-40 years to develop its own institutions and standards (North and Robert, 1971; Swamy, 2005).

Arguments regarding export-import trade

Data overwhelmingly, show that China has dramatically increased the level of its export-import trade in the last 20 years. On the other hand, India has increased this trade only marginally.

For example, India and China's shares in global merchandise exports were 0.8 and 6.7 percent, respectively, in 2004 (the comparative figures for 1984 were 0.5 and 1.2, respectively). The shares of China and India in 2004 global GDP were at 4.68 and 1.67 percent, respectively, (Srinivasan, 2006).

Such data have been widely interpreted to suggest that China has integrated with the global economy more successfully than India. That may or may not be correct assessment when measured by other metrics such as autonomy of the currency, transparency in the financial and market institutions, and norms and standards of corporate governance. In any case, for *arguendo* purposes even if this assessment is accepted, there is this important conundrum yet to be investigated: is growth driven by greater export-import trade recommended for long-term and stable growth? The answer is not evident.

While the level of export-import trade may or may not be a robust indicator of integration with global economy, the level of export-import trade definitely has an impact on the economy and its stability. India and China have both provided long-term, stable growths (China has obviously grown at a higher rate) but they have done it with different models: India has done with relatively low export-import trade, and China with relatively much higher export-import trade.

Empirical illustration

We provide a simple empirical analysis of the relationship between economic growth, and FDI and percentage of primary education completion (as one representative measure of social investment). This analysis is largely exploratory, and illustrative.

We collected annual data for China and India for the years 1991-2001 for the following variables:

- GDP measure represents economic growth. The source for this data is the World Bank (Reports of World Bank Development Indicators). GDP is defined as the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current US dollars. Dollar figures for GDP are converted from domestic currencies using single year official exchange rates.
- The FDI measure comes from UNCTAD's World Investment Reports. These reports present aggregate inflows, outflows, inward stocks and outward stocks of FDI.
- Primary school education data are also provided by the World Bank Development Indicators. This measure is defined in terms of primary completion rate is the number of students in the last year of primary school in a given year divided by the number of children of official graduation age in the population.

We propose the following model where growth is a function of FDI and level of primary school education:

$$\text{GDP} = \alpha + (\beta)(\text{FDI}) + (\delta)(\text{Primary school}).$$

We employed ordinary least squares, and estimated the model separately for China and India for the time period, 1991-2001. Given the limited degrees of freedom, the above model is appropriate for the current study.

The empirical results are shown in Tables I and II. As the empirical results suggest, the effect of FDI on GDP is statistically insignificant for both China and India. However, both the magnitude and the statistical significance of FDI effect are higher for China compared to India. The effect of primary school education is positive and statistically significant for both China and India. These results are consistent with theory, our expectations and other empirical findings (Alfaro, 2003; Srinivasan, 2006; Wu, 2008).

There are several evident caveats to the empirical results. The model is simple in form and structure. There are many other rich models which may capture the effects more faithfully. One of the immediate improvements required is inclusion of other control variables. Many statistical issues such as heterogeneity and auto-correlation have to be reviewed carefully. Given these limitations, the results are merely exploratory and illustrative.

Conclusion

In summary, China's growth has been fueled by input of huge resources (particularly from FDIs). On the other hand, India's growth is fueled by efficiency and productivity. In the long-run, growth secured through productivity may be more sustainable but as demonstrated by China such growth can be accomplished only when a threshold in size and scope are reached. India has adopted policies that stimulate consumer demand and foster entrepreneurship, and China has adopted policies that have encouraged resource-mobilization.

India's political pluralism where different constituents make their claims has kept the economic policies balanced and moderated. China does not have the moderating impact of competing and dissenting voices in design and execution of public policy.

While the structure of the economy appears to be more promising for India, there is one enigmatic issue yet to be understood: China's path of economic development (agriculture to industry to services) has been demonstrated to be viable and consistent with other successful development paths but India's path of development (almost directly agrarian

Variable	Magnitude	<i>t</i> -value
<i>c</i>	4.2	5.7
FDI	0.024	1.3
Primary school	0.07	2.3

Table I.
Empirical results
of China

Variable	Magnitude	<i>t</i> -value
Intercept	5.3	4.7
FDI	0.009	0.82
Primary school	0.12	3.2

Table II.
Empirical results India

to services-based) may or may not be viable. India's level success or failure in the next 10-20 years will educate us.

China has made monumental progress in the development of its physical infrastructure, and India has been woefully inadequate in this. However, China's physical infrastructure development may have come at the cost of social investments (e.g. primary and secondary education). Empirical results show that social investments are important for an economy's sustained growth, more than incentives to attract FDIs. China also has important work to do in building governance institutions to make the economy and business orderly and transparent.

Finally, China's economy constitutes significantly larger (than India) export-import trade. But, the data from China and India is not yet clear and compelling enough to answer the question: is growth driven by greater export-import trade recommended for long-term and stable growth? Again, we will have to let the policy experimentation and time educate us.

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About the author

G.K. Kalyanaram is a Professor, a Management Consultant and a Corporate Advisor. He got his PhD from Massachusetts Institute of Technology (MIT) in 1989. He has published extensively in several professional journals including *International Journal of Pharmaceutical and Healthcare Marketing*, *International Journal of Research in Marketing*, *Journal of Consumer Research*, *Journal of Marketing Research*, *Journal of Product Innovation Management*, *Marketing Science*, *Review of Industrial Organization*, and *Strategy and Business*. His research has been recognized by the American Marketing Association, the American Marketing Science Association, and the INFORMS. He has been recognized by MIT with the Harold Lobdell Jr Award for his contributions to the institute and its alumni. He has also been recognized as an Outstanding Alumnus by National Institute of Technology, India. G.K. Kalyanaram can be contacted at: kalyan@alum.mit.edu