



The Centre for International Governance Innovation

# WORKING PAPER

Emerging Economies

## Sustainability of Economic Growth in India

RAJIV KUMAR  
AMITENDU PALIT  
KARAN SINGH

• • •

Working Paper No.25  
May 2007

An electronic version of this paper is available for download at:  
[www.cigionline.org](http://www.cigionline.org)

TO SEND COMMENTS TO THE AUTHOR PLEASE CONTACT:

Rajiv Kumar  
Director and Chief Executive  
Indian Council for Research on International Economic Relations  
rkumar@icrier.res.in

Amitendu Palit  
Visiting Fellow  
Indian Council for Research on International Economic Relations  
apalit@icrier.res.in

Karan Singh  
Research Assistant  
Indian Council for Research on International Economic Relations  
karan@icrier.res.in

If you would like to be added to our mailing list or have questions about our Working Paper Series please contact **publications@cigionline.org**

The CIGI Working Paper series publications are available for download on our website at: **www.cigionline.org**

The opinions expressed in this paper are those of the author and do not necessarily reflect the views of The Centre for International Governance Innovation or its Board of Directors and /or Board of Governors.



Copyright © 2007 Rajiv Kumar, Amitendu Palit and Karan Singh. This work was carried out with the support of The Centre for International Governance Innovation (CIGI), Waterloo, Ontario, Canada ([www.cigionline.org](http://www.cigionline.org)). This work is licensed under a Creative Commons Attribution - Non-commercial - No Derivatives License. To view this license, visit ([www.creativecommons.org/licenses/by-nc-nd/2.5/](http://www.creativecommons.org/licenses/by-nc-nd/2.5/)). For re-use or distribution, please include this copyright notice.

# CIGI WORKING PAPER

Emerging Economies

## **Sustainability of Economic Growth in India\***

Rajiv Kumar  
Amitendu Palit  
Karan Singh

Working Paper No.25

May 2007

---

\* Rajiv Kumar, Amitendu Palit, and Karan Singh, are Director & CE, Visiting Fellow, and Research Assistant, respectively, at the Indian Council for Research on International Economic Relations (ICRIER), Delhi, India. The views expressed are personal to the authors. Usual disclaimers apply.

# Research Committee

**John English**

Executive Director

**Andrew F. Cooper**

Associate Director and Distinguished Fellow

**Daniel Schwanen**

Chief Operating Officer and Director of Research

**John M. Curtis**

Distinguished Fellow

**Louise Fréchette**

Distinguished Fellow

**Paul Heinbecker**

Distinguished Fellow

**Ramesh Thakur**

Distinguished Fellow

**John Whalley**

Distinguished Fellow

**Eric Helleiner**

Chair in International Governance

**Jennifer Clapp**

Chair in International Governance

# Publications Team

**Andrew Schrumm**

Working Papers Co-ordinator

**Alicia Sanchez**

Production and Graphic Design

## John English

EXECUTIVE DIRECTOR, CIGI

On behalf of The Centre for International Governance Innovation (CIGI), it gives me great pleasure to introduce our working paper series. CIGI was founded in 2002 to provide solutions to some of the world's most pressing governance challenges—strategies which often require inter-institutional co-operation. CIGI strives to find and develop ideas for global change by studying, advising and networking with scholars, practitioners and governments on the character and desired reforms of multilateral governance.

Through the working paper series, we hope to present the findings of preliminary research conducted by an impressive interdisciplinary array of CIGI experts and global scholars. Our goal is to inform and enhance debate on the multifaceted issues affecting international affairs ranging from the changing nature and evolution of international institutions to analysis of powerful developments in the global economy.

We encourage your analysis and commentary and welcome your suggestions. Please visit us online at [www.cigionline.org](http://www.cigionline.org) to learn more about CIGI's research programs, conferences and events, and to review our latest contributions to the field.

Thank you for your interest,



John English

## **Author Biographies**

Dr Rajiv Kumar is Director and Chief Executive of the Indian Council for Research on International Economic Relations (ICRIER), a New Delhi based economic policy think tank. He holds both a D.Phil in Economics from Oxford University and a PhD in Economics from Lucknow University. Dr Kumar is a member of the Indian National Security Advisory Board, the Telecom Regulatory Authority of India, and was previously the Principal Regional Economist for the Asian Development Bank in Central Asia, ADB Chief Economist for Mongolia and China, and chief economist with the Confederation of Indian Industry. He was professor at the Indian Institute of Foreign Trade, teaching competitive strategy and micro economics, and has published books and articles and contributes regularly to newspapers and journals.

Dr Amitendu Palit is Visiting Fellow with ICRIER, and was previously Deputy Economic Adviser in the Indian Ministry of Finance, responsible for policies relating to India's balance of payments, foreign exchange reserves and private capital flows. He holds a PhD in Economics from the School of International Studies, Jawaharlal Nehru University, New Delhi. His main research interests are macroeconomic policies, FDI, global value chains, small enterprises and labour market outcomes. Dr Palit figures on Technical Advisory Committees set up by the Planning Commission on Inflow of Foreign Savings for the 11th FYP and by the International Labour Organisation on Growth of Micro and Small Enterprises. He writes extensively for newspapers and appears regularly as expert on the radio and television.

Mr Karan Singh is Research Assistant at ICRIER, and was previously a Junior Environmental Economist at Madras School of Economics. He completed his MSc in Economics from Madras School of Economics, and is an efficient Economic Specialist

with 4 years of experience in the research and analytical fields. In terms of teaching experience, for the last 2 years he has taken lecture on Applied Econometrics for M.Phil students at Delhi University south campus. His research areas include Internet Virus, Stock Market, Macroeconomics, Market Integration and Applied Econometrics.

## **Abstract**

The robust performance of the Indian economy in recent years, with economic growth averaging 8.5%, has generated intense debate regarding India's future economic prospects. Indeed, the future of more than a billion people, many of whom still exist in degrading and unacceptable poverty and deprivation, depends critically on India's ability to grow fast at high rates. This paper, while examining the issue, argues that India's recent economic performance is a result of it's entering a virtuous circle of growth generated by some key structural drivers. The latter include a dynamic private sector, benign external environment and a well-functioning democracy. The paper also points out that high growth can be sustained only if necessary policies are adopted for removing binding constraints like poor infrastructure, stagnant agriculture and lack of fiscal space. The paper identifies education as the most critical sector requiring reforms, followed by public goods delivery and labour markets.

## 1. Introduction

The robust performance of the Indian economy in the last four years, with economic growth averaging 8.5% has generated intense debate regarding India's future economic prospects.<sup>1</sup> Indeed, the future of more than a billion people, at least a quarter of whom still exist in degrading and unacceptable poverty and deprivation, depends critically on India's ability to grow fast at high rates. Rapid and sustained economic growth, though not sufficient for eliminating poverty, is certainly a necessary condition for improving living standards. Therefore, it is crucial to examine and understand that if India can meet the 9% growth target set out by the Planning Commission's Approach Paper to the 11th Five Year Plan, approved by the National Development Council (NDC), chaired by the Prime Minister, on 9 December 2006.<sup>2</sup>

The two central issues being debated are whether a growth rate of around 9% is sustainable on the strength of sound economic fundamentals or is the recent growth upsurge simply a result of a fortuitous conjunction of the upswings in domestic and global economic cycles and will moderate as these cycles head southwards. The other issue being debated is whether or not this growth is 'inclusive' (inclusion implying not only reduction in absolute poverty, but also in income inequality across income groups and geographic regions). A new dimension to the growth debate has

---

<sup>1</sup> Global attention on India's economic prospects in the coming decades was first triggered by the much-discussed Goldman Sachs report on the BRICs (Brazil, Russia, India, China) report of 2003. This report has now been updated with a higher annual growth assumption of 8% for India based on more recent economic performance. See Wilson and Purushothaman (2003), and Poddar and Yi (2007).

<sup>2</sup> It is important to note that reportedly all but one of the Chief Ministers, who are part of the NDC, despite their disparate political predilections, approved of the growth target, as well as the primacy of achieving high growth. Apparently the state of Kerala was the only dissenting voice arguing for greater attention to achieving better distribution and equity.

been added by the emerging concern on ecological sustainability or inter-generational equity highlighted by the Nicholas Stern Report (United Kingdom, 2006) and the latest findings of the Intergovernmental Panel on Climate Change (IPCC). This relatively under-discussed aspect of the debate demands careful examination as giant economies like India and China cannot expect to be free riders on the ecological cycle on the standard and somewhat outdated plea of having damaged global resources far less than developed economies.

The four central arguments of this paper are as follows. First, we argue that India's economic performance since 2003-04 is a result of the economy entering a virtuous circle of growth generating its own momentum. We discuss some of the key structural drivers of growth in this regard. Second, we point out that while the high growth rates since 2003-04 may represent emergence of a new gross domestic product (GDP) growth trajectory of 8-9% per annum, the latter can be sustained only if necessary policy measures are adopted. In this context we identify the critical constraints currently facing India, which, if not addressed, can subdue the high growth levels. Third, future policy reforms must focus on raising growth and productivity levels in agriculture while facilitating an efficient transition to mass manufacturing. Finally, India must look increasingly towards its own innovative strengths and access relevant technology for charting out an ecologically sustainable high growth path. The paper argues that India must try and avoid the apparent trade-off involved in simultaneous pursuit of the triple objectives of rapid growth, lower poverty (and higher equity) and ecological sustainability.

The paper also takes issues with the view increasingly gaining currency in India, that the prevailing robust supply side factors (i.e. the growth drivers) will ensure double digit GDP growth rates irrespective of further policy reforms and the prevailing external

environment. Such a view is too mechanistic to be viable. Notwithstanding the well recognized strengths of the Indian industry and the private sector, the latter cannot hope to maintain their growth dynamism 'despite the government'. We disagree even more strongly with the extreme version of this view that 'governments simply don't matter' any more for India's inexorable march towards becoming the second or the third largest economy in the world by 2050 (Wilson and Purushothaman, 2003).

The next section reviews India's economic performance over the past five and a half decades. The analytical focus, however, is more on the recent years as we try to examine if the economy has scaled a new growth trajectory since 2003-04. The third section identifies and discusses the principal growth drivers that are expected to support the growth momentum in coming years. The fourth section examines the binding constraints, which must be ameliorated for sustaining high growth. In this context we scan in greater detail the problems involved in raising agricultural incomes and those impeding the Indian industry's transition to mass manufacturing. The last section outlines the recommendations for key policy reforms.

## **2. India's Growth Performance**

India's growth record during the last five and half decades can be divided into two phases (Table 1; Appendix 1). The first three decades since independence saw the economy growing at an average decadal rate between 3.2% - 3.9%. The 'stickiness' of growth at a mean rate of around 3.5% led to opinions that the Indian economy was structurally bound to the so-called 'Hindu' rate of growth<sup>3</sup> reflecting the economy's inability during three decades of planned development to achieve the kind of high-

---

<sup>3</sup> The phrase 'Hindu' rate of growth was coined by the celebrated Indian economist, Professor Raj Krishna.

growth trajectories that quite a few other Asian developing countries had succeeded in achieving.

For thirty years since the introduction of the first five year plan (FYP) in 1951-52, India's economic growth, besides being low by international standards, was also unstable. While there were episodes of GDP growth rising to as high as 9.0% (1975-76) and crossing 7.0% on quite a few occasions<sup>4</sup>, there were similar instances of absolute declines<sup>5</sup>, underscoring the relatively unstable nature of growth during the period. The decade of 1970s, arguably, was the most unstable, as indicated by the high coefficient of variation (CV) and standard deviation (SD) for the period (Table 1). The 1970s, however, were an unusually troubled period as well on account of declaration of national emergency (1975), a severe drought (1979-80), and disturbing external developments (e.g. Bangladesh War (1971) and oil 'shocks' from the Gulf (1973-74). These exogenous shocks, perhaps, could be held largely responsible for imparting instability to economic performance.

India's growth trajectory shifted upward from the early-1980s. The economy crossed the 'Hindu' rate of growth with the latter becoming more stable<sup>6</sup>. The CVs between the first three decades, and the later twenty six years, differ by more than 60 percentage points (Table 1) with growth post-1980s being much less volatile with no instances of decline in GDP. Growth has become even less volatile since the 1990s. Indeed, the first six years of the

---

<sup>4</sup> India achieved growth rates of 7.6%, 7.1%, 7.6%, 8.1%, 7.5%, and 7.2%, respectively, during 1958-59, 1960-61, 1964-65, 1967-68, 1977-78 and 1980-81.

<sup>5</sup> During 1957-58, 1965-66, 1972-73, and 1979-80, India's growth rate declined by -1.2%, -3.7%, -0.3% and -5.2% respectively.

<sup>6</sup> Barring East Asia (including China), India's average growth during the period 1980-99 was better than all other regions. Furthermore, in terms of stability of growth, India performed better than even East Asia during this period. See Panagariya (2005), Rodrik and Subramanian (2004), Virmani (2005).

Table 1. Mean, Standard Deviation and Coefficient of Variation for India's Growth Rate: 1951-52 to 2006-07

Period	Mean	Standard Deviation	Coefficient of Variation
<b>I.1951-52 - 1980-81</b>	3.62	3.49	96.45
a) 1951-52 - 1960-61	3.94	2.72	68.96
b) 1961-62 - 1970-71	3.74	3.53	94.42
c) 1971-72 - 1980-81	3.17	4.36	137.51
<b>II.1981-82 - 2006-07</b>	6.03	2.11	35.01
a) 1981-82 - 1990-91	5.65	2.21	39.07
b) 1991-92 - 2000-01	5.65	1.90	33.67
c) 2001-02 -2006-07	7.30	2.12	29.05

Note: Calculated from annual growth rates of GDP at factor cost at constant prices as given in source.

Sources: India, *Economic Survey 2005-6* (Delhi: Ministry of Finance, 2006); and, Central Statistical Organisation (7 February 2007): Available online: <[http://mospi.nic.in/press\\_release\\_7feb07.htm](http://mospi.nic.in/press_release_7feb07.htm)>.

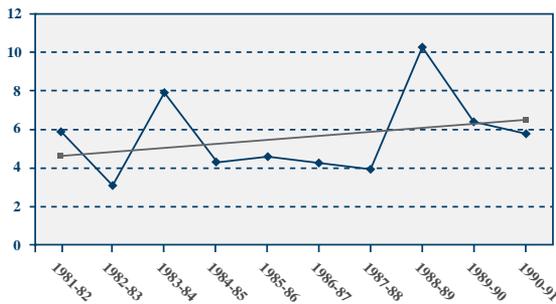
current decade are more stable compared with the 1990s also. The economy has moved on to a higher growth path with shallower troughs.

The recent growth performance has sparked off a debate on whether the higher growth trajectory was achieved in the 1980s or 1990s. Armed with commendable statistical evidence and rigour, some studies argue in favour of a significant shift in growth rate from the early-1980s (e.g. Virmani, 1989; Wallack, 2003; Rodrik and Subramanian, 2004). There are others, however, who find such a break to be statistically insignificant (e.g. Nagaraj, 1990; Bhargava and Joshi, 1990).

The debate on the timing of the inflexion point, however, is in itself a bit sterile. The important issue as some observers have noted more recently (e.g. Ahmad, 2006) is whether or not the

higher growth performance, be it in the 1980s, or the 1990s, was a result of reform efforts. A more useful debate in this regard has been on the nature of growth-inducing policies since the 1980s, as well as the sustainability of this growth. Some economists argue that contrary to popular perceptions, policy reforms in India actually began during the mid-1980s and were responsible for India breaking free from the 'Hindu' rate of growth (DeLong, 2001; Virmani, 1997). There are others, however, who opine that the higher growth in the 1980s was fragile and unsustainable, whereas growth in the 1990s, driven by synchronized reforms, is more durable (Ahluwalia, 2002; Panagariya, 2005). We revisit this issue in the paragraphs below.

Figure 1. GDP Growth during 1980s



The average rate of growth over the 1980s was 5.65%, almost two percentage points higher than the best decadal performance earlier (Table 1). While the rate of GDP growth was certainly more stable, excluding the only year of double-digit growth in independent India's history (1988-89; Appendix 1), the decadal average growth during the 1980s drops to 5.11%. Indeed, the growth rate for the decade was pulled up by exceptional performance in two years (1983-84 and 1988-89; Figure 1; Appendix 1). Thus the 1980s could hardly be seen as marking a sustained upward shift in India's growth trajectory.

Moreover, the decade also saw marked deepening of some structural imbalances, which could be seen to have led to the economic crisis of the early-1990s. These imbalances were inter-linked and mutually reinforcing. The savings-investment profile indicates how the imbalances accentuated over time. The decade began with domestic savings short of domestic capital formation by around 1.5% of GDP (Appendix 2) reflected in a current account deficit at a level considered appropriate for a developing economy. However, the deficit shot up to a 'disturbing' level of 2.7% of GDP in 1988-89 (Appendix 3). The rise in the current account deficit reflected deterioration in public savings that implied large scale public borrowings for financing public investment.

Public sector savings declined steadily throughout the 1980s, from 4.5% of GDP in 1981-82 to almost 1% of GDP during 1990-91 (Appendix 2). The decline in the share of public sector savings in total national savings was even sharper.<sup>7</sup> Public investment, on the other hand, after rising steadily from 10.1% of GDP in 1981-82 to 11.2% of GDP in 1986-87, declined to 9.3% of GDP in 1990-91 (Appendix 2). The public sector savings-investment gap widened rapidly during the second half of the decade building up fiscal pressures.

It is clear that the higher growth in the 1980s was achieved by high public investment unmatched by public savings and was based on a spurge in public sector borrowings. As a result, the Central Government's total liabilities increased from 40.4% of GDP in 1981-82 to 55.31% of GDP in 1990-91 (Figure 2). During the same period, India's total public debt (Centre plus states) increased from 45.9% of GDP to 61.7% of GDP. Excessive reliance on borrowings for financing expansionary growth policies

---

<sup>7</sup> From 24.1% in 1981-82, the share of public sector in total savings declined to only 4.8% in 1990-91.

was the key feature of India's economic performance during the 1980s. Such reliance led to heavy strains on external accounts and unsustainable fiscal deficits, culminating in the economic crisis of the early-1990s (Acharya, 2002). The Central fiscal deficit, as a proportion of GDP, increased sharply from 5.1% in 1981-82 to 7.9% in 1990-91 (Appendix 4). Much of the increase in this fiscal deficit was due to rapid escalation in revenue deficit fuelled by high revenue expenditure arising from mounting interest payments (see Appenix 4 for definitions). High revenue expenditure also constrained the growth of capital expenditure<sup>8</sup> and growth of durable assets, particularly physical infrastructure (Mundle and Rao, 1992).

In balance of payments (BOP) terms, the rising current account deficit was reflected in a growing merchandise trade deficit following liberalization of imports since mid-80s, unaccompanied by matching rise in exports<sup>9</sup> and drying up of invisibles receipts<sup>10</sup>

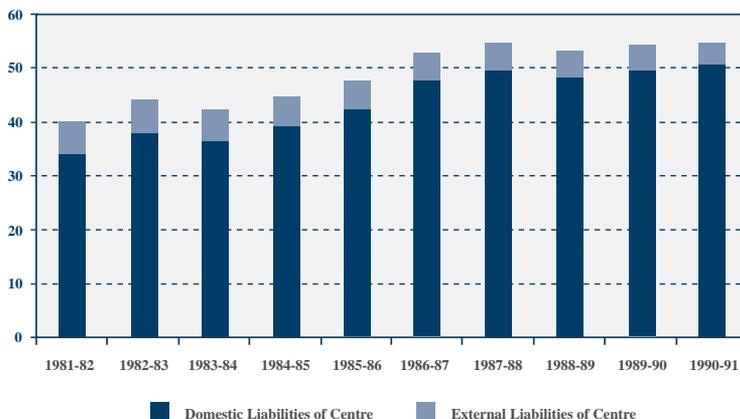
---

<sup>8</sup> While the share of revenue expenditure in total central government expenditure increased from 61.48% in 1980-81 to 69.6% in 1987-88, similar share of capital expenditure during the period dropped from 38.6% to 30.5%. Among various items of revenue expenditure, share of interest payments during the period rose from 13.2% to 19.3%, while that of subsidies increased from 12.1% to 14.9%. See Mundle and Rao (1992).

<sup>9</sup> During the mid-1980s, external sector reforms were initiated with the objective of reducing the protection available to several segments of domestic industry and increasing Indian industry's access to imported technology and capital goods. These reforms included facilitating imports by expanding the scope of the Open General License (OGL) scheme and adopting specific export promotion measures like introducing export-import pass books and advance licensing schemes (Kelkar and Kumar, 1990). While imports increased as a result of more open policies, exports did not rise as fast, which had much to do with an overvalued exchange rate and emerging structural weaknesses in Indian industry (Ibid.), which have been discussed later in the section.

<sup>10</sup> The invisibles surplus in the current account of the balance of payments reduced from 2.2% of GDP in 1981-82 to a deficit of -0.1% of GDP in 1990-91. Invisible receipts, as a proportion of GDP, dropped from 3.3% in 1981-82 to 2.3% in 1990-91, while payments, on the same basis, rose from 1.2% to 2.4% over the same period. Higher outgo under invisibles payments was mostly due higher interest payments on external borrowings reflected in 'investment income' outflows (GOI (1990-91) as cited in Jalan, 1992).

Figure 2. Central Government Liabilities during 1980s (% of GDP)



(Appendix 4). The sharp rise in external debt (Appendix 4), as well as in debt service obligations on account of the low maturity profile of external borrowings,<sup>11</sup> worsened fiscal indicators creating a vicious cycle of debt and deficit (Jalan, 1992). Unlike the previous decades, when current account deficits were financed mainly by concessional multilateral assistance, the 1980s saw such deficits being covered by non-concessional private loans (Ibid.). Thus while India succeeded in crossing the 'Hindu' rate of growth during the 1980s, it did so by heavily indebting the public sector.

Paucity of public resources also affected supply-side management. Apart from low public investment in infrastructure, agriculture too witnessed stagnating levels of capital formation

<sup>11</sup> During the 1980s, pursuit of expansionary policies resulted in short-term debt-financing of several public sector projects. Besides, short-term borrowings were resorted to for financing oil imports and non-oil project imports. Due to large gestation lags in public sector projects, obtaining quick flow of returns from these enterprises for servicing short-term debt became increasingly difficult (Jalan, 1992).

during the 1980s. The overall performance of the farm sector was erratic.<sup>12</sup> The trend of falling public investment in agriculture infrastructure and extension services, which started during the 1980s set off a disturbing phenomenon, which, even today, continues to remain a roadblock in enhancing agricultural productivity, crop diversification and improving overall agricultural performance. Indian industry, on the other hand, grew at an accelerated pace during the decade.<sup>13</sup> However, the industrial structure changed significantly. Consumer durables recorded the fastest growth, imparting industrial growth a distinct consumption-driven orientation, in contrast to the investment-driven growth of the earlier decades. Within the rest of manufacturing, chemicals displaced metal industries as the leading category, which had serious implications for India's global competitiveness, as chemicals were much less export-worthy (Kelkar and Kumar, 1990).

The decade, however, did witness some important policy reforms particularly in terms of introduction of a Long Term Fiscal Policy (LTFP) as well as rationalization of tariffs on imported inputs for some key export-earning segments like electronics. However, these fell far short of achieving the desired degree of openness and liberalization. Indeed, reforms during the 1980s could be seen merely as 'tinkering at the margin'.

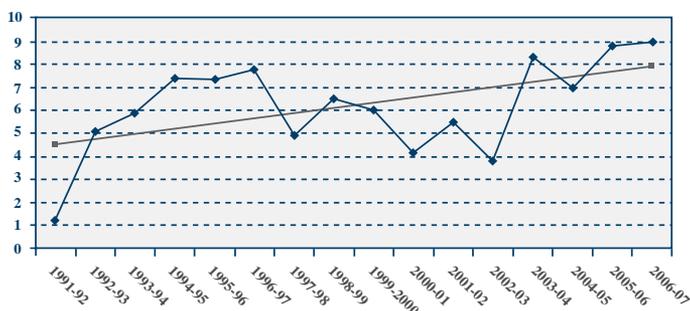
Nevertheless, the 1980s marked an important phase in independent India's economic history. While statistically the country overcame the jinx of the 'Hindu' rate of growth and moved on to a higher trajectory, it did so, ostensibly by following imprudent

---

<sup>12</sup> The two best years for agriculture were 1983-84 and 1988-89, which witnessed growth rates of 9.6% and 15.5% respectively (Appendix 1). On the other hand, during 1982-83, 1986-87, and 1987-88, agricultural output experienced absolute declines.

<sup>13</sup> The average decadal growth for industry was 7.11%. See Appendix 1 for annual growth rates.

Figure 3. Growth Trend, 1991-92 to 2006-07 (% GDP)



expansionary policies. These resulted in worsening of both the external and fiscal balances. The final years of the decade also witnessed growing political uncertainties in the form of rapid change of governments. It was, therefore, hardly surprising that the economy plunged into a deep balance of payments crisis in the early-1990s, which is well documented. The country barely avoided a default on its external payment obligations. And with a desperate situation calling for desperate remedies, India embarked on a series of structural reforms in response to the crisis of 1990-91.

### Growth after 1990s: Trends, Features and Outcomes

During 1991-92 to 2006-07, the economy grew at an annual average rate of 6.3%. The overall economic performance during this period, however, can be divided into three distinct phases on the basis of the trend pattern of growth (Figure 3). These are 1991-92 to 1996-97, 1997-98 to 2002-03 and 2003-04 to 2006-07 respectively.

(i) *1991-92 to 1996-97*: Following the introduction of a slew of economic reforms in 1991-92, growth responded robustly, as the economy moved into a phase of business cycle upswing. During

1992-93 to 1996-97, annual average growth in real GDP was 6.7% with GDP growth exceeding 7% in three consecutive years (Figure 3 and Appendix 1). Indeed, the recovery of the Indian economy from the 1991 crisis has been noted to be one of the 'swiftest' in the world among contemporary economies (Acharya, 1999; 2002). The strong pick-up was primarily a response to the reforms undertaken both in the later part of the 1980s, as well as in 1991 that released capacity constraints on manufacturing and lowered entry barriers - thereby promoting greater domestic competition and concomitantly exports. Coupled with the aggressive reforms introduced during 1991-92 to 1992-93,<sup>14</sup> growth received a vigorous policy push as investment rose sharply with private enterprise moving into hitherto closed sectors in a big way. Several capital controls were lifted and tariff rates were slashed, which enabled the economy to attract more foreign investment and made imports required for exports much cheaper.

(ii) *1997-98 to 2002-03*: The GDP growth rate during this six year period declined to an average of 5.2% as compared to 6.7% in the previous five years and 5.6% during the 1980s (Appendix 1). Moreover, this was also the period during which organized sector employment declined sharply mainly due to decline in manufacturing employment.<sup>15</sup> The weak growth performance

---

<sup>14</sup> Major reforms included withdrawal of licensing requirements from a large number of activities, limiting the monopoly of the public sector to only a few select areas, rationalizing the Monopolies and Restrictive Practices (MRTP) Act for allowing industry to obtain benefits of scale, and abolishing the inefficient freight equalization scheme. Furthermore moving to a more liberal policy for both foreign portfolio investment and FDI, sharp reduction in import tariffs, and moving towards a more transparent and efficient domestic financial architecture, also helped in improving industrial performance and investment.

<sup>15</sup> Organized sector employment declined by around 4.4% during the period as total organized employment dropped from 282.45 lakh persons at the end of 1996-97 to 270 lakh persons at the end of 2002-03. Manufacturing employment declined by 16.7% during this period. Calculated from figures reported in Economic Survey (2006-07).

combined with employment stagnation was seen by some as further evidence of the failure of the liberalization experience in India and of the so called 'Washington Consensus' in general.<sup>16</sup> As subsequent events have shown this conclusion was both premature and misplaced. The actual reasons for the slowdown in this period were: First, the global economy, buffeted by the Asian Crisis, and the Russian and Brazilian defaults, went through rather precarious and uncertain times during this period. Second, the Indian industry having been exposed to greater import competition and put on notice to achieve global competitiveness went through a massive restructuring that included technological upgradation, capacity expansion and rationalization of the workforce with a huge increase in domestic outsourcing of non-core functions by large firms trying to achieve greater flexibility and reduction in fixed costs, which, unfortunately, included labour costs in the organized sector as well. Third, the country itself went through a series of rather traumatic experiences in this period starting with the Orissa super cyclone (1997); the Pokharan nuclear tests (1998) that led to economic sanctions against India and stoppage of not only official aid but also denial of access to a range of technologies; the Kargil war with Pakistan (1999); the Gujarat earthquake (2000); and the attack on the Indian Parliament (2001) that resulted in another ratcheting up of tensions and strong adverse travel advisories. With all these shocks and a generally depressed investment climate, an average GDP growth

---

<sup>16</sup> The jobless and relatively weaker growth in India during the latter half of the 1990s was used by several to argue against liberalization. See Roderick and Subramanian (2004), Nayyar (2006). The Asian Crisis of 1997-98 that had eluded both India and China and the abysmal record of transition economies, reeling under the shock therapy inspired by Jeffery Sachs and his team, were of course the principal evidence cited against pushing for liberalization and integration with global markets. The important conclusion that this experience and debate has yielded is that there is no generalized package of reforms and no 'liberalization mantra' suited to all developing economies. Liberalization and integration with global markets though an important condition for achieving higher GDP growth has to follow country specific design and pace. See Ahluwalia (2002).

of 5.2% pointed to the new-found resilience of the Indian economy as a result of the reforms in the early-1990s.

Finally, another important factor affecting GDP growth during the period could, arguably, be the policy inability to address the trade-off between rapid growth and inflation. The pick-up in GDP growth after 1991-92 was accompanied by sharp rise in prices (Appendix 5). The expected monetary policy response saw interest rates<sup>17</sup> remaining fairly hard until 1996-97. Indeed, between 1991-92 and 1995-96, these rates ranged between 14.7%-18.7% and were combined with unusually high Cash Reserve Ratio (CRR) rates between 14%-15%. While the contractionary monetary policies did succeed in bringing down inflation in the latter half of the 1990s to an average of 5.3% (Appendix 5), this was probably achieved at the cost of depressing investment and slowing down the economy. The failure to maintain high growth along with price stability is in sharp contrast to the Chinese experience. The rather disconcerting sequence of rapid growth followed by a bout of inflationary pressure, as seen during the early-1990s and to which the country is extremely sensitive politically, appears to be repeating itself again currently. This issue of how to effectively deal with the trade off between growth and inflation is addressed later in the paper.

(iii) *2003-04 to 2006-07*: In the most recent phase of the past four years the economy has clocked an average GDP growth rate of 8.6% (Appendix 1). With 2007-08 expected also to achieve a growth of about 8.5%,<sup>18</sup> this would be the highest average GDP growth episode of any five year period in post independence economic development. This has prompted the Planning Comm-

---

<sup>17</sup> Interest rates are measured on the basis of Prime Lending Rates (PLRs) of five major banks.

<sup>18</sup> Till now, the most conservative growth projection for 2007-08 is 8% from the ADB. Otherwise, most agencies have put the growth rate at around 8.5% and more.

ission to hike up the growth target in the 11th Five Year Plan to 10% in its terminal year (2011-12) and to an average of 9% for the Plan period (2007-08 to 2011-12).<sup>19</sup> Apparently the Indian economy has moved on to a higher growth trajectory. The basis for this was laid in the control over inflation that was brought down to an average of 3.5% in the beginning of this decade (Appendix 5). This enabled the monetary authorities to bring down the bank rate to as low as 6% in 2003-04, which was half of 12% in 1996-97. This decline in cost of borrowed capital by 600 basis points over seven years provided the much needed boost to private investment and spurred the recovery and current high levels of GDP growth. At the same time, the Cash Reserve Ratio (CRR) has come down by nearly 10 percentage points from 14% in 1997-98 to 4.5% in 2003-04 providing the much needed liquidity for financing growth.

According to the latest National Sample Survey (NSS) data, employment generation has also improved in recent years. The annual rate of growth of employment has increased from 1.6% during 1993-94 to 1999-2000 to 2.5% during 1999-00 to 2004-05. However, almost the entire increase in the size of the labour force has taken place in the unorganized sector. Output growth in the organized sector has not been accompanied by employment growth (ILO, 2007). Given the strong rigidities in the labour market, this is not unexpected as the larger firms resist expansion of their labour forces and have been outsourcing most of the non-core businesses. The latter might have changed the nature of the manufacturing sector significantly and led to an underestimation of both value added and actual employment. But skill shortages are now being reported by both the services and manufacturing sectors with firms reporting high labour turnover rates. The ongoing high GDP growth phase can lead to higher employment

---

<sup>19</sup> For comprehension statistics, see India (2006 : 102).

generation, if export growth picks up and labour market rigidities are tackled.

The higher GDP growth in recent years has been financed by a marked increase in domestic savings as well as inflow of foreign capital. The domestic savings to GDP ratio, after declining marginally to 21.5% in 1998-99, from 22.0% in 1991-92, has improved to 32.4% in 2005-06 (Appendix 2). Household savings remain the largest contributor accounting for 68.9% of total domestic savings. The share of corporate savings in total savings has also increased from 14.1% in 1991-92 to 24.9% in 2005-06. The most marked improvement, however, has happened in growth of public sector savings that were negative from 1998-99 to 2002-03 (Appendix 2). With improvement in fiscal positions of both Central and State governments the growth in public savings has become positive since 2003-04 and has touched 2.0% of GDP in 2005-06 (Appendix 2). On the other hand, the current account of the BOP that had moved into a surplus from 2001-02 and had become as large as 2.3% of GDP in 2003-04, has slipped back to a deficit of 1.3% of GDP in 2005-06 (Appendix 3) implying a turnaround of nearly 3.6% of GDP in just two years. The more than 10% rise in domestic savings rate during 1998-99 to 2005-06 and positive trends in public savings as well as inflow of foreign capital is likely to continue to in the coming years because of favourable demographics, the prospect of higher returns from the large and expanding Indian market and the impact of the Fiscal Responsibility and Budget Management (FRBM) legislations that will rein in fiscal and revenue deficits. Based on these positive trends in savings and concomitant resource availability, some economists (e.g. Bhalla, 2006), however, have somewhat mechanically concluded that India is on a double digit growth path.<sup>20</sup>

---

<sup>20</sup> Bhalla (2006) asserts that this higher (double-digit) growth rate may well have already been achieved and is simply being under-reported in the official data.

The significant increase in domestic resource availability has supported an increase in gross domestic capital formation with investment to GDP ratio rising from 22.6% of GDP in 1991-92 to 33.8% of GDP in 2005-06 (Appendix 2). Private investment that had stagnated during the later part of the 1990s because of excess capacity creation following the initial euphoria in the post reform period, has picked up since 2002-03 following softening of interest rates. The investment boom is also reflected in a more than 30% growth (year on year) in non-food commercial bank credit since 2003-04. The on-going investment upswing that is also witnessing a marked technological upgradation in the Indian industry is expected to continue to fuel GDP growth and further increase consumption. The remarkable upturn in savings and investment trends combined with increase in domestic consumption (with 68% of GDP being consumption unlike 46.4% in China)<sup>21</sup> may point towards the beginning of a virtuous growth cycle in India that could sustain even higher growth in the foreseeable future.

India's biggest gains since the reforms in the early-1990s have come in its external sector. Policies such as moving away from an artificially pegged exchange rate regime to a broadly market-based 'float', bringing down customs tariffs<sup>22</sup> and doing away with quantitative restrictions have pushed both imports and exports and resulted in the Indian economy becoming more integrated with global markets. Foreign trade (i.e. exports and imports of goods and services), as a proportion of GDP, has increased from 21.3% in 1991-92 to 50.6% in 2005-06 (Appendix 3). Post-

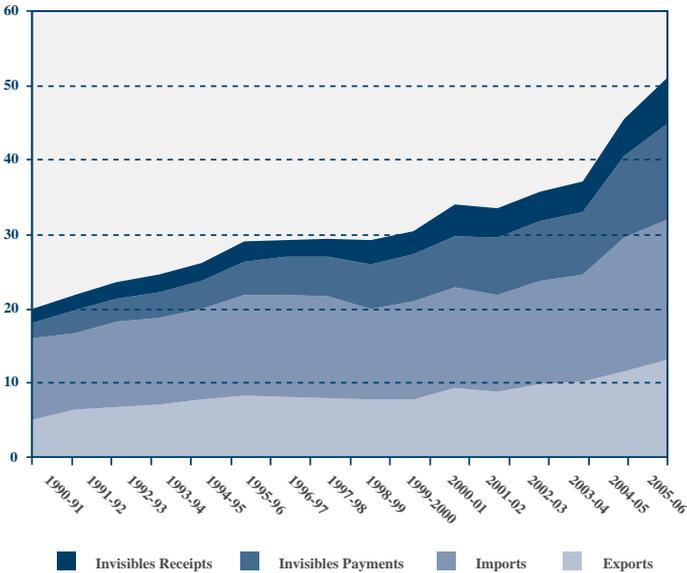
---

<sup>21</sup> India's consumption is estimated net of trade balance (exports - imports) and is obtained from data released by the CSO. China's consumption estimate is according to data provided by Chinese Government Statistics. Both are for the year 2005.

<sup>22</sup> The peak tariff rate has dropped from 300% in 1990 to 30% in 2004. During this period, the average tariff has come down from 128% to 22%. The Union Budget for 2007-08 has proposed to reduce the peak rate of customs duty on non-agricultural products to 10%.

reforms, India's invisibles inflows have surged (Figure 4), driven by robust software exports and heavy inward remittances. Large segments of the Indian economy have benefited from this greater integration with the global economy. However, agriculture in general, and a few services and manufacturing sectors still remain relatively isolated and their greater integration with the world markets will undoubtedly provide a growth stimulus in the coming years.

Figure 4. India's Current Receipts and Payments (as % of GDP)



Source: Reserve Bank of India (RBI)

India's foreign investment policy was revisited in the early-1990s for encouraging FDI, as the country sought to reduce reliance on external debt flows. Over time, foreign investment has been permitted in almost all manufacturing and services industries. More capital controls have been lifted by changing rules governing

portfolio investments. As a result, foreign direct investment (FDI) inflows that had stagnated around US\$2.5 billion till the late-1990s have increased to US\$7.7 billion in 2005-06 and have crossed US\$10 billion in the first nine months of 2006-07. Foreign institutional investments (FII), on the other hand, have maintained their upward trend with total inflows in 2005-06 estimated at US\$9.9 billion. These flows (net) have been somewhat lower in 2006-07 following sporadic outflows resulting from occasional market corrections in recent months. Indian companies have also been mobilizing large resources from overseas markets by issuing ADRs and GDRs.<sup>23</sup> As a result of robust capital inflows, not only has the capital account surplus augmented from only US\$8.4 billion in 1990-91 to US\$24.2 billion in 2005-06, but quality of flows in the capital account has also become more non-debt oriented.

An important indicator of the external balance is the state of external debt that had markedly worsened during the 1980s. Through prudent debt management, India has been able to cut down its external debt, as a proportion of GDP, from 28.7% in 1990-91 to 15.8% in 2005-06. Though India still figures among the top ten debtor nations of the world, it is one of the 'less' indebted countries in the group.<sup>24</sup> The sustained decline in the share of short-term debt in total debt and the debt-service ratio<sup>25</sup> also reflect the success of external debt management.<sup>26</sup> It is to be noted that the sustained improvement in debt sustainability

---

<sup>23</sup> ADRs are American Depository Receipts and GDRs are Global Depository Receipts.

<sup>24</sup> China, Brazil, Russian Federation, Argentina, Turkey, Indonesia, Mexico, India, Poland, and Hungary, are the top ten debtor countries according to the 'Global Development Finance' report of 2005 brought out by the World Bank.

<sup>25</sup> The ratio of debt service to current receipts.

<sup>26</sup> The proportion of short-term debt in total external debt has dropped from 10.2% in 1990-91 to 6.9% in 2005-06, while the debt-service ratio during this period has improved from 35.2 to 10.2.

indicators has taken place despite India following a progressively liberal policy towards commercial borrowings.<sup>27</sup> The best indicator of the strength gathered by India's external sector is the level of foreign exchange reserves. From only US\$5.8 billion in 1990-91, India's reserves have increased to US\$194 billion at the beginning of March 2007. Currently, India is the sixth largest reserve-holding country in the world.<sup>28</sup>

India's progress in fiscal discipline, however, has been somewhat disappointing. Fiscal consolidation progressed well during the first half of the 1990s with gross fiscal deficit of the Centre dropping from almost 8% of GDP in 1990-91 to 4.9% of GDP in 1996-97 (Appendix 4). However, populist measures, essentially the 5th Central Pay Commission awards reversed the trend from 1997-98 by leading to sharp rise in revenue deficit and gross fiscal deficit of the Centre. Since 2002-03, however, fiscal consolidation appears to be back on track again (Appendix 4). The improvement is largely due to the fiscal discipline enforced by the FRBM Act of 2003, which has made it mandatory for the Central Government to improve fiscal indicators in a time-bound manner.

The combined (Central and state) gross fiscal deficit had dropped from 9.4% of GDP in 1990-91 to 6.4% of GDP in 1996-97 (Appendix 4). The deficit shot up to 9.9% of GDP in 2001-02 underlining deterioration of state finances, along with those at the Centre. While much of the worsening of the situation in states is attributable to the cascading effect of the 5th Central Pay Commission, which led to similar awards in states, other generic issues

---

<sup>27</sup> Initially in the early-1990s, India followed a reasonably tight policy towards external commercial borrowings (ECBs). Over time, as the external debt situation improved, end-use norms for ECBs were liberalized along with prepayment clauses. Now, ECBs up to US\$500 million, can be mobilized without prior permission.

<sup>28</sup> The top five include China, Hong Kong, Taiwan, Japan and Singapore.

like high interest payments and rising losses of state public enterprises also affected fiscal health of states. In more recent years, however, state finances have shown distinct signs of improvement. As a result, the combined fiscal deficit has come down to 6.5% of GDP in 2006-07. While many states, like the Centre, have enacted FRBM legislations and have moved to time-bound expenditure management, state revenues have improved on account of larger share of Central tax collections being passed on to states, as per the recommendations of the Twelfth Finance Commission. Further, sustained efforts for broadening the tax base through stricter compliance, expanded coverage of the service tax, and implementation of the state Value Added Tax (VAT), have positively impacted both Central and State revenues.

### **3. Structural Drivers for Sustained High Growth**

India's higher growth performance since 2002-03, if sustained over the next decade and half, will see a significant reduction in absolute poverty and India emerging as one of the largest economies by 2020. The 11th Five Year Plan is targeting an annual average growth rate of 9% (10% in its terminal year). A double-digit growth rate is now seen as feasible if necessary policies are put in place. As the Approach Paper to the 11th Plan indicates, with a population growth of 1.5% per year and 9% growth in GDP, the real per capita income is expected to double in ten years. With consistent rates of double-digit GDP growth, however, such increase can occur much earlier. Going by these assumptions, by 2020, India can be expected to achieve a per capita income level, which will be almost 150-200% higher than its current level.<sup>29</sup>

---

<sup>29</sup> India's per capita income for the year 2006-07 is estimated at Rs 29,069 (CSO) or roughly US\$650. An increase anywhere between 150-200% will imply the per capita income rising to somewhere between US\$1650-\$2000. These are, of course, largely back-of-the-envelope calculations.

The question being raised is whether the recent growth performance represents the upswing of yet another business cycle, perhaps longer than the previous ones, or has the GDP growth reached a higher trajectory that signifies a take-off for the Indian economy. In this section, we discuss the principal drivers that are propelling this take-off and can enable the economy to settle on the higher growth trajectory. The downside risks or challenges that might prevent such a growth outcome and which must be addressed if high growth is to be sustained are discussed in the next section. We feel that the positive impact of the structural drivers outweighs the downside risks making the Indian economy capable of maintaining its current growth rate (i.e. between 8-9%) in the coming years.

### **Rising Levels of Domestic Savings and Investment**

Domestic savings, as a percentage of GDP, started declining from 1996-97, leading many to question the growth-inducing impact of 1991 reforms. However, after hovering between 21.5%-24.8% of GDP between 1996-97-2001-02 (Appendix 2), domestic savings have improved to 32.4% of GDP in 2005-06. While the household sector continues to remain the largest contributor to the savings pool, encouraging signs are visible in both private corporate and public sector savings. The turnaround in the latter, in particular, has been quite remarkable, driven principally by marked improvements in financial performances of public sector enterprises (PSEs). The upturn can be further consolidated by bringing in strategic investors and allowing private shareholders to play a more dominant role in public enterprise management. Private corporate savings on the other hand, at just above 8.0% of GDP, are far lower than those in many other emerging market economies, particularly China (Mishra, 2006). Further research is needed to determine the nature of policy measures required for enhancing corporate savings.

The improvement in public savings has also been achieved through a marked increase in direct tax revenues. The direct tax to GDP ratio has improved from 1.9% in 1990-91 to 5.6% in 2006-07 and is budgeted to increase to 5.7% in 2007-08.<sup>30</sup> This, however, continues to be lower than the ratio of indirect taxes to GDP, which was 5.8% in 2006-07 and is budgeted to increase to 6.0% in 2007-08.<sup>31</sup> Direct tax revenues can be increased further without raising tax rates and through better compliance and more efficient tax administrations, including doing away with the plethora of currently available tax exemptions. However, introducing a tax on the line of the erstwhile 'estate duty'<sup>32</sup> for tapping undeclared assets, mostly non-agricultural property, can be seriously considered. This will increase incentives for current income generation and discourage rental incomes - tendencies that are indeed virtuous for a young country like India. This will also help in bringing more high-income individuals in the tax net, which can be complemented by further improving tax intelligence.

The rise in domestic savings has been matched by acceleration in the domestic investment rate, which has increased by almost 11 percentage points as a proportion of GDP during 2001-02 to 2005-06 (Appendix 2). Foreign savings inflow, represented by the size of the current account deficit of about 1.3% of GDP<sup>33</sup> (Appendix 3) has been filling the investment-savings deficit without much difficulty so far. As discussed earlier, the external

---

<sup>30</sup> Calculated from the revised revenue figures for 2006-07 and budgeted figures for 2007-08 as provided in Union Budget documents for 2007-08.

<sup>31</sup> Ibid.

<sup>32</sup> The Estate Duty Act of 1953 had up to 85% of the value of assets of deceased persons going into the state exchequer. There were, however, exemptions for certain categories of assesses like Hindu Undivided Families (HUF). The levy was discontinued from 16 March 1985.

<sup>33</sup> Due to differences in methodology and system of compilation, the saving-investment balance (as a proportion of GDP), measured according to CSO data and computable from Appendix 2, is not always equivalent to the current account balance in Appendix 3, which is based on RBI's BOP data.

sector balance is not likely to be a cause for concern in the near future. The rapid pick-up in the level of savings and the pace of domestic capital formation in recent years has further demonstrated the positive growth impetus of the structural reform process.

## Demographic Dividend

India is on the threshold of a unique demographic opportunity. By the year 2025, India's population is projected to reach 1395 million from its current level of 1103 million. However, it is the not the increase in size of the total population but the incremental growth in the country's working force population that will be one of the crucial drivers of GDP growth in the coming decades (Table 2).

Table 2. Projected Population for India ('000)

Year	Population aged 0-14 years	Population aged 15-24 years	Population aged 15-64 years	Population (Total)
2005	353 750	211 254	(62.6 %) 691453	1 103 371
2010	354 218	224 657	(64.3 %) 762025	1 183 293
2015	353 203	231 221	(65.7 %) 829037	1 260 366
2020	349 811	232 353	(66.7 %) 888997	1 332 032
2025	341 452	232 579	(67.4 %) 941499	1 395 496

Note: Figures in parentheses indicate percentages of people in the age group 15-64 as proportion of total population.

Source: World Population Prospects, UN: <<http://esa.un.org/unpp>>.

By 2015, the population in the age group 15-64 years is expected to increase by almost 20%. This rate of increase is projected to continue and the population in the working age group is expected to expand by more than 36% by 2025 compared with the 2005 level. By 2025, more than 67% of India's population is expected to be in the age group of 15-64 years. Furthermore, compared with the European nations, US, Canada, and China,

India is expected to have the lowest median age population of 32 years by 2030.<sup>34</sup> Indeed, while in Europe, Canada, China, and the US, dependency ratios are expected to increase and reduce the projected quantum of savings in the long-term, in India, the trend is expected to be completely different (Figure 5).

Figure 5. Dependency Ratios (%)



Source: World Population Prospects, UN: <<http://esa.un.org/unpp>>.

The evolving demographic dynamics have important implications. First, the sheer size of the work force, combined with relevant skills, can make India the most attractive destination for 'efficiency-seeking' FDI that looks out for relatively cheap and skilled labour for producing mass consumption items for global markets. India is thus expected to become the leading skilled labour surplus economy in the world over the coming decades. Second, the growing number of new entrants to the work force, when productively employed, will not only generate greater

<sup>34</sup> The median age for population in Europe, Canada, China and the US are projected to be 46, 44, 42, and 39 years respectively in 2030. See World Population Prospects; <<http://esa.un.org/unpp>>.

consumption demand, but will also enlarge the savings pool. These two factors together comprise the rich 'demographic dividend' that India can reap provided critical policy reforms in education are undertaken.

## Private Sector Development

The single most important achievement of the 1991 reforms has been the releasing of private entrepreneurial dynamism in India. This resulted from the relaxation of the industrial licensing and the elimination of dysfunctional administrative controls on technology acquisition, capacity expansion and resource mobili-

Table 3. Share of Private Sector in Net Capital Stock (%)

	1994	2000	2004
Mining	5.7	6.4	7.2
Manufacturing	75.9	85.4	88.3
Electricity, Gas & Water Supply	7.2	11.5	14.4

Source: India, *Economic Survey* 2005-6 (Delhi: Ministry of Finance, 2006), 136, Ch 7.

zation from capital markets. This has led to greater participation of private sector in industrial activity as reflected in the increase in private investment as a share of total net industrial capital stock (Table 3).

It is interesting to note that even sectors like mining and electricity, which are still dominated by the public sector, have started witnessing greater private investment. Indeed, during the period 1994-2004, the share of private sector in net capital stock of electricity, gas and water supply has doubled underlining the increasing role of private investment in enhancing such services. As discussed later, effective implementation of the Electricity act of 2003 will significantly increase private power generation capacity in the country.

It is also important to note the increasingly significant role that FDI has begun playing in India's industrial growth story. Among developing Asian economies, India is now the most attractive FDI destination following China, Hong Kong and Singapore. From an average of around US\$4.2 billion during 1995-96 to 2004-05, FDI inflows have surged to US\$7.7 billion in 2005-06 and further to US\$10.6 billion in the first nine months of 2006-07. The increase is indicative of the long-term commitment of foreign investors in the economy. Favourable macroeconomic conditions and enabling policies are likely to initiate a virtuous cycle of FDI inflows, which will be self-reinforced by agglomeration benefits.

### **Innovative Capability**

The global economy is said to be increasingly becoming a 'knowledge economy' in which firms and countries that seek to build their competitive advantage from strengthening R&D and innovative capabilities are likely to be more successful (see Dahlman and Utz, 2005). While India is still considered primarily a 'resource-based' economy, large segments within it are active in knowledge creation and knowledge-based activities. As a proportion of GDP, India's R&D expenditure is just about 1%, which is almost as much as that of Brazil, Hungary, Italy, and Spain, and not much below those of China and Russia,<sup>35</sup> But it is still far below that of South Korea and Japan which allocate more than 3% of the GDP to R&D effort.<sup>36</sup>

---

<sup>35</sup> See National Science & Technology Management Information System (NSTMIS); <<http://www.nstmis-dst.org>>

<sup>36</sup> At present, more than 60% of India's R&D expenditure is accounted for by the Central Government, out of which, some major scientific agencies contribute more than four-fifth of total Central Government expenditure. India's corporate sector is also devoting considerable emphasis on R&D and accounts for more than 20% of total R&D expenses. Corporate R&D is most noticeable in IT and software in terms of R&D centers in India opened by global IT giants like IBM, Intel and Adobe.

The share of R&D expenditure in GDP, may, however, underestimate the innovative activity and capability in a country like India. This is on account of a very significant amount of innovative activity being undertaken at the local level and in marginal improvements to the production process principally for adapting received technology to prevailing conditions and user preference. Such technological developments are qualitative improvements in capabilities for enterprises that have achieved productivity gains by successfully adapting imported technology through the 'learning-by-doing' process. While all these are non-patentable improvements and cannot be construed as formal R&D, they do contribute significantly to the economy's innovative advantage. The development of new service products - like software and education - where innovation is inherent in the production process itself further augments the total innovative capacity of the economy.

India's innovative strengths are reflected in the growth of the new knowledge-intensive sectors - bio-technology, nanotechnology, pharmaceuticals, genetic engineering, organic farming, IT, communications - and advanced engineering products like complex forgings, auto components etc. In this regard, it is important to emphasize the need for further strengthening the emerging synergies between public and private R&D establishments. Commercialization of public-funded R&D, which would expectedly remain the more dominant segment as in the rest of the world, in cooperation with private manufacturers will yield significant benefits for the upcoming sectors and expand the country's competitive advantages in the knowledge economy.

### **Benign External Environment**

During the later part of the 1990s, India's economic performance was affected by several exogenous disturbances, which were discussed earlier. This has now been replaced by a benign

external environment that has even been remarked upon by Prime Minister Manmohan Singh.<sup>37</sup> There are several aspects of this positive change in India's external environment. The most important element, of course, is the sharp pick-up in global growth with global output growing at an average rate of 4.1% during the past ten years (1998-2007).<sup>38</sup> This is perhaps unprecedented in history. Secondly, dedicated efforts by the international community for strengthening pluralistic democratic traditions and institutions following 9/11, have made the world more aware and sympathetic about the huge and perhaps unique Indian experience of modernizing and industrializing a pluralistic and highly diverse society. The Indian effort is even more laudable given that it is being attempted simultaneously with strengthening of democratic institutions and a smooth transition to a market-based economy. Thirdly, the Indian diaspora has substantially raised its involvement in the country's growth story as reflected in the large inflow of remittances and the reverse brain drain that is now clearly visible. Fourthly, with India having 'rediscovered South Asia' and overcome its insecurity of a possible coalition of neighbours that is adversarial to its own interests, the prospects of a more peaceful and stable neighborhood have improved significantly. The resumption of high level talks and people-to-people contact with Pakistan, resurrection of democracy in Nepal, and positive outcome for both sides of the Indo-Sri Lanka free trade agreement (FTA) have perceptibly changed the regional context and made it more conducive to FDI and growth. Fifthly, the signing of several bilateral and regional economic cooperation agreements, particularly the Comprehensive Economic Cooperation Agreement (CECA) with Singapore and the FTA with Thailand and good progress on an Indo-ASEAN FTA have given India greater

---

<sup>37</sup> Prime Minister Manmohan Singh's address at ICRIER's Silver Jubilee Conference on 6 November 2006. Available online: <[http://icrier.org/nov7-06/PM\\_speech.pdf](http://icrier.org/nov7-06/PM_speech.pdf)>.

<sup>38</sup> The growth rates for the years 2006 and 2007 are projections. See IMF (2006).

opportunities in Asia. And finally, India's greater engagement with key global players like the US, European Union, China, Japan, and its continued engagement with Russia have imparted on India a growing significance as a key variable in the evolving global strategic matrix.

### **Higher Productivity Gains from Efficient Application of Information and Communication Technologies (ICT)**

Productivity-led growth is most enduring and is usually measured by improvements in an economy's total factor productivity (TFP). In India, the evidence on TFP in the post-reforms period is mixed. While there are studies indicating higher growth of TFP in the 1990s compared with the 1980s (e.g. Unel, 2003), most studies have estimated lower TFP growth after reforms (e.g. Bosworth & Collins, 2003; Goldar 2004; Rodrik and Subramanian, 2004). These results are somewhat puzzling given the widespread application of ICT across industries and productivity gains obtained. The results can probably be explained by the non-inclusion of the larger segment of services within the scope of these studies. Services, particularly telecom and financial, have witnessed almost spectacular growth post-reforms, mainly through efficient application of ICT. Moreover, almost all the studies have used Annual Survey of Industries (ASI) data up to 2000-01. The most sustained boom in services and the sharp upturn in industrial performance and manufacturing have occurred only since 2002-03. We expect TFP estimates for the more recent period to yield different and more positive results.

India's capabilities in efficiently applying ICT are well-established. Indeed, leading Indian IT firms have come a long way from rendering on-site 'body-shopping' services to delivering high value-added software solutions. Such a transition in the supply chain has resulted from efficient coupling of technological

progress and human skills. Indian IT industry has invested deep in both R&D and skill development. Maintenance of this virtuous cycle will result in larger productivity gains and higher overall economic growth in the medium-term. The development and continuous upgrading of ICT capacities and the emergence of globally leading ICT firms from India can surely be construed as enduring drivers of economic growth in the coming years.

### **Signs of Improvement in Fiscal Management**

The Fiscal Responsibility and Budget Management (FRBM) Bill for Central Government finances became an Act in August 2003 during the tenure of the National Democratic Alliance (NDA) government. The FRBM Rules, however, became effective from 5 July 2004, and were notified by the succeeding United Progressive Alliance (UPA) coalition. The sequence of events signifies a broad-based political consensus on maintaining fiscal discipline. Similar FRBM legislations have been enacted by several states as well.<sup>39</sup> The ongoing efforts towards fiscal consolidation were further reinforced by the Twelfth Finance Commission, which made debt write-off for states contingent upon enactment of FRBM legislations and elimination of state revenue deficits in a time-bound manner. Furthermore, the introduction of the Value Added Tax (VAT) is another major step forward in establishing a pan-India unified sales tax regime<sup>40</sup> and for ensuing revenue buoyancy and minimizing leakages. The initial experience under VAT is highly encouraging with the VAT-implementing states registering cumulative revenue growth of 13.8% in 2005-06 and 26.1% in 2006-07 (April-October) respectively. Smooth implementation of the VAT has also paved the way for moving onto a

---

<sup>39</sup> Till now, 23 states have enacted FRBM legislations.

<sup>40</sup> Apart from the state of Uttar Pradesh, all other states and Union Territories of the Indian Federation have introduced VAT.

national uniform Goods and Services Tax (GST) for which the target has been set as 1 April 2010.

### **Democratic Dividend**

India's unique and historical experiment of establishing a modern and industrial market-based economy in a multi-ethnic, pluralistic parliamentary democracy based on the principle of universal adult suffrage appears to be working against all odds and expectations. Since 1990-91, the country has had seven different governments, six Prime Ministers, and six finance ministers, and yet economic reforms have continued. Even with regional and ethnic parties beginning to occupy centre stage in both national and local politics there has been no reversal of reforms. It appears that despite occasional expression of contrary opinions, almost all segments of the Indian polity have accepted amelioration of controls and greater involvement of private enterprise in economic activity as the best option for higher growth and prosperity. The pace of reforms, of course, might vary depending upon the nature of the multi-party coalitions that are now the norm. However, the possibility of a reversal in the direction of reforms appears remote. Democracy has forged a consensus around these reforms. At the same time, democratic traditions have ensured that equity considerations remain firmly in place on the policy agenda. This can only be a positive for the society as a whole although it does cause some understandable frustrations among the purists and impatient investors.

The democratic dividend is best reflected in the increasing attention that state governments are now giving to providing better investment conditions in a competitive bid to attract both Indian and foreign investors. Efforts to make the panchayats and the urban local bodies more active participants in the development process and allowing people the right to information by enacting

the Right to Information (RTI) Act have been very significant measures in strengthening the civil society's role and this will further broaden the base of support for reforms in coming years.

#### **4. Challenges for Achieving Higher Growth**

The above discussion of growth drivers of the Indian economy will remain incomplete without putting them in the context of the downside risks facing the economy. Any assumption that the strong growth drivers that have brought the economy to the cusp of a sustained take-off will mechanically take it forward on the high growth trajectory is simply misplaced. This section discusses the challenges and risks that may derail the sustained and rapid growth process and highlight the importance of continued reforms. The latter are required for addressing the downside risks and ensuring that the take-off is sustained.

##### **Skill Shortages and the Education Deficit**

Quite paradoxically perhaps, to an external observer of the Indian economy, the most critical constraint and downside risk for sustained high growth exists in the education sector. It appears that the larger segment of the Indian work force has low, outdated skills and large parts of the education sector are producing 'unemployable students' at all levels of the system. This is an unfortunate outcome of a mismatch between the nature of demand for human resources on part of the manufacturing and services sectors vis-à-vis the nature of such resources being supplied by the education system, with the latter still employing outdated curricula and teaching processes. The products of the education system are either forced back into subsistence occupations in agriculture, which acts as a sump for underemployed labour, or have to be retrained at significant costs to the employers. This is an untenable situation and requires urgent attention.

The near collapse of the public education system brings out the need for wholesale reforms and transformation of the incentive structure and delivery patterns in the public education sector. High rates of drop outs at the primary and secondary levels mean that a bare 10% of the entrants reach higher education. And nearly 70% of college and university students still pursue liberal arts and social science courses rather than the more 'employable' language, technical or vocational skills. This cannot be the basis for India to compete in a knowledge-intensive global economy. The vocational education system in the country is grossly underdeveloped. The private sector has generated some supply response, without which, the skill shortages would have become acute long ago. But there are two problems with this private sector response. First, the large majority of private sector education providers are not recognized by the government. Nor is the quality of their education regulated by any external regulator. This is bound to create a backlash in due course. Second, and more important, the increasing share of private education providers will worsen equity as only the well-off will be able to afford the high cost of private education. Others, left at the mercy of the dysfunctional public education system will sink below the employable threshold. This will exacerbate social tensions.

The poorer states of the country are also the most populous ones. Between them, seven of the country's largest and poorest states (i.e. Bihar, Uttar Pradesh, Jharkhand, Orissa, Assam, Madhya Pradesh and Rajasthan) account for 44.4% of the total population. All the above states have literacy rates lower than the national average with the situation being particularly bad in Bihar and Uttar Pradesh. This will aggravate regional inequity, which is already a cause of concern. The pitiable state of the public education system and the inability of the government to devise robust but market friendly regulatory mechanisms for private education providers will increase the distance between India and 'Bharat'.

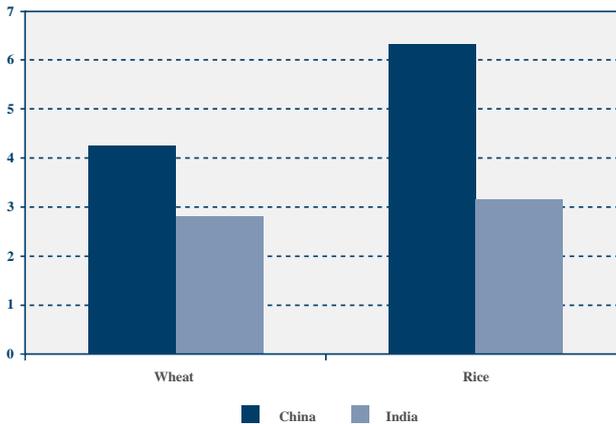
As Acharya (2007) points out, this cannot be a recipe for sustaining high rates of economic growth.

### Stagnant Agriculture

Stagnation is the key feature of large parts of Indian agriculture that still produces nearly a fifth of the GDP and has 60% of the population resident in itself. Yields, cropping patterns, technology and input usage, seed varieties, and marketing techniques, are all stagnating since the last two or even three decades. This is a direct consequence of overarching government control and intervention over nearly every aspect of agriculture, which has stifled enterprise and innovation in this crucial sector of the economy. It is critical to lift the heavy hand of government control if agriculture is to contribute its share to achieving GDP growth of 8% plus in the coming years.

Agricultural productivity, measured in terms of yield per hectare of cultivated area, has not shown consistent improvements.

Figure 6. Yield of Wheat/Rice per hectare (2004)



Source: Food and Agriculture Organization, UN: <<http://www.fao.org>>.

Compared with China, India's yield rates for wheat and rice are pretty low (Figure 6). On the whole, yields are generally seen to be high in years of bumper harvests, along with area cultivated and production of crops (both food and non-food). However, the trends in this regard have been highly erratic with rising yields followed immediately by sharp declines.<sup>41</sup>

Much of the variations in agricultural output and productivity can be explained by the uneven spatial distribution of rainfall. Indian agriculture continues to be heavily monsoon-dependent. Overcoming such dependency requires large investments in irrigation and in agricultural infrastructure (cold storage, warehousing, etc.) that will contribute to enhancing value addition in agriculture.

Unfortunately, investment in agriculture, after improving from 1.9% of GDP in 1990-91 to 2.2% in 2001-02, has been stagnating again at around 1.9% of GDP during the period 2003-04 to 2005-06. While this stagnation is a matter of concern, it is even more disturbing to note the dwindling share of public investment in agriculture. Such investment, after reducing from 29.6% of total agricultural investment in 1990-91 to 17.0% in 2002-03, has recovered only to 24.2% in 2005-06 (India, 2007).

The large number of farmers' suicides in recent years highlights the frailty of the agriculture economy in the country. Low yields, heavy and increasing dependence on subsidized but nevertheless expensive chemical inputs, and dependence on monsoons on account of poor quality of irrigation, has left the agriculture economy in a precarious position. Better irrigation coverage, either through canals or ground water exploitation, generation of new

---

<sup>41</sup> Between 1994-95 and 2004-05, there has not been a single instance of yield per hectare growing in two successive years. The closest example is 1999-00 and 2000-01, when yield per hectare (all crops) grew by 6.7% and 0% respectively. See RBI (2005).

varieties of seed or other technologies and reaching them through improved extension services to the farmer, has not happened in the desired manner in the past couple of decades. Food, fertilizer and power subsidies have eroded the public resource base required for providing these necessary inputs. Agriculture has also been kept away from any beneficial effects of integration with global markets, technology and financial flows. It is evident that interventions by way of higher procurement prices or changing rates of subsidies are not solutions for the chronic problems plaguing the sector. A second 'green revolution' that moves agriculture to a higher value added cropping pattern, rationalizes the use of water, power and chemical inputs, and rejuvenates the technology and extension services, is needed today.

### **The Slow Growth and Uneven Spread of Manufacturing**

Between 1990-91 and 2006-07, the Indian economy has undergone a significant structural transformation. But unlike other emerging market economies, the decline in agriculture's share has been taken up entirely by services, whose contribution to GDP during the period has increased from 41% to 55%. Interestingly, the share of industry has remained almost unchanged at 26.4% during this time, with manufacturing's share actually declining from 17% to 15.4%. This is in stark contrast to China, where the share of manufacturing in GDP has increased from 33% to around 40% during the same period.

However, a caveat is in order. With the changes in production and process technologies and increasing trends towards focusing on core competencies, the nature and coverage of the manufacturing sector may have radically changed in the past couple of decades. As mentioned earlier, Indian manufacturing firms, in order to remain globally competitive, are outsourcing bulk of non-core services and specializing in core functions. This is especially

true of large firms who have shed labour in their effort to successfully compete with cheaper imports and expand sales in export markets. Steel, auto components, complex engineering, and textiles, are examples of industries where such changes have been most marked. But the unacceptably low growth rate of the manufacturing sector in India still remains a worrisome fact especially in the context of the need for generating large scale employment for an expanding work force. Over the 1980s manufacturing grew at an average of around 7%, followed by 6% during the 1990s (Appendix 1). Its rate of growth has begun to approach that of services only in the last two years. Manufacturing must grow at consistently high rates if the economy is to generate enough jobs for a rapidly expanding work force.

The uneven spatial spread of manufacturing is another cause for concern as it exaggerates the dualism in the economy and contributes to regional inequality and large scale migration that generates social tensions. The most remarkable feature of the growth of Indian manufacturing has been the emergence of a few - about half a dozen 'hubs' - that have seen sustained and very rapid growth in the post-reform period. These are the National Capital Region (NCR) around Delhi; Mumbai-Pune corridor; Chennai-Bangalore corridor; Coimbatore-Trichi-Tirupur region; and the Vadodara-Surat-Ahmedabad belt. These hubs are mostly located in the southern and western parts of the country. The concentration of manufacturing activity in these pockets is reflected in the higher per capita incomes of their parent states compared with some of the largest and most populous northern and eastern states. Though the spatial distribution of manufacturing activity is becoming more evenly distributed with the relocation of industrial capacity in response to widespread fiscal incentives (the Baddi and Uttarakhand phenomenon and proposed investment in new capacities in proximity of natural resources in eastern states), achieving a regional balance is still a distant vision.

Labour-intensive manufacturing, particularly in export-oriented industries using low skilled labour has traditionally served to absorb the labour moving out of agriculture. This is not happening in India. Over the years the share of relatively labour-intensive industries like cotton and jute textiles, food products, and non-electrical machinery, in overall industrial output, has gone down compared with more capital and technology-intensive industries like chemicals and electrical machinery (Table 4). Exports from more labour-intensive industries have also failed to take off underlining the inability of Indian manufacturing to utilize cheap labour for producing mass-based consumption items for both domestic and international markets.

Table 4. Industry Share in Value Added by Registered Manufacturing (%)

Industry	1982-1992	1992-2004
1. Food products	8.97	8.01
2. Cotton textiles	7.01	3.98
3. Jute textiles	1.27	0.62
4. Non-electrical machinery	7.53	6.22
5. Chemicals	14.90	19.48
6. Electrical machinery	7.74	8.50
7. Wood and Furniture	0.76	0.35

Source: India, *Economic Survey 2005-6* (Delhi: Ministry of Finance, 2006), 35, Ch 7.

India's manufacturing sector is characterized by the bi-polarity which sees large globally competitive firms co-existing with small units using outdated technology and operating in pre-modern industrial environment. These exist in the so called 'unorganized' sector, which is really outside the modern industrial sector, but nevertheless services the economic needs of a large population. This marked dualism, also referred to as the problem of the 'missing middle' in Indian manufacturing, is a result of archaic rules and procedures impacting industrial operations and of dysfu-

nctional and over-specified labour laws that are merely in the statute books, observed mostly in their non-application and used primarily for generating rents (Felipe and Hasan, 2006). These inefficiencies must be tackled urgently if manufacturing sector growth is to be kept at double digit levels, which is necessary for generating 'inclusive' employment-intensive growth.

## **The Infrastructure Deficit**

The current infrastructure deficit is a binding constraint on growth. Addressing this deficit requires huge investments. In the power sector, for example, the overall shortfall for the country is estimated at around 7.0%, which increases to as much as 12.0% during peak season. Covering the shortfall requires creating additional generation capacity of around 100,000 MW over the next seven years.<sup>42</sup> In every successive Plan, capacity expansion in the power sector has always fallen well short of targets. The latest example is that of the 10th Five Year Plan, where actual capacity expansion is expected to fall short of the revised target of 36,956 MW (as fixed during the Mid-term appraisal against the original target of 41,110 MW fixed earlier) by almost 3,000 MW. Creating fresh capacity in generation, along with corresponding expansion of transmission and distribution networks, requires new investment worth more than US\$200 billion. Apart from unbundling of the state utilities and creating independent generation, transmission and distribution companies, the main issue to be addressed is that of granting 'open access', which will enable private power producers to supply to distant bulk consumers - a facility, which, till now, is denied to private producers.

Similarly, in highways, assuming annual average growth of 12-15% for passenger traffic and 15-18% for cargo traffic over

---

<sup>42</sup> See Committee on Infrastructure, Power: <<http://infrastructure.gov.in/power.htm>>.

the next five years, more than US\$50 billion are required for expanding the road infrastructure<sup>43</sup>. However, despite encouraging beginning, the national highway projects being undertaken by the National Highway Authority of India (NHAI) are showing signs of slowing down in recent years.<sup>44</sup> Much of the delays are attributable to lack of coordination between Central and state agencies, which are affecting acquisition of land and 4-laning of existing roads.

Given the tight fiscal situation and the multiple calls on public resources, private investment in infrastructure has to rise to unprecedented levels if the infrastructure deficit is to be overcome. The current business environment is encouraging for private investment in infrastructure given the growth of efficient regulatory frameworks enabling competition and enlarging consumer choices. The telecom sector is a leading example. The sector has multiple service providers offering a variety of choices at affordable prices. Benefits of competition are also evident in civil aviation, ports and power. Some sectors, like power, have advanced significantly in establishing new regulations. It is important for India to maintain the pace of regulatory reforms and ensure competitive pricing of infrastructure services for attracting private investment.

## **Labour Market Rigidities**

Over the years, India's labour laws have become obstructive for industrial growth and employment. By effectively raising

---

<sup>43</sup> See Committee on Infrastructure, Highways: <<http://infrastructure.gov.in/highways.htm>>.

<sup>44</sup> Under the Golden Quadrilateral (GQ), out of a total road length of 5,846 km, 5,474 km have been 4-laned, while another 371 km is being implemented. The disappointing component has been the North-South (NS) and East-West (EW) corridors, where out of 7,300 km of proposed road length, only 853 km has been completed in phases 1 and 2 and 5295 km are under implementation. This position is as on 30 November 2006. See National Highways Authority of India: <<http://www.nhai.org/WHATITIS.asp>>.

the cost of labour and in making labour a part of fixed costs for organized sector firms, these laws are detrimental to workers' interests as they minimize labour absorption and constrain employment generation. They have also contributed to the marked dualism in Indian industry where large and competitive firms in the organized sector co-exist within a sea of small and mostly inefficient units in the so called unorganized sector'.<sup>45</sup> Wages, productivity levels and working conditions are significantly lower in the latter than in the formal industrial sector. The organized sector employs only 26.5 million out of a total employed of 457.5 million (Appendix 6). This implies that the unorganized sector accounts for the remaining 431 million, which is around 94% of the total work force. While labour laws are stringent with regard to exit in the organized 'formal' sector, there are hardly any regulations protecting employee interests in the unorganized sector. Both for the organized and more so for the unorganized sector firms, the over specified labour laws serve only to generate rents for the petty officials (or inspectors) as their implementation is virtually impossible given ground realities. Recent research on productivity and performance of India's manufacturing sector suggests a negative correlation between rigidity in labour laws and manufacturing productivity and employment growth (Besley and Burgess, 2004; Lall and Mengistae, 2005).<sup>46</sup> A thorough review of these laws, with the explicit objective of amending them suitably to achieve maximum employment generation is urgently called for.

---

<sup>45</sup> Organised enterprises are those which are either registered, or come under the purview of any Acts, and/or maintain annual accounts or balance sheets. Any enterprise outside the domain of the 'organised' sector is therefore called 'unorganised'. See National Account Statistics: <[http://mospi.nic.in/nas\\_snm.htm](http://mospi.nic.in/nas_snm.htm)>.

<sup>46</sup> The evidence from the industry itself is that irrespective of the labour laws, large firms like TISCO, TELCO, Bajaj Auto etc have been able to downsize their work forces and even shift operations. However, these examples only further strengthen the impression that labour laws do not really protect workers' interests but serve to generate rents on one hand and keep the trade union movement alive on the other.

One of the key legislations hampering growth in productivity and employment is the Industrial Disputes Act of 1947. Stringent provisions regarding lay-offs, retrenchment, and closure, under Chapter V, Section B of the Act have forced employers to limit employment up to levels that do not attract harsh penalties in the event of closures and lay-offs<sup>47</sup>. The provisions have also encouraged tendencies to move towards employing more temporary workers (Ahmad 2006). The strong exit barriers created by the legislation is evident from India being ranked a lowly 70 in the 'difficulty of firing' index in the latest 'Doing Business : Explore Economies' report of 2006, which fares poorly when compared not only with OECD countries, but also with the South Asian region.<sup>48</sup>

### **The Governance Deficit**

The poor state of governance in India is reflected in many dimensions. There is a near collapse of the public education and health systems. Unplanned and unchecked urbanization has increased urban squalor and has led to near breakdown in municipal facilities, particularly in tier two and three towns. Persistence of cumbersome and non-transparent procedures creates large degree of uncertainty for small investors and entrepreneurs. These opaque and often arbitrarily administered procedures generate rents for the petty bureaucracy and raise transaction costs of doing business. But their worst impact is in creating uncertainty and raising entry and exit barriers that severely disrupt investment activity, especially for small and medium enterprises, which would otherwise be the most dynamic and labour intensive segments of the Indian

---

<sup>47</sup> Chapter VB of the Industrial Disputes Act of 1947 specifies that industrial establishments employing more than 100 workers need to obtain prior approval of the appropriate government authority for effecting lay-off, retrenchment and closure.

<sup>48</sup> See Doing Business, World Bank: <<http://www.doingbusiness.org/ExploreEconomies/Default.aspx?economyid=89>>.

economy. Much greater attention now needs to be given to addressing the governance deficit and improve the delivery of public goods and services on the one hand and make the procedures and processes affecting industry far more transparent, streamlined and investor friendly.

India continues to be seen as a poor location for doing business compared with other leading Asian economies<sup>49</sup> (Table 5). Hitherto there has been a general feeling that the best the government can do is to remove itself from the provision of public goods and services and let the private sector provide them. However, costs of private provisioning of these goods and services are generally higher as compared to their public provisioning in competing economies.

Table 5. Ease of Doing Business Ranks for Select Asian Economies

	2005	2006
1. China	108	93
2. Hong Kong, China	6	5
3. India	138	134
4. Indonesia	131	135
5. Japan	12	11
6. Malaysia	25	25
7. Phillipines	121	126
8. Singapore	2	1
9. Taiwan, China	43	47
10. Thailand	19	18
11. Vietnam	98	104

Source: Doing Business, World Bank. Available online: <http://www.doingbusiness.org>.

<sup>49</sup> As of January 2004, starting a business in India involved taking 11 start-up clearances involving a total time of 89 days. This is far worse than the average time taken of 63 days in low-income countries. See Doing Business, World Bank: <http://www.doingbusiness.org>.

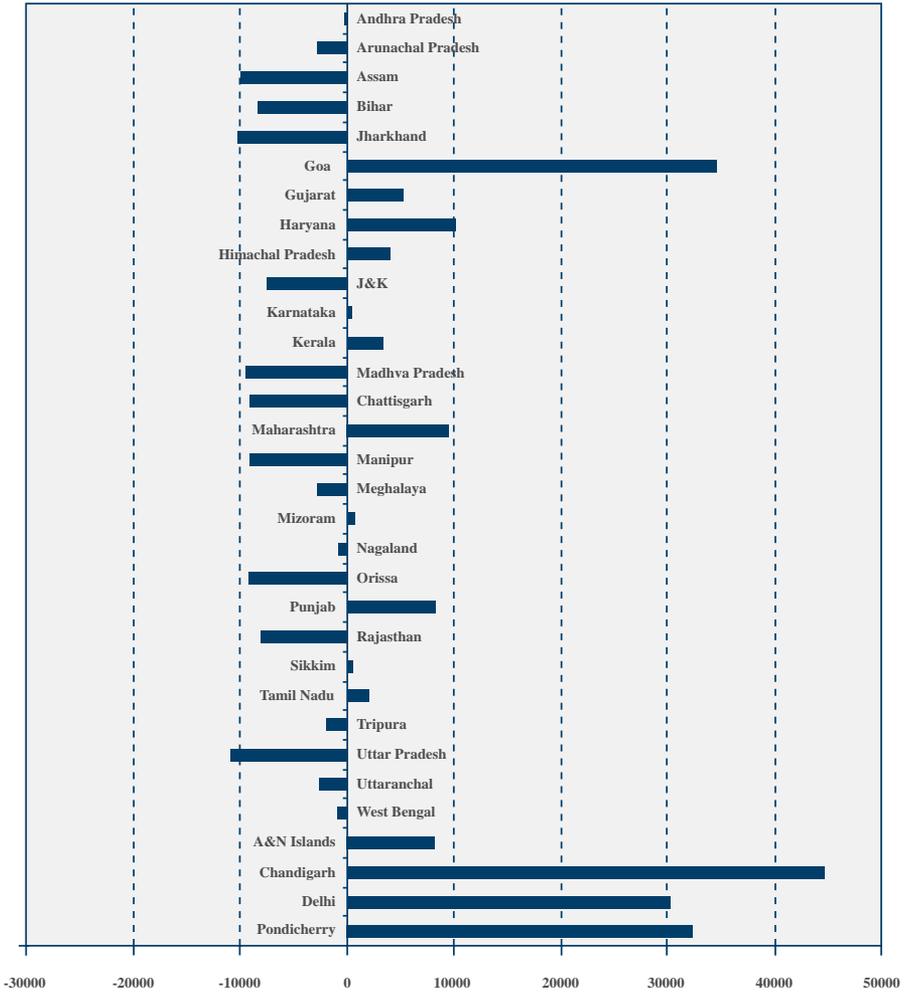
A greater reliance on the private sector for providing infrastructure, education, health and other public services, even if financially feasible, has the danger of exacerbating both income and regional inequities and resulting in greater marginalization of the poor. Thus, on account of both global competitiveness of Indian firms and for effectively addressing the trade-off between growth and equity, governance standards and the delivery of public goods and services must now necessarily be given much greater attention.

Another serious consequence of governance failure in India is seen in the continued fragmentation of the domestic market. This continues to the day because of state governments' reluctance to do away with archaic restrictions on inter-state movement of agriculture products and a plethora of border taxes and duties. Most of these are routinely flouted and have again generated a petty official-mafia nexus that is inimical to the expansion of industry and the modernization of agriculture. These inter-state impediments create supply side bottlenecks and delay or even block the potential investors' response to emerging constraints. These supply side problems and non-investor friendly business environment can be seen as one of the principal causes for periodic bouts of inflationary pressures in the economy. The expected policy response to these inflationary pressures is to raise interest rates and reduce money supply to dampen demand and bring it in line with the supply capacity of the economy. Such responses, in our view, have imparted the Indian growth performance a cyclical nature that now needs to be addressed for the economy to achieve a more long-term sustained growth.

### **Growing Regional Disparities**

Economic performance of Indian states has been divergent over the years resulting in an exacerbation of regional inequalities that result in large scale inter-state migration and persistence of

Figure 7. State-wise Deviation from National Average per capita Income in 2004-05 (at 1993-94 prices)



Source: Computed from; India, *Economic Survey 2005-6* (Delhi: Ministry of Finance, 2006).

absolute poverty in the more backward states. The per capita income of the poorest Indian state - Bihar - at Rs 5,772 in 2004-05 was only 8.6% of that of the richest - Chandigarh - at Rs 67,370<sup>50</sup> (Figure 7). The growing regional inequalities have serious implications for internal security as the backward states provide fertile grounds for left wing militancy and also for religious fundamentalism. The situation is likely to worsen as the backward states have higher rates of population growth and this could result in greater inter-state divergence in coming years.

### **Fiscal Deficit**

Enactment of FRBM legislations by the Centre and States is a long-awaited and laudable step towards fiscal consolidation. However, actual commitment to the FRBM targets is essential for bringing down the chronic revenue and fiscal deficits in the economy.<sup>51</sup> The focus of government policy must be on: first, further improving the revenue to GDP ratio and bring it in line with those in countries with similar income levels; second, to unify the taxes across the country and bring down the level of indirect taxes to those obtaining in competing countries like China, Korea, Thailand etc; and third to rationalize expenditures and get higher returns from the expenditures incurred by focusing increasingly on outputs and outcomes rather than on size of resource allocations. The focus on performance based budgeting is a welcome step in this regard. Finally, the government has to be

---

<sup>50</sup> Indeed, compared with the national average per capita income of Rs 23,241 in 2004-05, 17 states and Union Territories had lower than average incomes, while 15 had higher incomes. States with below average per capita incomes include large and populous states like Andhra Pradesh, Assam, Bihar, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh and West Bengal. The ones above include Chandigarh, Goa, Gujarat, Maharashtra, Haryana, Himachal Pradesh, Punjab and Delhi.

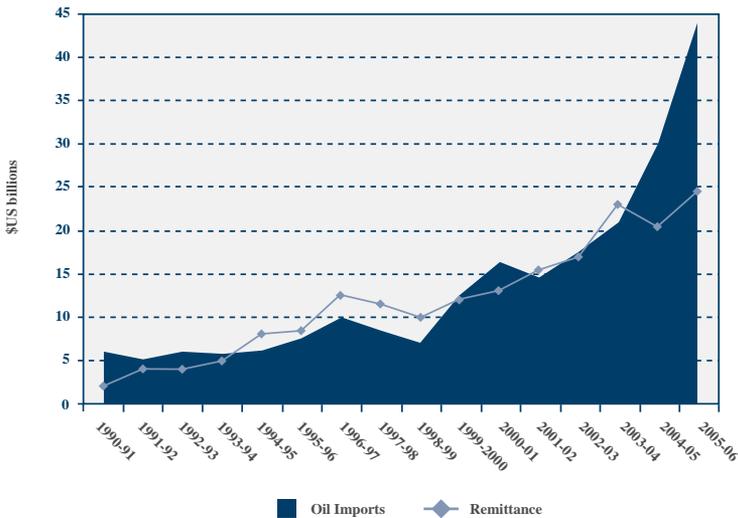
<sup>51</sup> The combined revenue deficit and gross fiscal deficit of the Centre and States are budgeted to decline to 2.2% and 6.5% of GDP respectively at the end of fiscal year 2006-07 (Appendix 4).

attentive to the rise in public debt and ensure that debt servicing remains within manageable limits. This will call for greater mobilization of non-tax revenues from divesting unproductive public assets, stopping the haemorrhaging of public enterprises, reducing subsidies and using the proceeds to retire existing public debt and thus reducing debt servicing obligations that today consume more than 30% of total revenue receipts. Action on these fronts will yield the much needed fiscal space to allocate higher resources for infrastructure expansion, which is one of the critical constraints on expansion of manufacturing and on economic activity in general.

### Volatility in Global Oil Prices

The unprecedented rise in global oil prices in recent times has led to sharp increase in India's oil import bill. The average price of the Indian crude basket (a mixture of Dubai and London varieties in the ratio of 57:43 by volume) increased from US\$22.4 per

Figure 8. Imports of Oil and Remittance



barrel in 2001-02 to US\$55.4 in 2005-06 and further to US\$71.1 per barrel in July 2006. As a result, during 2004-05 and 2005-06, India's oil imports went up by 45.1% and 39% respectively. The increase was almost entirely value-driven. During 2001-02 to 2003-04, the current account of India's BOP saw remittances covering up for oil imports (Figure 8). Thereafter, however, oil imports have overshoot remittances, despite India's emergence as the largest recipient of remittances in the world in 2005.

Though recent months have been relatively comfortable, rising global prices are a major downside risk to India's growth prospects in the medium-term and indeed the long-term if alternate (e.g. renewable and non-hydrocarbon) sources of energy are not developed. The government has to take steps to depoliticize the issue of oil and energy pricing by dismantling the administered oil price regime, minimizing subsidies so that these are targeted only to the really needy sections and encouraging energy conservation. These are also the necessary conditions for sufficient attention and resources being attracted for developing the renewable and non-hydrocarbon sources of energy.

## 5. Policy Reforms for Sustained Growth

The 8%-plus GDP growth recorded since 2003-04 could generate complacency and distract policy attention from pressing on with the reform agenda. The constraints discussed must be adequately addressed if the 9% average GDP growth target, reaching up to 10% in the terminal year, as adopted for the 11th Plan Approach Paper, is to be achieved.<sup>52</sup>

---

<sup>52</sup> It is worth noting that the Indian industry associations like the CII and FICCI have publicly stated that a double digit growth rate is today well within reach provided the government can implement the necessary reforms.

It is not within the scope of this paper to discuss in detail the reform measures needed to address the weaknesses given above. This will require sector specific analysis that will yield an understanding of the 'do-ability', pace, sequencing and interconnect- edness of these reforms. In this final section we only outline the most important reforms that are needed to sustain rapid growth and effectively address the trade-off between growth, equity and sustainability.

The seven most important reforms needed today are:

- (i) Removing existing government controls and other const- raints on augmenting and upgrading the education system specially the vocational and higher education segments. This would be achieved by facilitating the entry of private investment in all segments of the education sector and at the same time ensuring that a robust accreditation mechanism is established for assuring the quality and relevance of the curriculum.
- (ii) Improving the delivery of public goods and services both in urban and rural areas by addressing governance weaknesses and undertaking necessary reforms of the administrative system.
- (iii) Revitalizing the rural economy.
- (iv) Implementing the fiscal norms spelt out in the FRBM Acts, both for the Centre and States, for achieving fiscal stability and particularly the key FRBM target of zero revenue deficits by 2009-10.
- (v) Consolidate the financial sector by making it more inclusive and globally integrated.
- (vi) Address the infrastructure deficit by facilitating private sector entry and improving the capacity for project design, implementation and management in public sector departments.

- (vii) Blurring the distinction between formal and informal labour markets for reducing rigidities and improving real wages for the unorganized work force<sup>53</sup>.

It is, however, necessary to emphasize that India today has the opportunity and indeed a necessity to make its growth more environment friendly. The Stern Report, and even more recently the findings announced by the Intergovernmental Panel on Climate Change (IPCC), has amply demonstrated that business as usual will simply not do. It is also not useful for Indian policy makers to continue arguing that as developing countries they do not have any responsibility for mitigating the negative impact of growth processes and patterns adopted hitherto by the developed economies. The fact of the matter is that this global negative externality has to be tackled collectively.

There are two distinct advantages of taking innovative steps for addressing the growth-environment trade-off. First, India can pressurize the more developed economies to bring about the necessary changes in their consumption and production patterns and also to share the costs of generating environment-friendly technologies. Second, it will give India a chance to achieve technological leadership in coming up with low carbon-using products and processes. This will not only generate substantial volumes of carbon credits for Indian producers but will also give them

---

<sup>53</sup> In a recent public speech, the Prime Minister explicitly referred to five challenges that needed to be addressed if the growth momentum was to be sustained (17 December 2006, NCAER Golden Jubilee Address). These five are: revitalizing the rural economy; making the financial sector more inclusive and more globally integrated; improving the delivery of public goods and services; building up urban infrastructure; and establishing robust regulatory mechanisms for encouraging greater public-private partnership in the development of the infrastructure. These five are included in the six reform areas given here but we do want to emphasize the importance of education sector reforms that the Prime Minister included under the delivery of public goods and services.

significant advantage in global markets that are destined to favour carbon-friendly technologies in the coming years. This could be one of the strongest growth drivers for the Indian economy as it will provide new sources of demand both in domestic and export markets.

India is at the cusp of a historic take off that has the potential to remove its generic poverty and deprivation. The above 8% GDP growth for four years in succession since 2002-03 marks a new growth trajectory, similar to that achieved by China after about 15 years of starting the structural reform process. The economy is characterized by the presence of strong growth drivers and benign external conditions that have the potential to propel the economy forward at near double digit growth rates in the coming years. This rapid growth provides the necessary condition for addressing the trade-off between growth and equity. In India, the trade-off is more complex because it involves both income, as well as regional or spatial equity issues that have to be addressed.

To effectively achieve growth with equity the reform agenda has to be vigorously pursued. There is no room for complacency given the several downside risks that still persist and have been discussed in this paper. The broad contours of the reform agenda are clearly visible in the light of the risks that exist today. However, there is no given or standard model that can be adopted from other country experiences and applied to Indian conditions. The uniqueness of the on-going Indian development experience, with its pluralistic society, complex and diverse regional economies, vibrant and raucous democracy, and presence of some robust institutions demand that reform measures be carefully designed and implemented. The attention has to be on how to design and implement the reform agenda so that losers are minimized, their loss speedily and fully compensated and the development process seen by the great majority as a win-win process over the medium-term.

## APPENDIX 1.

### Overall and Sectoral GDP Growth Rates: 1980-81 to 2006-07

	Agriculture, Forestry & Fishing	Industry	Manufacturing	Services	GDP (real)
(%) Growth Rate of Gross Value Added					
1980/81	12.9	4.7	0.2	4.5	7.7
1981/82	5.3	8.0	8.0	5.4	6.0
1982/83	-0.7	3.7	6.6	6.7	3.1
1983/84	9.6	8.1	10.1	5.5	7.7
1984/85	1.5	5.8	6.6	6.3	4.3
1985/86	0.7	4.8	3.9	7.9	4.5
1986/87	-0.6	6.9	7.0	7.4	4.3
1987/88	-1.3	6.6	7.3	6.5	3.8
1988/89	15.5	9.2	8.8	7.3	10.5
1989/90	1.5	10.3	11.8	8.8	6.7
1990/91	4.1	7.7	6.1	5.3	5.6
1991/92	-1.5	-0.6	-3.6	4.8	1.3
1992/93	5.8	4.0	4.1	5.4	5.1
1993/94	4.1	5.2	8.5	7.7	5.9
1994/95	5.0	10.2	12.0	7.1	7.3
1995/96	-0.9	11.6	14.9	10.5	7.3
1996/97	9.6	7.1	9.7	7.2	7.8
1997/98	-2.4	4.3	1.5	9.8	4.8
1998/99	6.2	3.7	2.7	8.4	6.5
1999/00	0.3	4.8	4.0	10.1	6.1
2000/01	-0.2	6.4	7.7	5.7	4.4
2001/02	6.3	2.7	2.5	7.2	5.8
2002/03	-7.2	7.1	6.8	7.4	3.8
2003/04	10.0	7.4	6.6	8.5	8.5
2004/05	0.0	9.8	8.7	9.6	7.5
2005/06	6.0	9.6	9.1	9.8	9.0
2006/07	2.7	10.0	11.3	11.2	9.2

Note: Though annual growth rates in manufacturing are shown separately, it must be noted that in estimates prepared by the CSO, 'manufacturing' is included within 'industry'.

Source: Central Statistical Organisation (CSO), India.

## APPENDIX 2.

### Domestic Savings and Investment Rates: 1980-81 to 2005-06

Year	Gross investment (% to GDP)			Gross domestic saving (% to GDP)			
	Public	Private	Total	House hold	Private corporate	Public	Total
(Series base year 1993-94)							
1980-81	8.4	11.9	20.3	13.8	1.6	3.4	18.9
1981-82	10.1	10.0	20.1	12.6	1.5	4.5	18.6
1982-83	10.7	9.0	19.6	12.3	1.6	4.3	18.3
1983-84	9.7	9.0	18.7	12.8	1.5	3.3	17.6
1984-85	10.4	9.7	20.1	14.3	1.6	2.8	18.8
1985-86	10.8	11.0	21.7	14.3	2.0	3.2	19.5
1986-87	11.2	9.8	21.0	14.5	1.7	2.7	18.9
1987-88	9.5	13.0	22.5	16.7	1.7	2.2	20.6
1988-89	9.5	14.3	23.8	16.8	2.0	2.1	20.9
1989-90	9.5	15.0	24.5	17.9	2.4	1.7	22.0
1990-91	9.3	16.9	26.3	19.3	2.7	1.1	23.1
1991-92	8.8	13.7	22.6	17.0	3.1	2.0	22.0
1992-93	8.6	15.0	23.6	17.5	2.7	1.6	21.8
1993-94	8.2	14.8	23.1	18.4	3.5	0.6	22.5
1994-95	8.7	17.3	26.0	19.7	3.5	1.7	24.8
1995-96	7.7	19.3	26.9	18.2	4.9	2.0	25.1
1996-97	7.0	17.4	24.5	17.0	4.5	1.7	23.2
1997-98	6.6	18.0	24.6	17.6	4.2	1.3	23.1
1998-99	6.6	16.0	22.6	18.8	3.7	-1.0	21.5
(Series base year 1999-00)							
1999-00	7.4	18.5	25.9	21.1	4.5	-0.8	24.8
2000-01	6.9	17.1	24.0	21.0	4.3	-1.9	23.4
2001-02	6.9	16.0	22.9	21.8	3.7	-2.0	23.5
2002-03	6.1	19.2	25.2	22.7	4.2	-0.6	26.4
2003-04	6.3	21.7	28.0	23.8	4.7	1.2	29.7
2004-05	7.1	24.5	31.5	21.6	7.1	2.4	31.1
2005-06	7.4	26.4	33.8	22.3	8.1	2.0	32.4

Note: From 1999-00 onwards, private investment numbers include the residual reflected in 'errors and omissions' as well as 'variables' as indicated by the CSO in its estimates of gross domestic capital formation.

Source: Central Statistical Organisation, India.

### APPENDIX 3.

#### External Sector Indicators: 1980-81 to 2005-06

Year	Exports of Goods & services	Imports of Goods & services	Current Account Deficit	External Debt Stock
	(% to GDP)			
1980-81	8.5	10.2	-1.5	11.4
1981-82	8.0	9.7	-1.7	12.1
1982-83	8.1	9.8	-1.7	14.1
1983-84	7.7	9.3	-1.5	15.2
1984-85	8.3	9.4	-1.2	16.4
1985-86	7.0	9.1	-2.1	18.0
1986-87	7.0	8.8	-1.9	19.7
1987-88	7.2	9.1	-1.8	20.4
1988-89	7.5	10.2	-2.7	20.8
1989-90	8.4	10.8	-2.3	25.8
1990-91	8.1	11.2	-3.1	28.7
1991-92	10.5	10.8	-0.3	38.7
1992-93	10.9	12.6	-1.7	37.5
1993-94	12.4	12.9	-0.4	33.8
1994-95	13.1	14.2	-1.0	30.8
1995-96	14.1	15.8	-1.7	27.0
1996-97	14.5	15.6	-1.2	24.6
1997-98	14.4	15.7	-1.4	24.3
1998-99	14.5	15.5	-1.0	23.6
1999-00	15.0	16.1	-1.0	22.1
2000-01	16.9	17.5	-0.6	22.4
2001-02	17.1	16.3	0.7	21.1
2002-03	18.9	17.6	1.3	20.4
2003-04	19.9	17.6	2.3	17.8
2004-05	22.1	22.9	-0.8	17.3
2005-06	24.6	26.0	-1.3	15.8

Source: Reserve Bank of India (RBI).

## APPENDIX 4.

### Central & State Fiscal Indicators:1980-81 to 2005-06 (% of GDP)

	Fiscal Deficit	Primary Deficit	Revenue Deficit	Fiscal Deficit	Primary Deficit	Revenue Deficit
	Central			State and Central		
1980-81	5.8	4.0	1.4	7.5	5.4	0.4
1981-82	5.1	3.2	0.2	6.3	4.1	-0.6
1982-83	5.6	3.6	0.7	5.9	3.4	0.2
1983-84	5.9	3.8	1.2	7.3	4.8	1.1
1984-85	7.1	4.7	1.7	9.0	6.2	2.1
1985-86	7.9	5.2	2.1	8.0	4.9	1.9
1986-87	8.5	5.5	2.5	9.9	6.5	2.4
1987-88	7.6	4.5	2.6	9.2	5.5	2.9
1988-89	7.3	4.0	2.5	8.5	4.6	2.9
1989-90	7.3	3.7	2.5	8.9	4.7	3.2
1990-91	7.9	4.1	3.3	9.4	5.0	4.2
1991-92	5.6	1.5	2.5	7.0	2.3	3.4
1992-93	5.4	1.2	2.5	7.0	2.1	3.2
1993-94	7.0	2.7	3.8	8.3	3.3	4.3
1994-95	5.7	1.4	3.1	7.1	1.9	3.7
1995-96	5.1	0.9	2.5	6.5	1.6	3.2
1996-97	4.9	0.5	2.4	6.4	1.3	3.6
1997-98	5.8	1.5	3.1	7.3	2.1	4.1
1998-99	6.5	2.0	3.8	9.0	3.7	6.4
1999-00	5.4	0.7	3.5	9.4	3.8	6.2
2000-01	5.7	0.9	4.1	9.5	3.6	6.6
2001-02	6.2	1.5	4.4	9.9	3.7	7.0
2002-03	5.9	1.1	4.4	9.6	3.1	6.7
2003-04	4.5	0.03*	3.6	8.5	2.1	5.8
2004-05	4.0	0.06*	2.5	7.5	1.4	3.7
2005-06	4.1	0.4	2.6	7.5	1.6	3.1
2006-07#	3.7	0.1	2.0	6.5	0.8	2.2
2007-08 BE	3.3	-0.2	1.5			

Notes: # - Combined estimates for 2006-07 include revised estimates for Centre but budgeted estimates for States; \* - These are shown up to 2nd place of decimal since, otherwise, they become 0 only; Revenue deficit refers to the excess of revenue expenditure over revenue receipts. Fiscal deficit is the difference between the revenue receipts plus certain non-debt capital receipts and the total expenditure including loans, net of repayments. This indicates the total borrowing requirements of Government from all sources. Primary deficit is measured by fiscal deficit less interest payments. (Source:

<http://indiabudget.nic.in/ub1998-99/bag/bag7.htm>).

Source: Reserve Bank of India (RBI) and Union Budget Documents.

## APPENDIX 5.

### Annual Inflation Rate

Year	Consumer Price index			Whole-sale Price Index
	Industrial workers	Urban non-manual employees	Agricultural labourers	All Commodities
1980-81	11.4	11.8	14.2	18.2
1981-82	12.5	11.9	12.4	9.3
1982-83	7.8	8.0	5.2	4.9
1983-84	12.6	10.3	11.3	7.5
1984-85	6.3	8.7	0.2	6.5
1985-86	6.8	7.0	4.8	4.4
1986-87	8.7	7.5	4.8	5.8
1987-88	8.8	9.6	10.0	8.1
1988-89	9.4	7.9	12.6	7.5
1989-90	6.1	6.6	5.4	7.5
1990-91	11.6	11.0	7.6	10.3
1991-92	13.5	13.7	19.3	13.7
1992-93	9.6	10.4	12.3	10.1
1993-94	7.5	6.9	3.5	8.4
1994-95	10.1	9.7	11.9	12.6
1995-96	10.2	9.3	10.7	8.0
1996-97	9.4	9.3	9.1	4.6
1997-98	6.8	6.9	3.4	4.4
1998-99	13.1	11.3	11.0	5.9
1999-00	3.4	4.5	4.4	3.3
2000-01	3.8	5.6	-0.3	7.2
2001-02	4.3	5.1	1.1	3.6
2002-03	4.0	3.8	3.2	3.4
2003-04	3.9	3.7	3.9	5.5
2004-05	3.8	3.6	2.6	6.5
2005-06	4.4	4.7	3.9	4.4
2006-07*	6.7	6.4	7.5	5.2

Note: \* - Figures for 2006-07 are for April-January India.

Sources: Labour Bureau, Ministry of Labour and Employment, India; and, Central Statistical Organisation (SCO).

## **APPENDIX 6.**

### **Poverty and Employment**

<b>Year</b>	<b>Poverty Head Count Ratio</b>	<b>Employment (In Million)</b>
1983	44.5	299.6
1987-88	38.9	327.3
1993-94	36.0	376.2
1999-00	26.1	399.0
2004-05	27.8	457.5

Note: The employment figures include both organized and unorganized sector estimates. The total employment numbers are adjusted with total population numbers.

Source: Various rounds of NSSO Survey on Employment and Unemployment.

## Works Cited

Acharya, S. (1999). "Managing External Economic Challenges in the Nineties : Lessons for the Future," *Occasional Paper*, no.3318 (September). 18th Anniversary Lecture of the Centre for Banking Studies, Central Bank of Sri Lanka.

\_\_\_\_\_ (2002). "Macroeconomic Management in the Nineties," *Economic and Political Weekly*, 20 April, 1515-1538.

\_\_\_\_\_ (2007). *Can India Grow Without Bharat*, mimeo. New Delhi: Academic Foundation.

Ahluwalia, I.J. (2002). "Economic Reforms in India Since 1991: Has Gradualism Worked," *Journal of Economic Perspectives*, vol. 16, no. 3 (August): 67-88.

Ahmad, S. (2006). "India's Long-Term Growth Experience: Lessons and Prospects," Paper presented at a Seminar organized by ICRIER, New Delhi, 9 October.

Besley, T. and R. Burgess (2004). "Can Labour Regulation Hinder Economic Performance? Evidence from India," *Quarterly Journal of Economics*, vol. 119, no. 01 (February): 99-134

Bhalla, S. (2006). "India Joins China at 10% Growth," *Business Standard*, 28 October. Available online: <<http://inhome.re diff.com/money/2006/oct/28guest1.htm>>.

Bhargava, S. and V. Joshi (1990). "Increase in India's Growth Rate: Facts and a Tentative Explanation," *Economic and Political Weekly*, 1 December, 2657-2661.

Bosworth, B. and S.M. Collins (2003). "The Empirics of Growth: An Update," *Brookings Papers on Economic Activity*, no 2 (September): 113-206

- Dahlman, C. and A. Utz (2005). *India and the Knowledge Economy: Leveraging Strengths and Opportunities*. Washington, DC: World Bank Institute (WBI), Development Studies, July.
- DeLong, J.B. (2001). "India since Independence: An Analytic Growth Narrative," mimeo. Available online: <<http://ksglobe.harvard.edu/~drodrik/Growth%20volume/DeLong-India.pdf>>
- Felipe, J., and R. Hasan (2006). *Labor Markets in Asia: Issues and Perspectives*. New York: Palgrave Macmillan.
- Goldar, B.N. (2004). "Productivity Trends in Indian Manufacturing in the pre- and post-reform periods," *ICRIER Working Paper*, no. 137 (July). New Delhi: Indian Council for Research on International Economic Relations.
- ILO (2007). "The Nexus of Growth, Investment and Decent Work in South Asia," Background paper presented at, *South Asia Sub-Regional High-Level Tripartite Meeting on the Nexus of Growth, Investment and Decent Work*, Delhi, 3-4 April.
- IMF (2006). "Financial Systems and Economic Cycles," *World Economic Outlook*. Washington: International Monetary Fund.
- India (2007). *Economic Survey 2006-7*. Delhi: Ministry of Finance.
- \_\_\_\_\_ (2006). "Towards a Faster and More Inclusive Growth: An Approach to the 11th Five Year Plan," Report, November. Delhi: Planning Commission.
- IPCC (2007). "Summary for Policymakers," *Climate Change 2007: The Physical Science Basis*. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, February. Available online: <<http://www.ipcc.ch/SPM2feb07.pdf>>.

- Jalan, B., ed. (1992). *The Indian Economy: Problems and Prospects*. Delhi: Viking Press.
- Kelkar, V.L. and R. Kumar (1990). "Industrial Growth in the Eighties: Emerging Policy Issues," *Economic and Political Weekly*, 27 January 27, 209-222.
- Lall, S., and T. Mengistae (2005). "The Impact of Business Environment and Economic Geography on Plant-level Productivity: An Analysis of Indian Industry," *Policy Research Working Paper*, no.3664 (July). Washington, DC: World Bank.
- Mishra, D. (2006). "Can India Attain the East Asian Growth with South Asian Saving Rate," Draft paper prepared for World Bank, July.
- Mundle, S., and G. Rao (1992). "Issues in Fiscal Policy," in B. Jalan, ed. *The Indian Economy: Problems and Prospects*. Delhi: Viking Press.
- Nagaraj, R. (1990). "Growth Rate of India's GDP, 1950-51 to 1987-88: Examination of Alternative Hypotheses," *Economic and Political Weekly*, 30 June, 1396-1403.
- Nayyar, D. (2006). "Economic Growth in Independent India: Lumbering Elephant or Running Tiger?" *Economic and Political Weekly*, 15 April, 1451-7.
- Panagariya, A., (2005), 'The Triumph of India's Market Reforms, the Record of the 1980s and the 1990s', *Policy Analysis No 554*, CATO Institute, Washington D.C;
- Poddar, T., and E. Yi (2007). "India's Rising Growth Potential," *Global Economics Paper*, no. 152 (January). New York: Goldman Sachs. Available online: <[http://econ.ucsc.edu/Content/seminar\\_papers/W07/Singh\\_Indias\\_Rising\\_Growth\\_Potential.pdf](http://econ.ucsc.edu/Content/seminar_papers/W07/Singh_Indias_Rising_Growth_Potential.pdf)>.

RBI (2005). *Handbook of Statistics on Indian Economy* Mumbai: Reserve Bank of India.

Rodrik, D. and A. Subramanian (2004). "From 'Hindu Growth' to Productivity Surge: The Mystery of the Indian Growth Transition," *IMF Working Paper*, no. WP/04/77 (May).

Unel, B. (2003). "Productivity Trends in India's Manufacturing Sectors in the Last Two Decades," *IMF Working Paper*, no. WP/03/22 (March).

United Kingdom (2006). *Stern Review on the Economics of Climate Change*. London, Her Majesty's Treasury. Available online: <[http://www.hm-treasury.gov.uk/independent\\_reviews/stern\\_review\\_economics\\_climate\\_change/stern\\_review\\_report.cfm](http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm)>.

Virmani, A. (1989). "Growth, Capital and Employment: Performance in Perspective," *Economic Research Paper*, no. 3 (February). Planning Commission.

\_\_\_\_\_ (1997). "India: Crises, Reform and Growth," *Economic and Political Weekly*, 9 August, 2064-7.

\_\_\_\_\_ (2005), "India's Economic Growth History: Fluctuations, Trends, Break Points and Phases," *ICRIER Occasional Paper* (January). New Delhi: Indian Council for Research on International Economic Relations.

Wallack, J.S. (2003). "Structural Breaks in Indian Macroeconomic Data," *Economic and Political Weekly*, October, 4312-5.

Wilson, D. and R. Purushothaman (2003). "Dreaming With BRICs: The Path to 2050," *Global Economics Paper*, no. 99 (October). New York: Goldman Sachs. Available online: <<http://www2.goldmansachs.com/insight/research/reports/99.pdf>>.

## **Internet Resources**

Committee on Infrastructure, India  
<<http://infrastructure.gov.in>>

Doing Business, World Bank  
<<http://www.doingbusiness.org>>

National Account Statistics, India  
<[http://mospi.nic.in/nas\\_snm.htm](http://mospi.nic.in/nas_snm.htm)>

National Highways Authority of India  
<<http://www.nhai.org/WHATITIS.asp>>

National Science & Technology Management  
Information System, India  
<<http://www.nstmis-dst.org>>

World Population Prospects, UN  
<<http://esa.un.org/unpp>>

# CIGI Working Paper Series

(for a full listing please visit: [www.cigionline.org](http://www.cigionline.org))

- 16 Eric Helleiner and Bessma Momani, 'Slipping into Obscurity? Crisis and Reform at the IMF', January 2007.
- 17 Domenico Lombardi and Ngaire Woods, 'The Political Economy of IMF Surveillance', February 2007.
- 18 Ramesh C. Kumar, 'Poverty Reduction and the Poverty Reduction Facility at the IMF: Carving a New Path or Losing Its Way?', February 2007.
- 19 Tony Porter, 'Beyond the International Monetary Fund: The Broader Institutional Arrangements in Global Financial Governance', February 2007.
- 20 Peter I. Hajnal, 'Summitry from G5 to L20: A Review of Reform Initiatives', March 2007.
- 21 John Whalley and Weimin Zhou, 'Technology Upgrading and China's Growth Strategy to 2020', March 2007.
- 22 OG Dayaratna-Banda and John Whalley, 'Regional Monetary Arrangements in ASEAN+3 as Insurance through Reserve Accumulation and Swaps', April 2007.
- 23 Simon J. Evenett, 'EU Commercial Policy in a Multipolar Trading System', April 2007.
- 24 OG Dayaratna-Banda and John Whalley, 'After the MFA, the CCAs (China Containment Agreements)', May 2007.
- 25 Rajiv Kumar, Amitendu Palit and Karan Singh, 'Sustainability of Economic Growth in India', May 2007.



The Centre for International  
Governance Innovation  
Centre pour l'innovation dans  
la gouvernance internationale

## About The Centre for International Governance Innovation

The Centre for International Governance Innovation (CIGI) is a Canadian-based, not-for-profit, non-partisan think tank that conducts research and advises on issues of international governance, focusing on international relations and economic policy research. CIGI was founded in 2002 by visionary Jim Balsillie, Co-CEO of RIM (Research In Motion) and collaborates with over 125 partners around the globe.

CIGI builds ideas for global change by studying, advising, and networking with academic researchers, practitioners, civil society organizations, the media, the private sector, students and governments on the character and desired reforms of the multilateral system, which has encountered mounting challenges



in the period since the end of the Cold War. To achieve this, CIGI helps shape dialogue in Canada and abroad, funds the research initiatives of recognized experts and promising young academics, and builds collaborative links among world class researchers.

The Centre's main research themes include the changing shape of international relations, international institutional reform, shifting global economic power, regional governance, fragile and weak states and global security issues. This research is spearheaded by CIGI's distinguished fellows who comprise leading economists and political scientists with rich international experience and policy expertise.

CIGI has also developed IGLOO™ (International Governance Leaders and Organizations Online). IGLOO is an online network that facilitates knowledge exchange between individuals and organizations studying, working or advising on global issues. Thousands of researchers, practitioners, educators and students use IGLOO to connect, share and exchange knowledge regardless of social, political and geographical boundaries.

To learn more about CIGI and IGLOO please visit:  
**[www.cigionline.org](http://www.cigionline.org)** and **[www.insideigloo.org](http://www.insideigloo.org)**.



The Centre for International  
Governance Innovation

Centre pour l'innovation dans  
la gouvernance internationale

57 Erb Street West  
Waterloo, Ontario, Canada N2L 6C2  
tel +1.519.885.2444 fax +1.519.885.5450  
[www.cigionline.org](http://www.cigionline.org)