

## **India—East Asian Growth, Latin American Deficits**

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Over the past 25 years, India's economy grew at an average real rate of close to 6 percent, yet by the end of this period, the general government debt-to-GDP ratio was 34 percentage points higher. We examine the links between the public finances and growth in the post-1991 period. The persistent combination of high growth and high fiscal deficits appears less schizophrenic once macro-micro linkages and lags are taken into account. We argue that the main factor in the deterioration of government debt dynamics after the mid-1990s was not fiscal profligacy but a reform-induced loss in trade, customs and financial repression taxes; these very factors plus lower entry barriers have over time contributed to stronger microfoundations for growth by increasing competition and hardening budget constraints for firms and financial sector institutions. We attribute the unexpected growth resurgence of the past few years to the lagged effects of these factors, which have taken time to attain a critical mass in view of India's gradual reforms. Similarly, the worsening of the public finances after the mid-1990s can be attributed to the cumulative effects of the tax losses, the negative growth effects of cuts in capital expenditure that were made to offset the tax losses and a pullback in private investment (hence growth and taxes) after what increasingly appears to have been a low-quality investment boom during the first few years of the reforms. Capital expenditure cuts have contributed to the infrastructure gap which is now the biggest constraint on private investment and continued rapid growth. We discuss the ongoing reforms in revenue mobilization and fiscal adjustment at the states' level, which if successfully implemented, will better align the public finances with growth and contribute fiscal space for infrastructure.

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<sup>1</sup> The authors are at the World Bank. This paper has been written for the October 12-13 2006 "Sovereign Debt and Development" conference organized by PRMED. It draws liberally upon earlier work, notably the 2006 Development Policy Review for India, Pinto and Zahir (2004a, b) and Pinto, Zahir and Pang (2006). The findings, interpretations and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the views of the World Bank, its Executive Directors, or the countries they represent.

## 1. Introduction

On the surface of it, India presents an acute case of economic schizophrenia. It is growing rapidly and inflation is low but government debt has grown even faster and deficits remain high.<sup>2</sup> Over the past 25 years (1980/81-2005/06) real GDP posted an annual growth rate that was close to 6 percent, among the highest of any country in the world. Yet by the end of this period, the government's debt-to-GDP ratio had risen by 34 percentage points. In fact, nominal debt grew by 2 percentage points a year faster than nominal GDP. This combination of "East Asian growth" and "Latin American deficits" without a major economic crisis for 25 years is virtually unique among large emerging market countries.<sup>3</sup> The markets take a relatively sanguine view, with one ratings agency upgrading India's long-term foreign and local currency rating to investment grade (Fitch Ratings, 4 August 2006) and another rewarding India with a stable or positive outlook (Standard & Poors, 17 May 2006). Fitch notes that notwithstanding the upgrade, "... public finances are still weak and India is clearly an outlier among its rating peers in this respect," while S&P cautions that "India's fiscal weakness is one of the worst among rated sovereigns, leaving it particularly vulnerable to any secular decline in growth rates or any increase in interest rates."

One recent analysis argues: "The reasons India has remained fundamentally solvent despite the sustained fiscal deficits of the past twenty years are fast nominal GDP growth and financial repression."<sup>4</sup> But real GDP growth has been high too, begging the question of how large fiscal deficits and high growth can coexist for so long. And what if the reasons for high growth and high fiscal deficits overlap (as we shall argue has been the case after 1991)? Besides, the scope for financial repression in recent years is probably much lower than in the second half of the 1980s or early 1990s.<sup>5</sup> Singh and Srinivasan (2004) underline that "... a coherent intertemporal model" is needed to understand India's macroeconomic puzzles. We attempt to do this, albeit heuristically, while also trying to integrate the macro and the micro.

As Figure 1 shows, growing indebtedness (measured by the debt-to-GDP ratio) has coincided with high fiscal deficits. This alone is no cause for alarm: a country with high growth potential might need to borrow in order to extract it. One consequence might be a temporary rise in indebtedness, but this need not lead to a solvency problem. The most obvious case is increased government spending on infrastructure, which spurs private investment and future growth and taxes while raising short-run fiscal deficits. In India's case, however, the debt-to-GDP ratio has risen in spite of a 3 percent of GDP cut in government capital expenditure after 1991. India today faces an infrastructure gap that threatens to put a brake on future rapid growth.

This does not mean that India's high government debt and fiscal deficits have been completely in vain. We show that a significant portion of the rise in indebtedness after 1991 is traceable to a reform-induced loss in revenues, especially in indirect taxes (customs and excise) and implicit financial repression taxes. Over time, these reforms have increased competition and

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<sup>2</sup> Unless otherwise noted, debt and deficits will refer to the debt and fiscal deficit of the general government (center and states consolidated).

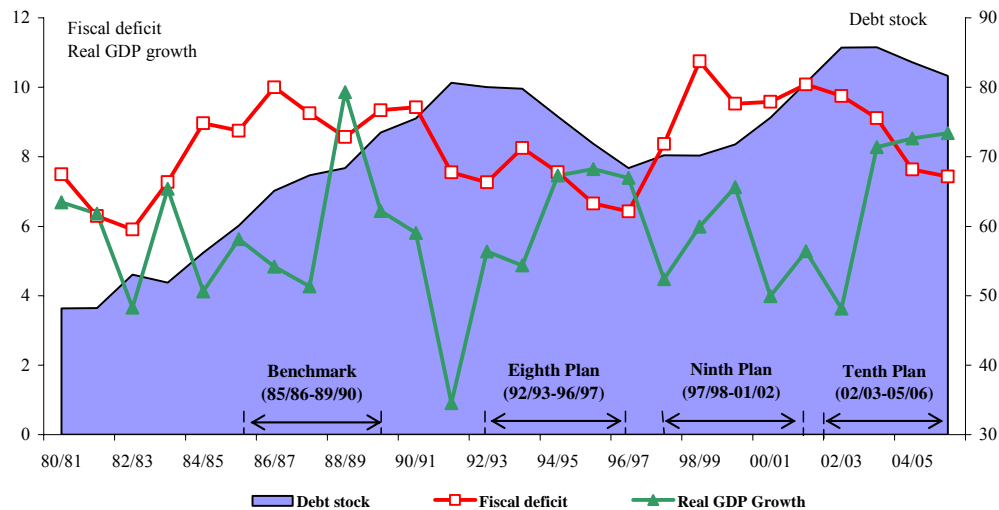
<sup>3</sup> In retrospect, the 1991 balance-of-payments crisis was more an embarrassment than a crisis when compared with Latin America's lost decade. Its most important impact was that it served as a trigger for economic reform. For comparisons of India's fiscal, debt and growth outcomes with other emerging market countries (many of which endured a serious crisis after 1997) see Ahluwalia (2002a) and Pinto, Zahir and Pang (2006, Annex 1).

<sup>4</sup> Buitier and Patel (2005, p. 18).

<sup>5</sup> Kletzer (2004) estimates financial repression revenues for 1980-2002 and finds these to be negative in 2001 and 2002.

hardened the budget constraints of firms and financial sector institutions—the government-owned development finance companies in particular—stimulating deeper microeconomic restructuring and faster growth. But this has been a meandering process which has been gaining momentum only over the past few years. Taking an integrated view of the macro and micro and allowing for lagged effects leads to a more positive interpretation of India’s post-1991 economic outcomes and reforms. This approach reinforces rather than diminishes the urgency of continued fiscal and structural reform, not least to address inadequate infrastructure as probably the most serious constraint on continued rapid growth.

**Figure 1 Growth (%), Fiscal Deficit, and Debt Stock (% of GDP)**



*Source:* Handbook of Statistics on Indian Economy, Reserve Bank of India

The impact of lags is related to certain clearly demarcated stages in economic outcomes over the past 20 years. In Figure 1, we see a jump in the fiscal deficit to the 9-10 percent of GDP range in the late 1980s with the general government debt-to-GDP ratio displaying a sustained rise to a (local) peak of 81 percent in 1991/92 coinciding with the BoP crisis. The period 1985/86-1989/90, which was marked by high deficits and rising debt, offers a convenient benchmark for the assessment of economic outcomes after the crisis and reforms of 1991. The first subsequent period of interest is the reform-intensive Eighth Plan period, 1992/93-1996/97, during which growth recovered with deficits falling and the debt-to-GDP ratio shrinking to a (local) trough of 68 percent in 1996/97. The second period more-or-less coincides with the Ninth Plan period, 1997/98-2001/02, during which growth slowed relative to the last three years of the Eighth Plan period, deficits rose and debt climbed, returning to 81 percent of GDP. This is the period when accusations of fiscal profligacy, concerns about slowing reforms and misgivings about a crisis were at their strongest in recent years. The third period covers the first four years of the Tenth Plan period, 2002/03-2005/06, during which growth staged an unexpected recovery starting in 2003 and deficits charted a downward course but debt rose to another peak, of 86 percent, in 2003/04, before beginning to fall. We shall pay particular attention to the resurgence in growth of the past three years, including emerging constraints to maintaining it and the related public finance implications.

In understanding the interdependence between macro-fiscal sustainability and growth after 1991, consider that the economy was effectively closed until that year. The government's debt-to-GDP ratio was over 80 percent and its tax system heavily reliant on customs and excise duties and implicit financial repression taxes. One could imagine a policy agenda dominated by three objectives: avoid another crisis; stimulate growth through better resource allocation and competition; and alleviate poverty, partly through faster growth and partly through subsidies (which turn out to be inefficient and politically motivated). The following policy instruments could be regarded as having been assigned to the first two objectives:<sup>6</sup>

Crisis avoidance: shift to long-term rupee debt; build up foreign exchange reserves; go slow on capital account liberalization; don't privatize banks.

Resource allocation: cut import tariffs on machinery and inputs, go slow on consumer goods; reduce excise duties; reduce financial repression (get the prices right).

Competition and liberalization: cut import tariffs (import competition); reduce entry barriers—liberalize industrial licensing, foreign direct investment, foreign technology agreements (put pressure on incumbent firms while enlarging their ability to respond).

There are difficult policy trade-offs: cutting import and excise duties would tend to raise the primary fiscal deficit, while reducing financial repression would raise interest payments. Given its vulnerability to a crisis, the government cuts capital expenditure to keep deficits in check, which is politically (and possibly institutionally) easier to do than cutting the wage bill or increasing direct taxes; but with inimical effects on growth down the road. Reforms are gradual. The chief constraints to going cold turkey (apart from political economy and vested interests) would be the high initial debt and sheltered firms and banks unaccustomed to serious competition from overseas. Today, the cumulative impact of India's gradual reforms has been substantial, and we argue that the resurgence of growth over the past three years is based on strong microfoundations in an environment of global competition; but the challenge of moving to East Asian growth with East Asian deficits remains.

Section 2 discusses the links between the public finances and growth. Section 3 elaborates upon the ongoing fiscal adjustment on the revenue side (to compensate for the reform-induced loss in taxes) and in the states (in response to the recommendations of the Twelfth Finance Commission). It closes with the challenge of creating fiscal space for infrastructure. Section 4 concludes.

## **2. Public Finances and Growth After 1991**

Concerns about a looming crisis were repeatedly expressed by eminent economists towards the end of the Ninth Plan period (Acharya (2001, 2002a, 2002b), Ahluwalia (2002a), Srinivasan (2002)). Apprehension about fiscal profligacy in the form of the Central Fifth Pay Commission award (CFPC—implementation of which began at the center in 1997 followed a year later by the states)—and lost opportunities to spur growth and cut poverty came to the forefront.<sup>7</sup> Srinivasan (2002, page 68) wrote, “When the economy seems to be at last on the

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<sup>6</sup> Acharya (2006) contains a fascinating account of India's macroeconomic challenges and response.

<sup>7</sup> The CFPC award was labeled the “single largest adverse shock to India's strained public finances in the last decade” and an act of “fiscal profligacy” without parallel (Godbole (1997), Acharya (2001), quoted in World Bank (2003), page 36).

verge of achieving sustained and rapid growth, jeopardizing it is unconscionable.”<sup>8</sup> Box 1 discusses how a crisis was avoided during the Ninth Plan period even as other emerging market countries with seemingly better fiscal fundamentals succumbed to crises.

### **Box 1. How a Crisis was avoided during the Ninth Plan Period**

With the wisdom of hindsight, a crisis was avoided because: (i) as a deliberate policy, the government shifted towards long-term rupee debt and built up foreign exchange reserves to lower vulnerability after 1991;<sup>a/</sup> (ii) it cut capital expenditure to limit fiscal deficits; and (iii) slow capital account liberalization, state-owned banks which willingly held government paper and gradual financial liberalization helped keep interest rates low while reducing avenues for a speculative attack.<sup>b/</sup>

Would not growth become a casualty of the effort at self-insurance (cut capex, raise reserves) described above? Accumulating reserves when fiscal deficits are high requires high real interest rates to generate the needed current account surpluses, and indeed, there were suspicions of private investment being “crowding out” during the Ninth Plan period.<sup>c/</sup>

<sup>a/</sup> After the 1991 crisis, Acharya (2001, page 16) notes that there was a conscious decision to build up reserves to “provide greater insurance against external sector stresses and uncertainties”. See also Reddy (2002).

<sup>b/</sup> Williamson and Zaghera (2002) stress the benefits of the gradualist approach to capital account liberalization. See also Hausmann and Purfield (2004).

<sup>c/</sup> Chapter 2, India (2001), Reserve Bank of India (2002), World Bank (2003), Pinto and Zahir (2004a). Lal, Bery and Pant (2003) discuss crowding out as well as the growth effects of subsequent capital inflows sterilization.

Ultimately, however, with India becoming increasingly integrated into the world economy, the only way to avoid a crisis would be to convince debt holders that the government will eventually generate the requisite primary surpluses to balance its intertemporal budget constraint. A sufficient condition would be assurance that future growth and taxes will be high enough—provided a temporary increase in deficits does not in the meanwhile lead to a crisis. On this latter point, India is in a good position because of its strong credit history and good inflation track record; in other words, it is “debt tolerant”, unlike many of the emerging market countries which fell prey to disruptive crises with better public finance indicators.<sup>9</sup> But one would expect cuts in government capital expenditure to weaken the incentives for private investment and hence future growth. At first sight, therefore, the resumption of broad-based growth over the past three years is all the more surprising.

Our explanation for the positive outcome on growth over the past three years is simple. The main reason for the deterioration in debt dynamics during the fateful Ninth Plan period was not fiscal profligacy understood as an irresponsible increase in spending; rather it was a revenue loss associated with the reforms aimed at liberalizing trade and the financial system after the 1991 crisis. Cutting import tariffs and excise duties and eliminating industrial licensing lowered trade and domestic entry barriers, increasing competition for incumbent firms, reducing the scope for cost-plus pricing and forcing higher quality, i.e., hardening firms’ budgets.<sup>10</sup> This was an equally direct if less obvious macro-micro link than say increasing public infrastructure investment or cutting marginal corporate income tax rates. Moreover the ongoing liberalization of the financial system enlarged the financing options open to firms, increased competition for commercial banks and the development finance companies and reduced the scope for financial repression (which in all likelihood involved government borrowing being cross-subsidized by firms). All this has

<sup>8</sup> Professor Srinivasan was not alone in expressing misgivings about growth. See also Ahluwalia (2002b), India, Planning Commission (2001, Chapter 2), World Bank (2003) and Pinto and Zahir (2004).

<sup>9</sup> On debt intolerance, see Reinhart, Rogoff and Savastano (2003).

<sup>10</sup> The seminal paper on hard budget constraints is Kornai (1986).

forced firms and banks to become more efficient over time, creating a more solid micro foundation for growth. In this interpretation, the macroeconomic deterioration in debt dynamics is the fiscal cost of the reforms with the payoff in terms of higher future growth and taxes based on a stronger (i.e., more able to withstand global competition) micro foundation for growth .

## 2.1 Fiscal adjustment and growth

The trade and financial liberalization-related tax loss had two components: customs and excise; and implicit financial repression taxes. How this could affect debt dynamics may be seen from using the continuous time approximation of the difference equation for government debt shown in Annex 1:

$$(1) \quad \dot{d} = pd + (r - g)d,$$

where  $d$  is the government debt-to-GDP ratio,  $pd$  is the ratio of the primary deficit to GDP,  $r$  is the real interest rate,  $g$  is the real growth rate. The primary deficit can be written as capital expenditure ( $k$ ) plus non-interest current expenditure ( $n$ ) minus the sum of customs and excise duties ( $\tau$ ) plus other revenues ( $T$ ), all expressed as ratios of GDP. Likewise, the interest rate can be written as  $r = r^m - \phi$ , where  $r^m$  is the interest rate which would prevail in the absence of financial repression and  $\phi > 0$  is the implicit financial repression tax. Equation (1) can now be rewritten as shown below, where the primary fiscal deficit has been decomposed into the terms shown in square brackets and the implicit tax from financial repression is  $\phi d$ :

$$(2) \quad \dot{d} = [k + n - (\tau + T)] + ([r^m - \phi] - g)d.$$

The trade and financial liberalization after the 1991 BoP crisis led to a reduction in  $\tau$  and  $\phi$ .

Therefore, absent other changes, we would expect (i) the primary deficit to rise and (ii) the gap between real interest rates and growth rates to narrow or even become positive, placing the debt-to-GDP ratio on a faster upward trajectory than before. In other words, the time derivative of the debt-to-GDP ratio would change as follows:

$$\Delta \dot{d} = -\Delta \tau - [\Delta \phi \cdot d + \phi \Delta d],$$

where the first term on the RHS is the reduction in import and excise taxes and the second term in square brackets the rise in interest payments consequent upon (partial) financial liberalization. Suppose for illustration that the reduction in taxes is 1.5 percent of GDP (the primary deficit rises by 1.5 percent of GDP) and the rise in interest payments an equal amount. Then other things held constant, the debt-to-GDP ratio would rise by an *additional* 3 percent of GDP per year compared to a situation of no change. Now suppose the government cuts capital expenditure to offset the falling taxes and rising interest payments so that  $\Delta k = \Delta \tau + \Delta \phi \cdot d + \phi \cdot \Delta d$ . Then the debt-to-GDP trajectory will not change.

### 2.1.a. Capital Expenditure Cuts Offset Revenue Losses

The preceding discussion captures the fiscal adjustment during the Eighth Plan period. Table 1 shows that when average outcomes are compared with the second half of the 1980s (the benchmark period), the cut in capital expenditure of 3 percentage points of GDP almost exactly offset the fall in revenues and rise in interest payments.<sup>11</sup> In addition, growth picked up slightly compared to the average over the last half of the 1980s and non-interest current spending was also cut. As a result, the debt-to-GDP ratio actually fell by some 2.5 percentage points of GDP per year over 1992/93-1996/97.

<sup>11</sup> The crisis year, 1990/91, and the year following it, are omitted. Pinto and Zahir (2004) and Pinto, Zahir and Pang (2006) argue that the combined 3 percent of GDP hit in falling revenue and rising interest payments is a lower bound for the reform-induced loss in trade, customs and financial repression taxes (net of any increases in direct taxes).

**Table 1. Fiscal Adjustment 1985/86-2005/06  
(based on period averages)**

% of GDP	Benchmark 85/86-89/90	8 <sup>th</sup> Plan versus 85/86-89/90	9 <sup>th</sup> Plan versus 8 <sup>th</sup> Plan	First 4 years of 10 <sup>th</sup> Plan versus	
				9 <sup>th</sup> Plan	85/86-89/90
1. Revenues	19.4	-1.5	-1.0	+1.7	-0.8
2. Interest	3.8	+1.3	+0.6	+0.6	+2.6
3. Capital expenditure	6.6	-2.9	0.0	-0.3	-3.2
4. <i>Net impact (3.+2.-1.)</i>	--	-0.1	+1.6	-1.4	+0.2
5. Non-interest current exp.	18.3	-1.9	+0.8	+0.2	-0.9
6. <i>Impact on GFD (4.+5.)</i>	--	-2.0	+2.4	-1.2	-0.7
7. <i>Primary deficit (3.+5.-1.)</i>	5.4	-3.3	+1.8	-1.8	-3.3
8. <i>Revenue deficit (2.+5.-1.)</i>	2.6	+0.9	+2.4	-0.8	+2.5
Memo item: growth %/yr.	6.2	+0.3	-1.2	+1.9	+1.1

Note: Rounding off error present.

Source: Authors' calculations based on Handbook of Statistics on Indian Economy, Reserve Bank of India

It is easy to see why the Ninth Plan period appears profligate compared to the Eighth: the gross fiscal deficit rose by over 2 percentage points of GDP while growth fell by over 1 percentage point. Non-interest current spending rose by about 1 percentage point of GDP. This was probably driven by the CFPC award. In spite of this increase, non-interest current spending remained 1 percentage point of GDP below the mid-1980s. Primary expenditure was cut by 4 percentage points of GDP during the Ninth Plan period compared to the mid-1980s—3 percentage points of GDP in capital spending and 1.1 percentage points in non-interest current spending. Large though this expenditure cut was, it was not enough to offset a cumulative fall in revenues of 2.5 percentage points and a rise in interest payments of 1.9 percentage points of GDP, so that the gross fiscal deficit grew to exceed the level of the mid-1980s. The rise in the deficit and slowdown in growth relative to the Eighth Plan period led to a rise in the debt-to-GDP ratio of 2.5 percentage points per year so that by 2001/02, debt-to-GDP was back to the level which prevailed at the time of the 1991 crisis.

The last two columns of Table 1 show outcomes over the first four years of the Tenth Plan period. Revenues grew substantially compared to the Ninth Plan period; but the continued upward trend in interest payments and stagnation in capital expenditure remain worrisome. Moreover, the chief symptom of the worsening expenditure composition, the revenue deficit (government dissaving) had increased by 2.5 percentage points of GDP relative to the benchmark.

#### 2.1.b. Retracing the Debt-to-GDP Path

The debt-to-GDP ratio reached new highs over the first two years of the Tenth Plan period, but fell over the third and fourth year. Insights into what is driving this process can be gleaned from a standard debt decomposition exercise. This decomposition assigns changes in the debt-to-GDP ratio to primary fiscal balances, growth and interest rates, exchange rates and other factors, such as financial sector recapitalization costs and privatization. It is based on the flow version of the government's budget identity shown in Annex 1.

In Table 2, data values over 1985/86-1989/90, the five years preceding the 1991 crisis, once again serve as a benchmark. Subsequent years are divided into the year of the BoP crisis and its aftermath, 1990/91-1991/92; the Eighth Plan period; the much-maligned Ninth Plan

period, 1997/98-2001/02; and the first four years of the Tenth Plan period 2002/03-2005/06. The impact of each determinant, shown in the first column of the table, is annualized.<sup>12</sup>

**Table 2. Factors Accounting for Rising Indebtedness, 1985/86-2005/06**  
(Annual average, % points of GDP)

	85/86- 89/90	90/91- 91/92	92/93- 96/97	97/98- 01/02	02/03- 05/06
1. Increase in debt	3.5	3.6	-2.5	2.5	0.2
2. Primary Deficit	5.4	3.8	2.1	4.0	2.2
3. Real GDP growth	-3.7	-2.4	-4.7	-3.6	-5.7
4. Real interest rate	-0.3	-2.0	0.3	2.8	3.5
5. Real exchange rate change	0.2	1.9	0.1	0.3	-0.3
6. Financial Sector Recapitalization	0.0	0.0	0.3	0.0	0.1
7. Divestment	0.0	-0.2	-0.2	-0.1	-0.2
8. Residual (1. minus sum of 2. to 7.)	1.8	2.4	-0.4	-0.9	0.7

*Source:* Authors' calculations based on Handbook of Statistics on Indian Economy, Reserve Bank of India

We see that the debt-reducing impact of growth was strongest impact during the Eighth Plan period and the first three years of the Tenth Plan period. The real interest rate impact became positive during the Eighth Plan period and has been strongly positive since as financial repression eased. And in contrast to other emerging market countries, especially the ones suffering a serious crisis, the real exchange rate impact (except for the BoP crisis period and its aftermath 1990/91-1991/92) and costs of financial sector recapitalization have been insignificant.<sup>13</sup> Divestment has not played a major role.

The impact of the growth resurgence is shown in Table 3, which presents results by year for 2002/03-2004/05. Even though the average real interest rate impact over the past 20 years was at its strongest during first four years of the Tenth Plan period, Table 3 shows a small, declining trend as the low marginal interest rates (as a result of the record lows in global interest rates) at last began to kick in.<sup>14</sup> Growth has lowered the debt-to-GDP ratio by almost 7 percentage points per year over the past three years. Equally importantly, by 2004/05, the primary deficit had dropped to levels lower than the Eighth Plan period.<sup>15</sup>

<sup>12</sup> Thus, during 1985/86-1989/90, the debt-to-GDP ratio rose by 3.5 percentage points per year, with the primary deficit contributing 5.4 percentage points per year; whereas over 1992/93-1996/97, the debt-to-GDP ratio fell by 2.5 percentage points per year, etc..

<sup>13</sup> Debt decompositions for the crisis emerging market countries show that real exchange rate collapses and the fiscal costs of bank bailouts were the main factors raising the debt-to-GDP ratio. Growth collapses played a small role. Budina and Fiess (2004) and IMF (2003).

<sup>14</sup> With India's long maturity debt, the impact of low marginal interest rates takes time to be reflected in the average interest rate which drives debt dynamics.

<sup>15</sup> For formal analyses of debt sustainability looking at primary fiscal deficits and the real interest rate - growth rate differential, see Rangarajan and Srivastava (2005), Pinto and Zahir (2004b), and Pinto, Zahir and Pang (2006).

**Table 3. Changing Indebtedness, first 4 years of 10<sup>th</sup> Plan period****(% points of GDP)**

	2002/03	2003/04	2004/05	2005/06
1. Increase in debt	5.1	0.0	-2.1	-2.0
2. Primary Deficit	3.2	2.7	1.4	1.3
3. Real GDP growth	-2.8	-6.6	-6.7	-6.7
4. Real interest rate	4.0	3.5	3.1	3.2
5. Real exchange rate change	-0.3	-0.5	-0.3	0.1
6. Financial Sector Recapitalization	0.1	0.2	0.0	0.0
7. Divestment	-0.1	-0.6	-0.1	-0.1
8. Residual (1. minus sum of 2. to 7.)	1.1	1.4	0.4	0.1

*Source:* Authors' calculations based on Handbook of Statistics on Indian Economy, Reserve Bank of India

### 2.1.c. From Rising Debt to Rising Growth

From Tables 2 and 3, it is obvious that the resumption of strong growth in 2003/04 has been the most significant factor driving the debt-to-GDP ratio in recent years. This growth has been broad-based and most significantly, has included manufacturing, which stagnated during the Ninth Plan period, as shown in Table 4. It is also the most tax-buoyant sector of the economy and could explain, via increased taxes, the big fall in the primary deficit also evident in Table 3.

**Table 4. Real GDP growth at factor cost (%)**

	85/86 -89/90 (avg.)	8th Plan (avg.)	9th Plan (avg.)	10th Plan 02/03 -05/06 (avg.)	02/03	03/04	04/05	05/06
Agriculture, forestry & fishing	3.1	4.7	2.3	1.9	-6.9	10.0	0.7	3.9
Industry	7.6	7.6	3.4	8.0	7.0	7.6	8.6	8.7
of which, manufacturing	7.8	9.8	1.2	7.7	6.8	7.1	8.1	9.0
Services	7.6	7.6	8.6	8.9	7.3	8.2	9.9	10.0
GDP	6.0	6.7	5.5	7.0	3.8	8.5	7.5	8.4

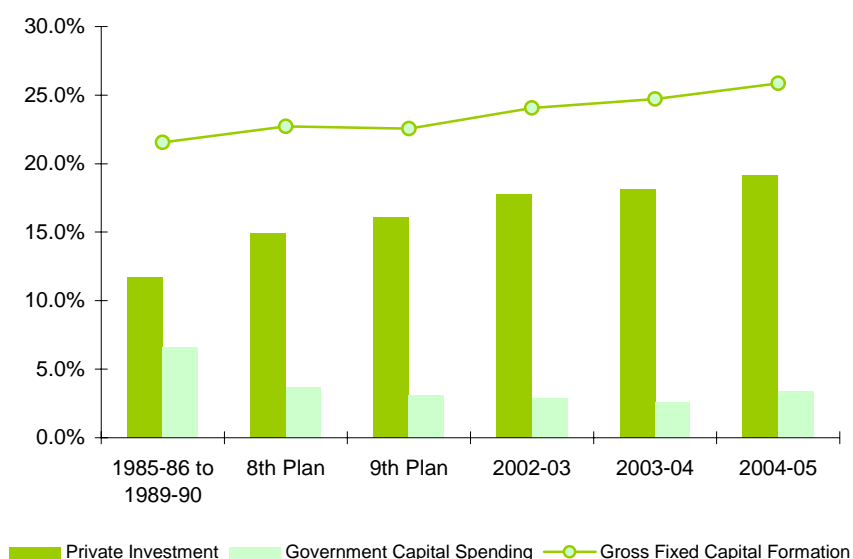
*Source:* Authors' calculations based on Handbook of Statistics on Indian Economy, Reserve Bank of India

We hypothesize that the growth rebound since 2003/04 stems from a more efficient microeconomic environment than has prevailed at any time since 1991 (and probably since independence). IMF (2002) suggests that India's trend growth had fallen to 5-6% of GDP during the late 1990s, and to perhaps as low as 5% in 2001/02, reflecting lingering structural distortions, infrastructure bottlenecks, and remaining industrial and agricultural controls. However, the transitional recession of the late 1990s led to a process of creative destruction that lay the basis for the subsequent manufacturing growth. The main impetus to growth has come from increased competition and hardened budget constraints as a result of the economic liberalization and cuts in trade and financial repression taxes, which have forced firms and banks to become more efficient, the microeconomic counterpart of the macroeconomic slide during the 1990s. The efficacy of

hard budgets and competition in stimulating micro restructuring has been convincingly established in firm-level studies in the transition countries of Central and Eastern Europe.<sup>16</sup>

While detailed firm-level studies do not exist for India, a combination of anecdotal evidence and data suggests three stages in India’s microeconomic transition leading to the recent growth surprise: in the first, India’s large business houses (“oligopolistic firms”) jockey for position in the new regime marked by the dismantling of the permit raj (elimination of industrial licensing) and lower import barriers after 1991 for machinery and inputs; tariffs on consumer goods have been brought down much more slowly. They do so by going on an investment binge. In the second stage, which more-or-less coincides with the Ninth Plan period, there is a pull-back after the private investment spree of the Eighth Plan period reinforced by the cuts in government capital expenditure.<sup>17</sup> The third stage coincides with the resurgence in growth in 2003/04. Figure 2 shows private investment on a steadily increasing trend in recent years, driven mainly by the pick up in private investment. Box 2 shows that TFP was positively affected by the post-1991 reforms, although it has taken time for a visible impact to emerge.<sup>18</sup> Some of the reasons for this are discussed in further detail below.

**Figure 2: Investment as a share of GDP, 1985–86 to 2004–05**



<sup>16</sup> The first systematic evidence was presented in Pinto, Belka and Krajewski (1993), later confirmed by a 3000-firm survey conducted by EBRD reported in Carlin, et al. (1999), and discussed in Chapter 7 of the EBRD Transition Report, 1999.

<sup>17</sup> While private saving increased by 3 percentage points of GDP during the Ninth Plan period relative to the Eighth Plan period, private investment increased only by 0.6 percentage points of GDP. This led to the argument that increased private saving was going to finance the growing fiscal deficit instead of additional private investment. See Table 4 and related discussion in Pinto and Zahir (2004b, pp. 1042-1043).

<sup>18</sup> The growth impact of the post-1991 reforms has not been without controversy. Rodrik and Subramanian (2004) argue that the growth spurt took place during the 1980s. For an opposing view, see Panagariya (2004a, b). Most businessmen would probably side with Forbes (2002, p. 167) who writes: “The changes since 1991 have unleashed a new dynamic in Indian industry [...] that is forcing change in every sector as firms finally are forced by new firms and the availability of imported products to provide consumers with products, prices and service that are beginning to approach internationally competent levels.”

### **Box 2: Reforms and Total Factor Productivity (TFP) during the 1990s**

Several studies have assessed the impact of the market opening after 1991 on TFP of firms as positive.<sup>a/</sup> In a study of 131,558 factories, based on the Annual Survey of Industries, Tata Services Limited (2003) finds that TFP growth increased from 0.68% per year during the pre-reform period (1981-82 to 1992-93) to 0.97% during the post-reform period (1993-94 to 2001-02). Similar findings were reported in Unel (2003). The contribution of TFP growth to real output growth has increased; as has labor productivity growth.

Pattnayak and Thangavelu (2003) find that reforms in India in the 1990s raised TFP in 10 out of 13 key industries, such as leather and leather products, chemical and chemical products, metal products and parts, machinery and equipment and electrical and related parts. In comparison, TFP growth in traditional industries such as food, beverage, basic metal and alloys, wool, silk and man-made fibres, textiles, and non-metallic minerals has remained either constant or declined. Their comparison of technical change before and after the 1991 reforms suggests that the TFP trend in most of the sectors is significantly higher after the 1991 reforms.

There are also indications that productivity has increased most in those sectors that have opened up to the global markets. Topalova (2004a) and Goldar and Kumari (2003) find that reductions in trade protectionism lead to higher levels and growth of firm productivity. Interestingly, Topalova (2004a) shows that while this effect is robust and highly statistically significant for private companies, there is no evidence that trade liberalization leads to any productivity improvements for government-owned companies. This suggests that private companies are better able to take advantage of the new opportunities.

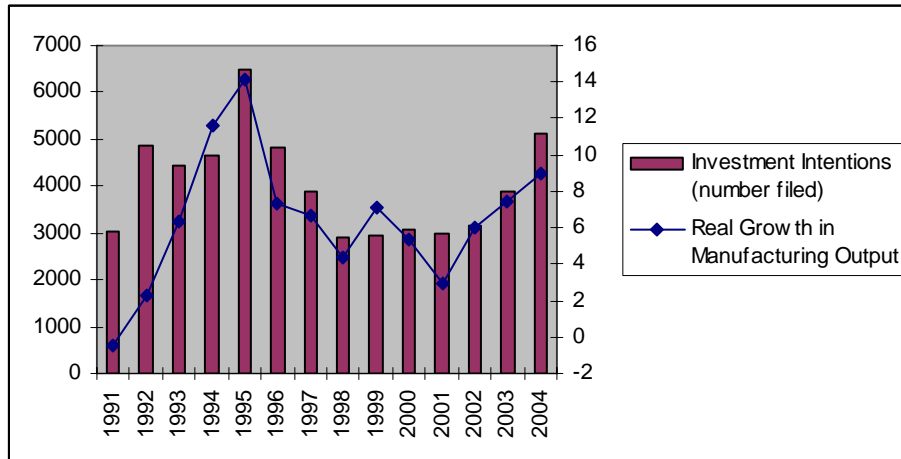
Further evidence of the links between productivity and reform has been provided in Dollar, Iarossi, and Mengistae (DIM, 2002) and in Veeramani and Goldar (2004) who analyze the influence of investment climate on TFP in Indian states. Based on a survey of over 1000 manufacturing establishments, and controlling for establishment size and industry, DIM (2002) find that value added per worker is about 45 percent lower in states that business managers consider to possess a relatively poor investment climate. Most of this gap is due to the lower TFP of firms in these states. The average rate of net fixed investment is less than 2 percent for firms from poor investment climate states against 8 percent in good investment climate states.

<sup>a/</sup> Goldar (2004) and a number of other authors find that TFP growth in the 1990s decelerated. Goldar and Kumari (2003) suggest that gestation lags in investment projects and slower agricultural growth in the 1990s had an adverse effect on productivity growth. The analysis reveals that underutilization of industrial capacity was an important cause of the productivity slowdown.

<sup>b/</sup> DIM find that a quarter of the TFP gap can be traced to inferior power supply and poorer internet connectivity in poor investment climate states. About a tenth is due to a higher regulatory burden in the same states.

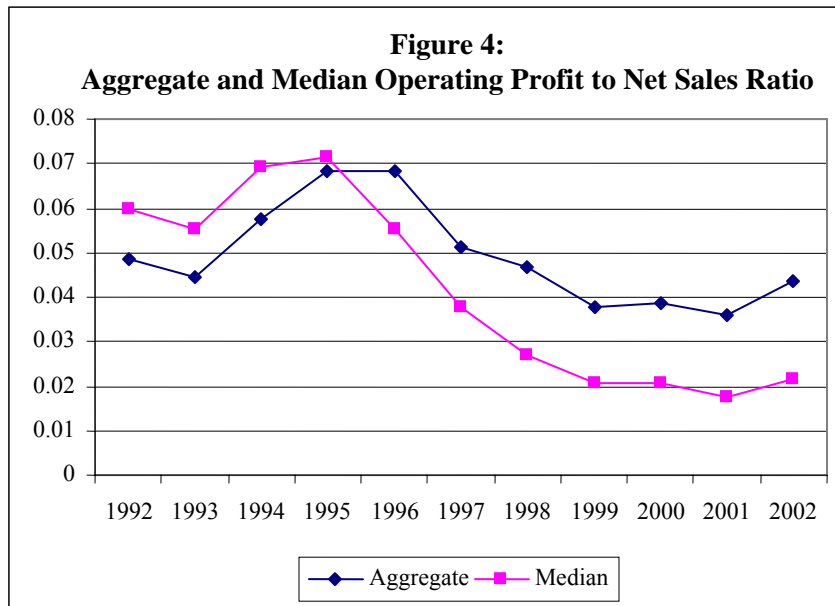
**First stage** Following the crisis in 1991, the initial post-crisis years witnessed a strong positive response from investment and growth. In the first half of the nineties, deregulation of industry and foreign trade, strong export performance and the overall reform momentum drove investment higher. The fixed investment surge was particularly strong in the manufacturing sector. As shown in Figure 3 below, investment intentions filed in industry more than doubled from 3038 in 1991 to 6502 in 1995 and the proposed total investment also increased rapidly (from approximately Rs. 76310 crores in 1991 to Rs. 125509 crores in 1995).

**Figure 3: Trends in Investment Intentions and Manufacturing Output**



Source: Handbook of Industrial Policy and Statistics

As part of the liberalization process, quantitative trade restrictions were eliminated, and tariff levels and their dispersion came down. The number of private companies operating in India, also increased significantly, and nearly doubled in the 5 years post-1991, from 249,181 in 1992 to 449,730 in 1997. As highlighted by Topalova (2004b) in her analysis of the Indian corporate sector, promising trends in liquidity, profitability and leverage of the sector also emerged in the early 1990s (Figure 4).



Source: Topalova (2004b)

The investment boom in the early 1990s appears to have been facilitated by the established business relationships between an oligopolistic real sector and a few large public financial sector institutions (Mohan 2004; and Mor, Chandrasekhar and Wahi 2005). Prior to 1991, a few large business houses relied on a few large development finance institutions, DFIs, to provide long-

term investment finance in a system of industrial licensing and controlled interest rates.<sup>19</sup> Mor, Chandrasekhar and Wahi (2005) describe the initial response to the post-1991 liberalization as follows: “In part led by the consortium financing system but largely because neither industrialists nor bankers had any experience in operating in liberalised environments, almost every project that was submitted for financing was accepted. As a consequence, the system created capacity (which is quite possibly what showed up as growth numbers) in industry after industry – steel, man-made fibre, paper, cement, textiles, hotels, and automobiles received a major share of the large loans given principally by the DFIs and partly by the CBs (commercial banks).”

**Second stage** In the second stage, which more-or-less coincides with the Ninth Plan period, there is a pull-back after the private investment spree of the Eighth Plan period. Many of the positive trends that had been observed in earlier years were reversed during the second half of the nineties and investment intentions and levels declined significantly (Figure 3). Financial trends at the firm level were also reversed: aggregate leverage increased, and the maturity structure of debt shifted slightly towards short-term borrowing (Topalova 2004b) and companies also suffered from declining profitability (Figure 4). Importantly, a number of studies using disaggregated data point to significant differences across companies. For instance, foreign firms consistently perform better than domestic firms; and private firms perform better than public firms.<sup>20</sup> Moreover, these performance gaps appear to be increasing over time, suggesting that different firms are responding differently to the new challenges and opportunities provided by the reform process, and thus alluding to some process of creative destruction. (See more on this in the next section.)

We posit three reasons for the reversal in investment performance during the second half of the nineties, all related to the complex transition process that took place in India.

- (i) the Eighth Plan investment boom was facilitated by established business relationships and did not reflect internationally competitive business fundamentals;
- (ii) large cuts in public investment which started during the Eighth Plan period, hurt private investment with a lag; and
- (iii) given India’s gradual approach, key structural reforms have taken time to reach a critical mass. We consider these three issues in turn below.

A Low-Quality Investment Boom. NCAER (2001) shows that although the liberalization of the early 1990s led to some restructuring, this was of a limited nature and the investment decisions of the Indian private corporate sector were significantly different from foreign companies. The former essentially continued in similar activities as before – basic and intermediate commodities. These activities were not as profitable in the liberalized, more open economy, with further large capacity additions reducing profit margins. Foreign companies on the other hand, entered new areas like pharmaceuticals and certain consumer goods where profitability was higher thus improving their performance. According to CMIE data, the correlation of industry-wise distribution of gross fixed assets between 1992 and 1998 was 0.99 for domestic public firms; whereas it was only 0.79 for foreign firms.<sup>21</sup> While domestic and foreign investment surged

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<sup>19</sup> DFIs were established by the government to provide long-term project finance for investments, while working capital came from the banks.

<sup>20</sup> As shown by Topalova (2004b), the interest coverage ratio (ICR, defined as earnings before interest, taxes, depreciation and amortization over interest expenses) dropped from 2.7 in 1996 to 1.9 in 1999, suggesting that Indian companies were facing increased strain in meeting their debt service obligations. The incidence of an ICR of less than one (the level at which a firm experiences difficulty in servicing its debt) was greatest among government-owned enterprises (55 percent).

<sup>21</sup> The average for the whole sample, including domestic private firms, was 0.90.

during the first half of the nineties, the structure and operation of existing Indian firms was not significantly altered.

From the perspective of the financial sector, Mohan (2004) notes: “The exuberance of investment activity in the mid-1990s also led to the creation of over capacity in industry, including some uncompetitive capacity that led to erosion of profits which, in turn, perhaps explains the poor performance of the stock market during this latter period.” This investment boom was accompanied by a large increase in public equity issues. Data in Mohan (2004) indicate that such issues rose from 0.7 percent of GDP during the 1980s to 1.1 percent during the Eighth Plan period, 1992/93-1996/97, almost vanishing during the Ninth Plan period, 1997/98-2001/02, at 0.1 percent.<sup>22</sup>

And Mor et al. (2005, p. 5) describe the impact on the financial sector thus: “These mounting NPAs (non-performing assets) together with excess capacity, suggests a strong possibility that these two developments were linked to each other in a causal fashion. Almost 4 in 5 projects experienced large delays in implementation and a few celebrated cases could not complete financial closure because of the collapse of equity markets. Three of the five major financial institutions, Unit Trust of India (UTI), Industrial Finance Corporation of India (IFCI) and Industrial Development Bank of India (IDBI) had to be given large infusions of capital by the Government of India.”

Large Cuts in Public Investment. In addition to the firm-level microeconomic restructuring, cuts in public infrastructure investment are likely to have contributed to the slowing of private investment as there appears to be a “crowding in” effect (RBI 2002). IMF (2002) estimates a model of private investment growth in India for 1970/71 – 1999/2000. The estimation results indicate that only public sector investment in infrastructure had a positive effect on private investment, a result corroborated by RBI (2002). Higher growth in public consumption or other public investment inhibited private investment growth. Almost 70 percent of the slowdown in private investment in the late 1990s was attributed to a deterioration in the composition of public expenditures, which shifted towards public consumption and non-infrastructure investments after 1995/96 compared to the earlier part of the decade. The estimated impact is roughly divided equally between the negative effect of weaker growth of infrastructure investments and of faster growth of other public spending.

Key structural reforms have taken time to reach a critical mass. It took some time for the stronger competitive pressures from trade liberalization and the entry of new firms to feed through. Forbes (2002, p. 149) wrote: “It is only in the last four years (*i.e., 1996-99*) as industrial growth has fallen and industry has come under the dual pressure of competition from imports and falling margins that firms have been forced to look at which activities they really wish to retain.” (Material in italics added) Moreover, the most dramatic decline in effective tariffs did not take place until the early part of this century.

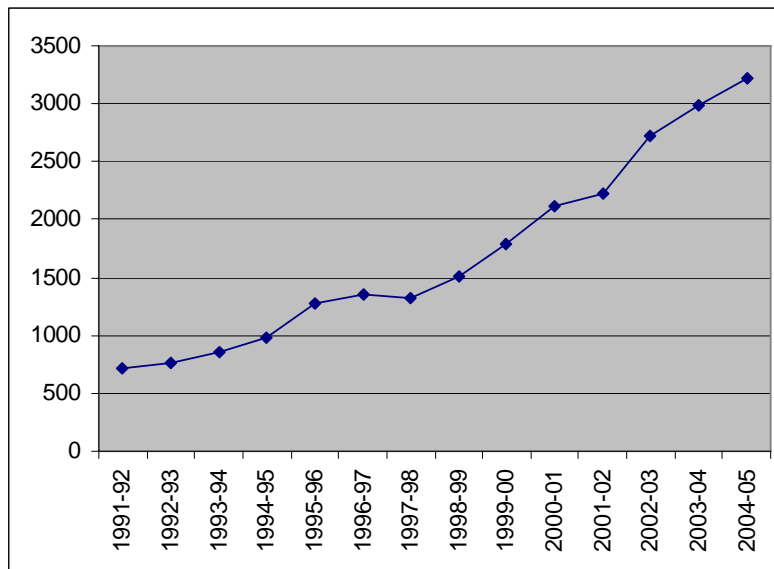
**Third Stage** The third stage coincides with the resurgence in growth starting in 2003/04. It has its roots in the restructuring which began during the second stage, in which import competition and the resultant compression of profit margins compelled firms to restructure and become more innovative. As noted previously, firm-level evidence from the transition countries indicates that hard budgets and competition—especially when they threaten firms’ survival—can lead to profound microeconomic restructuring. An interesting feature is that some element of

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<sup>22</sup> Mohan (2004), Table 9, page 333.

monopoly power (which has been plentiful in India) combined with a sufficient degree of competition (from imports in the first instance) could actually spur innovation because some of the rents from innovation can be captured by the innovating firm.<sup>23</sup> This is good news for future growth in India. We do not have access to systematic evidence on the third stage in India, but informal interviews with big industrial houses and commercial banks suggest that firms have restructured their balance sheets and assets and are ready to launch a new round of expansion. This time, however, it is with an eye on the global economy. One economist working for a major industrial group described the change in attitude thus: In the past, the key concern of Indian companies was how to keep foreign competition out. Now, the key concern is how to gain access to overseas markets. This is a profound change for a country where the economy was effectively closed up to 1991. Improved firm competitiveness is reflected in export performance as shown in Figure 5 below. Following stagnation in the late 1990s, export performance took off as the effects of restructuring kicked in around the turn of the century.

**Figure 5: India's Export Performance  
(Rupees billion, constant prices)**



Source:

## 2.2 Making the Public Finances More Pro-Growth

The description of the fiscal adjustment above as well as the identification of the three stages in microeconomic restructuring suggests one could tell the following plausible, more positive story about Ninth Plan period outcomes: private investment slowed partly because of overinvestment during the Eighth Plan period and the lagged impact of sustained cuts in government capital expenditure. As a result, growth and taxes slowed, widening the deficit and raising debt and real interest rates and forcing further cuts in capital expenditure. This interpretation would ascribe Ninth Plan period outcomes to the transitional dynamics stemming from the post-1991 reforms rather than the more sinister-sounding effects of fiscal profligacy. Viewed from this perspective, the deterioration in debt dynamics after the mid-1990s and up to 2002/03 represented the fiscal cost of reforms, with the benefit emerging in the form of the subsequent growth rebound. In other words, it has taken some 12 years for the economic benefits from the post-1991 reforms to emerge.

<sup>23</sup> Carlin et al. (2004).

Does this mean that India is going to grow out of its debt problem? There is always a non-zero probability that this could happen but this would be a risky posture because a significant agenda of fiscal reform remains. Ninth Plan period outcomes might have been softened by a more aggressive implementation of tax reform, especially on direct taxes and the state-level VAT, which was introduced in 2005 in 24 out of 29 states and union territories after a 10-year delay (Poirson (2006)). Subsidy reform (electricity, food, fertilizer) is another area in which much more could have been done. These reforms plus a clearer strategy for addressing the infrastructure problem (by dealing with pricing and regulation) might have led to smaller cuts in government capital expenditure and a bigger private sector role in providing infrastructure services. As of this juncture, addressing the infrastructure constraint remains a major challenge for the public finances and an obstacle to the maintenance of rapid growth.

In the next section, we address three simultaneous transitions that are going on, which are critical for reining in indebtedness and strengthening the links between the public finances and growth: (i) in revenues, completing the move away from trade, excise and financial repression taxes to a broad-based VAT and income taxes; (ii) at the states' level, a major fiscal adjustment in line with the 2004 Twelfth Finance Commission (TFC) report; and (iii) at the micro level, from a protected real and financial sector dominated by a few large industrial houses and state-owned development finance companies and commercial banks to a less protected, more competitive structure.

### **3. Towards East Asian Growth with East Asian Deficits**

This section discusses two major remaining challenges facing the public finances: revenue reform; and the states' fiscal adjustment. It closes by discussing the infrastructure gap.

#### **3.1 India's Revenue Adjustment**

Table 5 shows the big decline in revenues after 1991. In the last two years, revenues have shown signs of returning to their pre-1991 crisis levels; but this is only part of the story. The reform also resulted in reduced implicit taxes from financial repression—today, interest payments are substantially higher. Capital expenditure has endured deep cuts relative to the second half of the 1980s, albeit with a recovering trend the past few years. And interest, administration and pensions rose by over 3 percentage points of GDP and at its peak in 2002/03, by 25 percentage points of revenue!

With indebtedness high, an adverse expenditure composition from the growth perspective and inflation and /or a default anathema to policymakers (wisely so), there is good reason to mobilize more revenue and build on the positive fiscal trends after the bleak outcomes of the Ninth Plan period, including on the primary and revenue deficits (Table 5). Fortunately, India is widely regarded as an under-taxed country with considerable potential for increasing tax revenue. At first blush, this might appear strange because of the beneficial impact the tax cuts have had on microeconomic restructuring. The good news is that studies show this can be achieved without increasing marginal tax rates, which would hurt private investment and growth.

**Table 5: General Government Fiscal Trends (% of GDP)**

	85/86- 89/90 Avg.	8th Plan Avg.	9th Plan Avg.	10th Plan 02/03- 05/06 Avg.	02/03	03/04	04/05	05/06 <sup>1/</sup>
<i>Revenues</i>	19.4	17.9	17.0	18.6	17.8	18.1	19.1	19.6
<i>Current expenditure</i> <sup>2/</sup>	22.0	21.5	22.9	23.7	24.6	24.0	23.5	22.9
Social services	5.4	5.0	5.5	5.3	5.3	5.1	5.4	5.3
Economic services	6.5	5.8	5.5	6.0	6.3	6.4	5.7	5.6
General services	9.5	10.3	11.6	12.1	12.6	12.1	12.0	11.7
<i>Capital expenditure</i> <sup>3/</sup>	6.6	3.7	3.7	3.4	2.9	3.1	3.3	4.1
<i>Gross fiscal deficit</i>	9.2	7.2	9.7	8.5	9.8	9.1	7.6	7.4
<b>Memo</b>								
Primary deficit	5.4	2.1	4.0	2.2	3.2	2.7	1.4	1.3
Revenue deficit	2.6	3.6	6.0	5.1	6.8	6.0	4.4	3.3
Interest	3.8	5.1	5.7	6.3	6.5	6.4	6.2	6.1
Interest / Revenue %	19.4	28.5	33.6	34.0	36.8	35.6	32.5	31.3
(Irrigation+power+transport)/GDP	4.7	3.5	3.4	4.1	3.8	4.9	4.1	3.6
(Interest+ admin.+ pensions)/GDP	6.3	8.1	9.2	9.9	10.2	9.9	9.8	9.8
(Interest+ admin.+ pensions)/Revenue	32.6	45.1	54.2	53.5	57.6	54.9	51.5	50.0

Notes:

<sup>1/</sup> Revised estimates for the center and budget estimates for the states

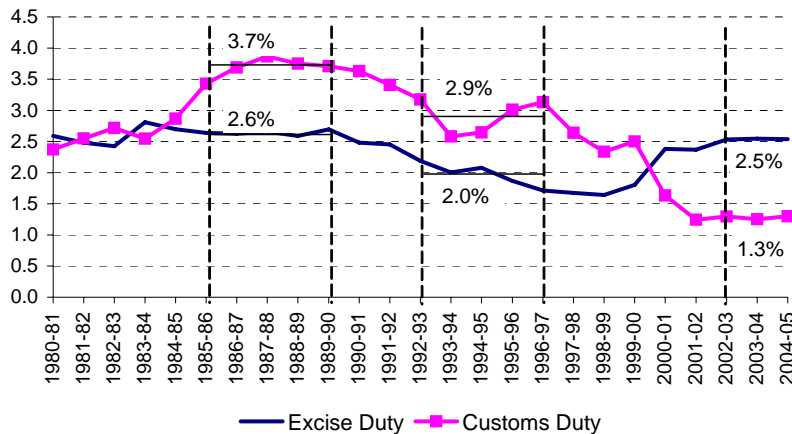
<sup>2/</sup> Refers to Revenue expenditure in the budget

<sup>3/</sup> Refers to Capital outlay and net loans and advances from the center to the states

Sources: GOI budget documents, Handbook of Statistics on Indian Economy (RBI)

We focus on a few main ideas in this section, as several good surveys exist.<sup>24</sup> As alluded to above, the fall in indirect taxes has been a major factor in lower revenues after 1991. Figure 6 shows that compared to 6.3 percent of GDP in the second half of the 1980s, customs and excise had fallen to 3.8 percent of GDP in recent years.

**Figure 6. Excise and Customs Duties (% of GDP)**



Source: Handbook of Statistics on Indian Economy, Reserve Bank of India

<sup>24</sup> For detailed assessments of India's tax reform, see Acharya (2006, chapter 5), Muhleisen (1998) and Shome (2004).

Today, India's tax system exhibits the following salient features:<sup>25</sup> (i) a high reliance on indirect taxes (notwithstanding the large decline); (ii) low average effective tax rates;<sup>26</sup> and (iii) high marginal tax rates. An encouraging feature of the 1990s is that AETRs on labor and capital have been gradually increasing even though statutory tax rates have been lowered. In other words, tax administration has improved and compliance has gone up. Nevertheless, there is still considerable scope for raising AETRs, which are low because tax productivity is low. For example, calculations for 2001 reported in Poirson (2006, Table 3a) show that corporate income tax (CIT) productivity measured as the ratio of the effective to the statutory CIT rate was less than 10 percent compared to an OECD average of 30 percent!

At the same time, marginal corporate taxation is high. Poirson (2006) computes two standard indicators based on the Indian tax code, the marginal effective tax wedge (METW) between the pre- and post-tax return on capital and the marginal effective tax rate (METR), defined as the ratio of the wedge to the required real pre-tax rate of return. These are low for India largely because of low personal taxes on dividends and the elimination of the tax on long-term capital gains; corporate tax rates tend to be higher than average. At the same, there is considerable variance across sectors and types of financing because of exemptions and differences in depreciation allowances. In particular, Poirson (2006) argues that there is a bias against financing investment through new equity or retained earnings and in favor of debt financing. Reducing this bias is important because the DFIs, which have traditionally been the source of long-term investment funds, are restructuring to compete with banks and capital markets in the radically new environment of market-based pricing and allocation of funds. As Mohan (2004, p. 329) notes, "Lending by the DFIs has fallen continuously over the last 5-7 years." This might mean a paucity of long-term funds to finance investment, especially for small and medium-sized firms,

The fact that AETRs are low because of a low tax base suggests that direct tax revenues can be raised while lowering statutory and hence marginal tax rates. The way to do this would be to eliminate exemptions while improving tax administration, as both the Chelliah 1991, 1992, 1993 and Kelkar 2002 tax committee reports have recommended. The results could be striking—for example, GoI's 2004 road map for implementing the Fiscal Responsibility and Budget Management Act (FRBMA) foresees a virtual doubling of corporate tax revenue from 2.3 percent of GDP in 2003/04 to 4.2 percent by 2008/09 even while the CIT rate is reduced to 30 percent from over 35 percent in 2004.<sup>27</sup> On indirect taxes, the plan is to introduce a national VAT on goods and services (goods and services tax, GST), which would replace the existing state VAT, central sales tax CST, central excise duties and central service tax. All these measures would help complete the shift towards a broader tax base with lower marginal rates and higher AETRs. While there is considerable potential for increased revenue, especially as services are brought more fully into the tax base, IMF (2006, chapter III) cautions that the GST should be regarded only as a medium-run solution because of the many administrative pitfalls.

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<sup>25</sup> The discussion here is chiefly a summary of main results from Poirson (2006).

<sup>26</sup> The AETR is actual tax collections divided by the potential tax base; or, equivalently, the statutory tax rate times the actual tax base divided by the potential tax base. If the ratio of the actual tax base to the potential tax base is very small, then raising this substantially could increase AETRs even if statutory (and hence marginal) tax rates are decreased, which typifies the Indian case.

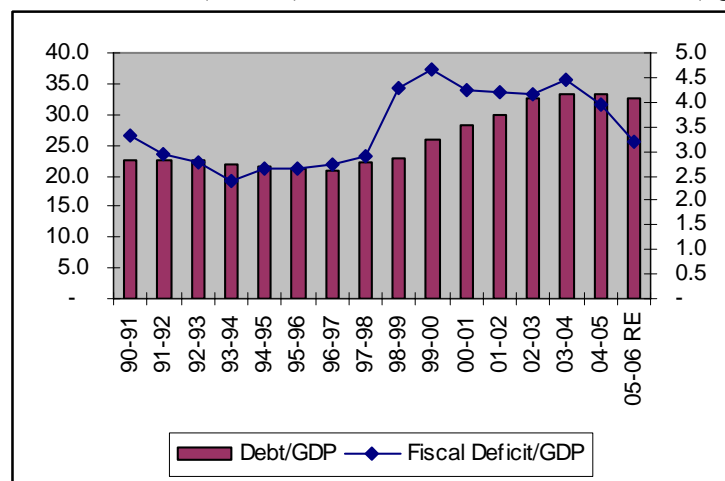
<sup>27</sup> See Ministry of Finance (2004) and Poirson (2006), page 16-17.

### 3.2 States' Fiscal Adjustment

In 2000, the ratio of debt to own revenues for all India's states combined stood at 203 percent.<sup>28</sup> Canada was next with 189 percent, followed by Brazil with 170 percent and Pakistan with 100 percent. In addition to reducing this indebtedness, which is a source of vulnerability, existing fiscal deficits leave the state governments with little fiscal space even for productive new spending to support the current rapid growth. These challenges are particularly acute in the poorer states, which have suffered greater variability in revenues, are more indebted and have high salary bills. Interest payments as a share of own revenues are nearly twice as high in poor states as in other states: in Bihar debt service preempts nearly 90 percent of own revenues. The tight fiscal situation in many of India's states is severely hampering the role of the state as an effective developmental agent and also raises concerns about overall fiscal sustainability as the states account for nearly half of India's consolidated government deficit.

As Figure 7 shows, India's states had a fairly constant fiscal deficit for most of the 1990s; but in 1998/99, the fiscal deficit jumped from 2.9 percent of GDP the previous year to 4.3 percent catalyzed by the 1997 CFPC award, around which level it then stabilized for the next 6 years or so.<sup>29</sup> Despite central government control over state government borrowings being enshrined in the Constitution, state governments were able to increase their borrowing by drawing on sources over which GoI exercises no active control: 'small savings', central government-owned financial institutions, and state provident funds. As a result, the state-level debt stock increased from 22.5 percent in 1991 to 33.5 percent in 2005. Off-budget liabilities, mostly in the power sector, also grew quickly – as did state government guarantees. In September 2003, state governments issued "power bonds" of approximately 1 percent of GDP (Rs 29,000 cores) cover the arrears of SEBs to the central Public Sector Undertakings as of October 1, 2001 in accordance with the provisions of the Ahluwalia Committee ("Report of the Expert Group, Settlement of SEB Dues", May 2001).

**Figure 7: State Deficits and Debt Levels**  
Debt as a share of GDP (left axis) and fiscal deficit as a share of GDP (right axis)



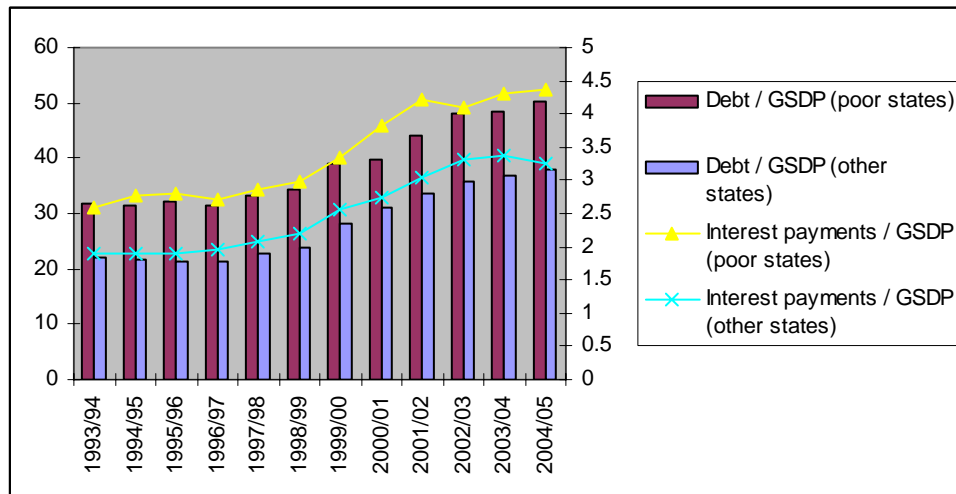
Source: Reserve Bank of India (2005) and World Bank States Database

<sup>28</sup> For the general government, the ratio is even higher at over 400% whereas for the poor states it is about 600%. Interest payments / own revenues are in excess of 60% for the poor states.

<sup>29</sup> While large pay awards and revenue shortfalls were the immediate cause for the abrupt fiscal deterioration, the worsening in the current balance of the state governments can be traced to the early 1990s. The growing revenue deficit was prevented from translating into a higher fiscal deficit until the second half of the 1990s only because capital expenditure was compressed.

As also highlighted by Reserve Bank of India (2005), India's poorer states have seen larger increases in their debt ratios over the past decade (Figure 8). As of March 2005, the debt to GSDP ratio was 53 percent in the poor states, versus 38 percent in the other states. India's poorer states have been more reliant on central transfers, and so they have suffered more from a reduction in these transfers during the nineties.<sup>30</sup> They have also been proportionately harder hit by the implementation of the CFPC award, which began in 1998 in the states.

**Figure 8: Debt stock as a share of GSDP**



Source: Reserve Bank of India (2005) and World Bank States Database

While, as shown in Figure 6, there are signs that fiscal deficits are now coming down and the debt-to-GDP ratio is stabilizing, this is not enough. Many desirable initiatives have been launched including for rural infrastructure (*Bharat Nirman*, NURM), employment (NREGA), education (SSA) and rural health (NRHM). These need to be financed with some combination of higher taxes (or user charges) or lower expenditures (cutting other existing funding). India's fiscal federalism framework and the 2004 TFC recommendations in particular can go a long way in facilitating the development process.

The TFC was given an exceptionally wide remit, in particular coming up with a plan to lower states' indebtedness and reform the borrowing regime. Its recommendations include a package of interest rate reductions on existing loans from the center and debt write-downs in return for adopting fiscal responsibility legislation and eliminating revenue deficits by 2008/09 while reducing the overall deficit to 3 percent of GSDP (implying that states' capital expenditure will be 3 percent of GDP).<sup>31</sup> The TFC proposed that the center move to a system of 100 percent grants to the states; the only loans will be the pure pass-through of external assistance. States would have to borrow directly from the market without any cross-subsidy. As a result of the TFC's proposals, there is a one percentage point increase in total taxes transferred to all states as a share of the government of India's center's tax take (from 29.5 percent to 30.5 percent). An even bigger increase is projected in grants: the average annual grant for all states is 143 percent

<sup>30</sup> In poor states central transfers account for half of all revenues, versus about a third in the other states.

<sup>31</sup> The TFC has set up a Debt Relief Facility to replace the Fiscal Reforms Facility. The objectives of the two funds are the same, although the reward is now in the form of debt relief or restructuring rather than the cash grants given earlier. And the corpus of the Debt Relief Facility is much bigger than that of the Fiscal Reforms Facility, although it is still small relative to the size of the overall debt.

higher during the TFC's tenure (2005/06 to 2009/10), compared with the previous five-year period (2000–05).

Nine of the ten grants that the Finance Commission has awarded are tied. Tied grants for maintenance (separate grants for roads, buildings, and forests) are conditional on states' increasing their own spending in these areas, as are the health and education grants, which are only for the poorer states. The obvious challenge for the states is to ensure that these funds are productively spent, including through further strengthening of public expenditure management and financial accountability.

An important remaining issue on the borrowing side for states pertains to the rapidly growing "small savings" funds (largely savings mobilized through India's post offices). States are compelled to borrow all the proceeds of small savings raised in their states, on which the interest rate is set artificially high. This amounts to a form of "forced borrowing," which is expensive even for the least creditworthy states, and which teaches the states that they should borrow whatever is available, not what they can afford. Reforming small savings is the next important area of center-state fiscal reform.

Buoyant tax collections, following the introduction of the state-level VAT by most of the major states, along with higher central government transfers owing to the TFC reforms have helped the states to reduce their combined deficits in 2005/06. World Bank (2004a) projections suggest that a sustained cross-sectoral program of state and central reforms can enable the poorest and most highly indebted states to eliminate their revenue deficits over the next few years, while increasing their capital spending as a percentage of GSDP, and maintaining their non-wage operations and maintenance (O&M) spending, again as a percentage of GSDP.<sup>32</sup> A key assumption is that GoI is able to further increase its tax-to-GDP ratio to allow for the higher transfers to the states envisaged by the TFC.

### 3.3 Creating Fiscal Space for Infrastructure

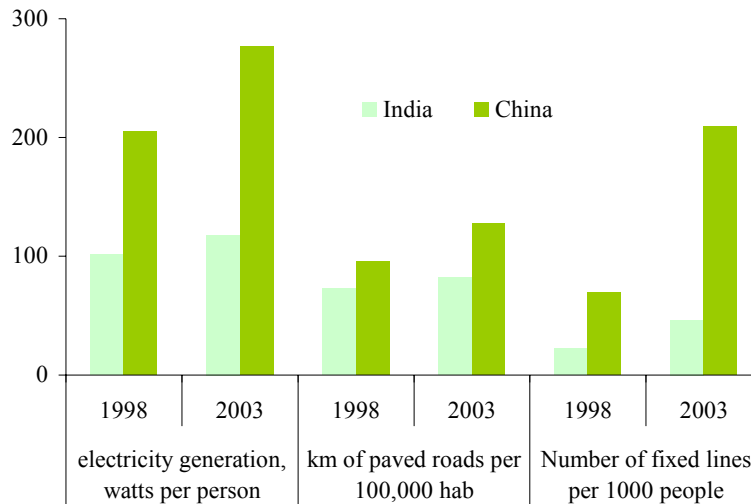
Infrastructure remains a serious constraint on private investment, two others commonly identified being rigid labor laws and small scale industry reservation policy.<sup>33</sup> Mohan (2002) argues that the latter two constraints serve as a brake on the reallocation of resources towards labor intensive manufacturing, and eventually, on more rapid employment growth, which is essential in view of India's demographics. We focus on infrastructure because of its fiscal implications, and start by giving an idea of the size of investments involved.

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<sup>32</sup> For recent analyses of states' debt sustainability, see Prasad, Goyal and Prakash (2004) and Rajaraman, Bhide and Pattnaik (2005).

<sup>33</sup> Besley and Burgess (2004) find a negative impact of pro-worker labor regulation on output, employment, investment and productivity in the formal sector based on an analysis of data from Indian states for the period 1958-92.

**Figure 9. Infrastructure stocks in India and China, 1998 and 2003**



*Source:* World Development Indicators.

Figure 9 compares India and China. In 1980 India had higher infrastructure stocks—power, roads, and telecommunications—but China has rapidly overtaken India. From 1990 to 2000, China’s installed power capacity increased by 136 percent, compared with 51 percent in India. China has been investing around 8–10 times India’s level in highways since the mid 1990s. Just for India to catch up to China’s present per capita overall infrastructure stocks would take an investment of 12.5 percent of GDP per year through 2015.<sup>34</sup>

The 1996 India Infrastructure Report called for an increase in investment to around 8 percent of GDP by 2005/6. Recent estimates produced by the Bank suggest that India might need to invest 8 percent or more of GDP over the period 2006–10 to sustain annual GDP growth at near 8 percent and replace old capital stocks. Over the past decade, however, estimates suggest India has invested only 3–4 percent of GDP in infrastructure. There are also significant regional and income-related differences in access to much-needed infrastructure, which the government is seeking to address and which also require investment.

The greatest pressures on Indian infrastructure are in electricity, roads and urban infrastructure. The average manufacturer in India loses 8.4 percent in sales annually on account of power outages, as opposed to less than 2 percent in China and Brazil. The frequency and average duration of outages are such that generators are standard industrial equipment in India, accounting for as much as 30 percent of a business’s power consumption in many cases. Almost 61 percent of Indian manufacturing firms own generator sets; the comparable figures are 20 percent in Malaysia, 27 percent in China, and 17 percent in Brazil.<sup>35</sup>

Infrastructure constraints in India are the most binding on manufacturing, particularly export-oriented manufacturing. The share of exports and imports in India’s GDP today is less than half that of China’s, and at 2.5 percent, India’s world market share in the trade of goods and services is a small fraction of China’s (10.5 percent). Nonetheless, India exports an impressive

<sup>34</sup> World Bank (2004b).

<sup>35</sup> World Bank (2004c).

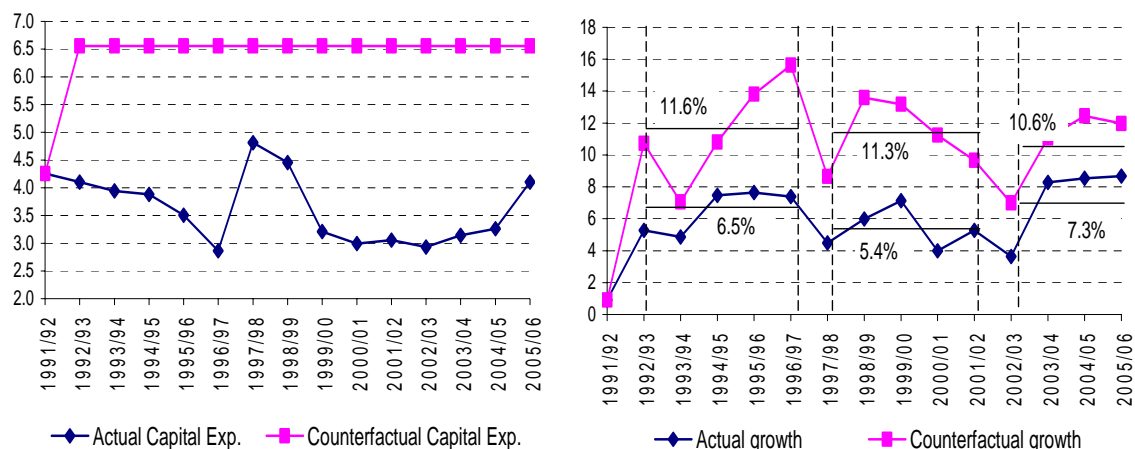
mix of quality goods—India’s current export composition is similar to that of countries with income almost five times as high (Hausmann, Hwang and Rodrik 2006).

While India is well-placed in terms of industrial experience, technical capacity, and available labor, infrastructure hinders India's success in global trade. Manufacturing exports are increasingly part of a regional or global supply chain in which firms source their procurement of inputs or components from many different countries for a given final product. This type of manufacturing demands particularly reliable and efficient transport and production. Margins tend to be thin and high transport costs eat significantly into those margins—thus to be competitive, firms have to pay lower wages. India is just beginning to attract this type of export-oriented manufacturing which is a potentially important component of future growth, one that can help to equalize growth because it employs more semiskilled labor than do export-oriented services.

How to relax the infrastructure constraint is controversial, not just in India.<sup>36</sup> One view would say that it’s alright to step up public spending on infrastructure even if this increases fiscal deficits because faster future growth and higher taxes will pay for it. Any debt-financed increase in infrastructure spending will lead to an immediate rise in the debt-to-GDP ratio; but this is consistent with solvency provided the marginal financial return to the government, given by user charges plus the tax collected on the marginal product of the extra capital, exceeds the marginal cost of borrowing plus the rate of capital depreciation. When this condition is met and growth prospects improve as the infrastructure constraint is relaxed, the net worth of the government will rise even if the debt-to-GDP ratio goes up immediately.<sup>37</sup>

In India’s case, the debt-to-GDP ratio is already high and the preceding marginal condition for increasing net worth is often violated in practice, the power sector being a prime example. Besides, a big and sustained rise in growth rates would be needed just to maintain the debt-to-GDP ratio. Assume for example that government capital expenditure after 1991 had been maintained at the level of the second half of the 1980s, 6.6 percent of GDP, and that the difference were all spent on infrastructure. What growth rate would be needed to keep the debt-to-GDP ratio at its observed level? Figure 10 shows the results.

**Figure 10: Growth rate needed to maintain debt-to-GDP with Rise in Capital Expenditure**



<sup>36</sup> For a discussion of fiscal space in the context of Latin America, see Easterly et al. (2003).

<sup>37</sup> Serven and Burnside (2006).

The left panel of the figure shows actual and counterfactual capital expenditure as a percentage of GDP, while the right panel shows actual and counterfactual growth. Growth would have had to be substantially higher to maintain the keep the observed path of debt-to-GDP: 5 percentage points higher over the Eighth Plan period on average; 6 percentage points over the Ninth Plan period; and 3 percentage points over the Tenth Plan period. Besides, this additional growth is a lower-bound as, at a minimum, we would expect a rise in interest rates and an increase in O&M to complement the increase in capital expenditure. These would call for even faster growth to keep debt-to-GDP on the observed path.

Since a debt-financed increase in infrastructure spending by the government presents clear macroeconomic risks, alternative strategies must be found. A less risky alternative would be to address the weakness in the public finances and the infrastructure gap simultaneously through an overhaul of the public finances, including states' fiscal adjustment along the lines discussed in section 3.2. This alternative becomes compelling in view of the probable size of the investments involved.

The citizens of India will ultimately pay for infrastructure either as users or as taxpayers—and this is true no matter who finances it. If the government borrows money to finance a highway then Indian citizens have to pay the interest—either as taxpayers or users. If private contractors build a highway and finance the construction themselves then Indian citizens have to pay the interest—either as taxpayers or as users. The advantage of some private sector engagement in infrastructure finance in a country like India is not that it puts additional resources on the table in net present value terms—it is that public-private partnerships (PPPs) often offer a transparent commitment to finance the additional infrastructure by users, not taxpayers. Given the pressure on fiscal space, this is an important advantage. However, PPPs need strong supporting institutions and monitoring to manage and minimize contingent liabilities in connection with guarantees private operators might seek from the government on minimum rates of return, turnover etc. If there is to be an increase in the usage of PPPs, the Government of India (GoI) would have to work to strengthen oversight of their fiscal costs and assist state governments in doing the same.

To encourage PPPs, GoI announced in the 2005 Union Budget that it would provide viability gap financing for infrastructure projects which are socially and/or economically beneficial, but too risky or not profitable enough to be attractive to the private sector. Up to 40 percent of the financing needs of such projects can be met through viability gap financing.<sup>38</sup> A coordinating facility has been housed within the Ministry of Finance, budgetary allocations have been made, and guidelines to avail of the financing have been prepared, but no amount has been drawn down yet.<sup>39</sup> In conjunction with the viability gap funding support, a Special Purpose Vehicle for long-term financing is also being established.

Other options to increase fiscal space include additional revenue mobilization, which holds out considerable promise, as discussed in section 3.1; and reforming existing expenditures, which we now discuss. Expenditure reform is needed not only for fiscal sustainability, but also to make the government a more effective agent of development. Any significant increase in public investment and developmental spending needs to be largely compensated by accelerated reduction of the revenue deficit and movement toward generating revenue surpluses (i.e., positive saving). As shown in Table 5 above, the share of interest, administration, and pensions remains

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<sup>38</sup> Viability gap funding can take various forms, including capital grants, subordinated loans, O&M support grants or an interest rate subsidy. A mix of capital and revenue support may also be considered.

<sup>39</sup> World Bank (2006b).

high in spending and revenues. Moreover, international experience suggests that the more successful fiscal adjustments rest at least partly on the restructuring of recurrent expenditures (World Bank 2004). Fiscal consolidations achieved through cutting the wage and subsidy bills tend to be longer lasting and more beneficial to growth than adjustments based solely on revenue increases and cuts in more productive spending.

Areas of unproductive spending exist both at the center and the state levels, as discussed in World Bank (2003b). A key issue is that of salaries and pensions, which are estimated to account for roughly 25 percent of general government spending. With the states having responsibility for the major services of health, education, and law and order, much of this spending is at the state level.<sup>40</sup> It is estimated that at the state level salary spending alone accounts for about a third of all public spending, so the success of any expenditure reform strategy will depend heavily on strategies adopted in this area. As discussed in Howes and Murgai (2004) there are significant savings that can feasibly be extracted from the salary bill, through both wage and hiring restraint, without sacrificing expenditure quality. If real wage increases are avoided, the combined state-central government salary bill could fall by two percentage points of GDP over the coming decade.

Pensions are also a rapidly mounting liability, and the pension bill is unlikely to decline as a share of GDP. Rough estimates suggest that central and state pension liabilities could amount to 25 percent of GDP, with a significantly higher relative figure for some states. The issue here is containment of costs through reform of pension characteristics and structure. A mandatory defined contribution scheme for new central civil servants has been introduced in many states and the passage of the Pension Bill, which among other things envisages a new regulator, will also help to improve long-term fiscal sustainability. Nonetheless, these reforms will not have an immediate fiscal impact and thus need to be complemented by reforms to the existing system, which can have a larger near-term fiscal impact.<sup>41</sup>

Subsidies have remained stubbornly high. As discussed in Government of India (2004), there has been very little change in the share of subsidies to GDP since 1987/88.<sup>42</sup> At the central level, the largest subsidies are for food, fertilizer, and the below-cost provision of propane and kerosene. At the state level, explicit subsidies are relatively small, and the largest subsidies are implicit, most notably power sector losses (which reflect subsidies to households and farmers at the expense of firms and decapitalization). Most of these subsidies are both inefficient and regressive. For instance, the propane subsidy benefits largely the urban middle class (World Bank 2003). A large portion of the subsidy on food goes to cover food storage costs. About 73 percent of the rice and 84 percent of the wheat purchased by the Food Corporation of India (FCI) is from Haryana, Punjab, and Andhra Pradesh, even though these states produce only 26 percent of India's rice and 35 percent of its wheat. Farmers in these states enjoy guaranteed sales at prices that are much higher than in states where the FCI is not active. High purchase prices for food benefit net producers, but harm net consumers in rural areas, who tend to be poorer. The Indian government (2004a) estimates that nonmerit subsidies accounted for 58 percent of total subsidies

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<sup>40</sup> In 2000/01, 57 percent of India's total government expenditure was accounted for by the states, as was 97 percent of irrigation maintenance, 90 percent of public health spending, and 86 percent of public education spending. In fact, India's states are responsible for a higher proportion of general government spending than in any other developing country, except China.

<sup>41</sup> Attempted and possible reforms include: (a) use of longer averaging periods for the calculation of benefits; (b) reduction of pension abuse; and (c) use of a lower limit for the maximum amount that can be commuted at retirement.

<sup>42</sup> Total explicit government subsidies are estimated at around 2% of GDP. State Electricity Board losses, the largest state-level implicit subsidy are in excess of 1% of GDP.

in 2003/04. The National Common Minimum Program pledged “all subsidies will be sharply targeted at the poor and the truly needy,” but no concrete action has been taken yet, although there are numerous proposals to address the food and fertilizer subsidies without adversely affecting the rural and urban poor.

To sum up, a prudent and effective way to create fiscal space for infrastructure would be to do so within the framework of a comprehensive overhaul of the public finances which focuses on the states’ fiscal adjustment, additional revenue mobilization and subsidy reform.

#### **4. Concluding Remarks**

The persistent combination of high growth and high fiscal deficits over the last 25 years in India appears less schizophrenic once macro-micro linkages and lags are taken into account. Doing so leads to a more positive interpretation of economic outcomes after 1991. It also offers insight into how India avoided a crisis beyond the standard (but important) arguments of a relatively closed capital account and state-owned banks willing to hold government paper. The force of these arguments diminishes over the 1990s with financial liberalization and increasing external openness on both the current and capital account. Judging from results in recent years as well as the pronouncement of ratings agencies, the most important consideration underlying government solvency today is that the prospects for growth and fiscal adjustment are strong. This might appear strange because only a few years ago, India’s growth prospects were being written off precisely because fiscal outcomes had worsened during the second half of the 1990s. A key point of this paper is that the same basic factors which contributed to the fiscal deterioration ended up stimulating microeconomic restructuring and growth, albeit with a lag.

We characterize fiscal adjustment during the 1990s in simple terms: revenues from trade, excise and financial repression taxes fell significantly as a result of economic reforms following the 1991 crisis; capital expenditure was cut to compensate. The lagged effects showed up during the latter half of the 1990s, when fears of a crisis were at their strongest; but fiscal profligacy understood as a spending spree did not play a role and in spite of serious misgivings to the contrary, growth staged an unexpected and strong rebound in 2003/04.

We hypothesize that this growth has been driven by a hardening of microeconomic budget constraints and an increase in competition resulting from lower trade and entry barriers (indirect tax cuts and deregulation). The medium-run fiscal consequences of these tax cuts and the reduction in financial repression (as part of creating a more efficient financial sector) have been negative, as one would expect from a big loss in revenues; but this has been the “macro” price for stronger “micro” foundations of growth evident in the rebound of the past few years, which has been achieved even as India is integrating more fully into the global economy with its connotations of competition and quality. The paper identifies three distinct stages of growth, differentiated chiefly by the performance of industry and especially manufacturing, the most tax-buoyant sector of the Indian economy. In the first stage, which includes the first few years after the 1991 crisis and subsequent reforms, growth and private investment both picked up. Notwithstanding this strong response to the indirect tax cuts and economic liberalization, the weight of accumulating evidence on both firms and financial sector institutions suggests that the private investment boom was of low quality. Large business houses financed by state-owned development finance institutions rushed to invest in projects and sectors where they had little competence. The second stage largely coincides with the Ninth Plan period. It was marked by a pullback in private investment and the start of serious micro restructuring. The latter was motivated by growing import competition and the compression of profit margins, reminiscent of

the experience of firms in the transition countries of Central and Eastern Europe. The start of the third stage can be traced to 2003/04, when industry and manufacturing turned around.

Looking ahead, three important transitions are going on in India, each embodying an immense challenge: at the revenue level, completing the shift to a tax system based on broad-based direct taxes and a national value-added tax; at the states' level, a significant fiscal adjustment guided by the recommendations of the Twelfth Finance Commission; and at the microeconomic level, the continuing shift towards world-class firms and banks. A major issue is how to create fiscal space for infrastructure without compromising the improvement in debt dynamics of the past few years. The arguments advanced in this paper indicate that the most prudent and effective course would be to do so through the continuing, comprehensive overhaul of the public finances. The TFC recommendations, which aim to eliminate the revenue deficit and reduce the fiscal deficit for the states to 3 percent of GDP by 2008/09, plus the fiscal targets for the center under the Fiscal Responsibility and Budget Management Act 2003, would result in lowering the fiscal deficit for the general government to 6 percent of GDP. This would effectively raise capital expenditure to 6 percent of GDP and go a long way in addressing the infrastructure gap while preserving beneficial macro-micro links.

## Annex 1: Government Debt Dynamics

Debt dynamics are driven by primary deficits and interest payments, which add up to the gross fiscal deficit. As debt is usually expressed as a ratio of GDP, growth also comes into play. Equation (1) is the standard difference equation for government debt:

$$(1) \quad d_t - d_{t-1} = pd_t - DR_t + F_t + \frac{(r_t - g_t)}{(1 + g_t)} d_{t-1} \quad ,$$

where  $d$  is the government debt-to-GDP ratio,  $pd$  is the ratio of the primary deficit to GDP,  $DR$  is divestment (privatization) receipts,  $F$  stands for the new flow of debt issued in connection with financial sector bailouts (both as ratios of GDP),  $r$  is the real interest rate,  $g$  is the real growth rate and the subscript refers to fiscal years.<sup>43</sup> The LHS of (1) is the increase in the debt-GDP ratio relative to the previous year. It is explained by the primary deficit ( $pd$ ) less divestment revenues ( $DR$  - as these lower borrowing requirements) plus financial sector bailout costs ( $F$  - as these necessitate more debt issue). The last term captures the interaction between interest rates and growth: the interest rate determines the interest payment on public debt while growth acts to lower the ratio of GGD to GDP.

Key points to note about the real interest rate are that it reflects all capital gains and losses through real exchange rate changes and inflation on the outstanding stocks of foreign currency-denominated and domestic currency debt respectively; and the implicit GDP deflator is used to convert nominal to real.

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<sup>43</sup> The last term on the RHS can be equivalently written  $\frac{(i_t - G_t)}{(1 + G_t)} d_{t-1}$ , where  $i$  is the nominal interest rate on GGD and  $G$  is the nominal rate of growth of GDP.

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