

Private Sector Assessment – India

Crisil Infrastructure Advisory

1. EXECUTIVE SUMMARY

This section provides snapshot of the analysis, findings and recommendations of the report.

1.1 Introduction

The Asian Development Bank (ADB) is one of the prominent multilateral development finance institutions active in India. Its primary objective is to help recipient country achieve broad based economic growth and poverty reduction. The bank is currently assisting India through carefully defined projects such as the Private Sector Infrastructure Facility.

Sustainable poverty reduction measures would aim at providing jobs, credit, housing, roads, electricity, and access to the markets, as also the education, water, sanitation, and health facilities for the poor. Given the traditional importance of the private sector in some of these physical and social infrastructure areas and its increasing significance in the erstwhile government areas of function, the efforts to reduce impediments to private sectors development could provide thrust to the poverty reduction process.

The objective of the Private Sector Assessment (PSA) is to develop a coherent country strategy for Private Sector Development (PSD). The strategy should promote a strong and dynamic private sector that will contribute to long-term economic growth and sustained poverty reduction. The Bank has engaged CRISIL Infrastructure Advisory to identify the specific legal, policy, regulatory, financial, project development and other issues that are impeding faster growth of private investment in infrastructure. The study covered the telecom, ports, highways, power, urban water supply & sewage, urban housing, health and education sectors.

CRISIL undertook an exhaustive literature survey, identified and analysed critical issues and debated them with internal and external experts, government agencies and ADB. Based on the insights gained from this process, CRISIL Infrastructure Advisory summarized the impediments in private sector investments in Indian infrastructure.

1.2 Overview and Status of the Private Sector In India

The growth rate of GDP originating in the public sector has always been higher than the growth rate of GDP originating in the private sector. Nevertheless, despite public sector registering higher growth rates than the private sector, the contribution of private sector to overall growth was always higher because of its significantly higher share in GDP.

Only during the first half of nineties¹ (1990H1) did both public and private sectors register growth rates of 4.9 percent each but in the second half 1990s, GDP growth in public sector again outpaced the private sector GDP growth. This was mainly a result of the increases in salaries and wages after the implementation of the Fifth Pay Commission's recommendations for Government employees.

In a brief period between 1993-94 and 1996-97 the private sector grew faster (7.6 percent per annum) than the public sector (5.7 percent per annum). – a result of the FDI liberalisation measures, industrial delicensing and external demand boost from

¹ 1990H1 = 1990-91 to 1994-95; 1990H2 = 1995-96 to 1998-99 (public sector data is available only upto 1998-99).

devaluation. However, this has not been sustained and the private sector is still in the throes of a downturn since 1997-98

As opposed to the poor growth in private sector GDP, there has been a clear shift in the composition of investment in the favour of private sector. The share of private sector in total investment shot up from 56 percent in 1990H1 to 71 percent by 1990H2. Sector analysis shows that the private sector was better placed in some areas (e.g. financial services, transport, community and social services) to respond to reform initiatives and consequently displayed buoyancy in investment and growth.

1.3 Private Sector Participation and Poverty Impacts

In order to provide a context for the poverty impacts of private activities in the selected sectors for this assignment, it would be useful to assume that the policy framework poses no barriers to private entry (or expansion), and then assess what is the most likely form in which private providers will participate and its impacts on poverty, either directly or indirectly.

Direct impacts essentially relate to changes in the variables referred to above. Three types of direct impacts can be identified:

- Impact on livelihoods through expansion of employment or production opportunities
- Impact on access to essential requirements
- Impact on prices of essential requirements

Indirect impacts are the impacts that sectoral changes have on the processes by which poverty is eliminated. Sustaining the momentum of a poverty reduction process requires the initiation of certain structural changes in both individuals and the communities in which they live and carry out their economic activities. Two channels of indirect impacts can be identified.

- Impact on the processes of human capital formation and preservation amongst poor people
- Impact on social capital, or the community's inherent capabilities to improve the economic condition of its members

Direct impacts are, by definition, manifested in relatively short periods of time. Whether the beneficial impacts of sectoral changes are sustainable over time depends on the strength of what may be classified as indirect impacts. The table below attempts to summarise the *a priori* perceptions about the impact of increased private participation on poverty.

Table 1. Private Sector Participation and Poverty Impacts

Sector	Likely Direct Impacts	Likely Indirect Impacts
Physical Infrastructure		
Transport	Livelihoods, Access, Prices	
Power	Livelihoods, Access	
Telecom	Livelihoods, Access, Prices	
Finance		
Institutional	Livelihoods	
Micro-finance	Livelihoods	Social Capital
Social Infrastructure		
Health		Human Capital
Education		Human Capital

1.4 Constraints to Private Sector Participation

The focus of post-reform policy in India has been to attract private investments in expanding India's infrastructure, which would catalyse the economic growth and poverty reduction. However, the results of these reforms measures have, at best been mixed. Existing imperfections in the financial sector has constrained the funding of projects in India. At the same time, the lack of or slow pace of reforms in key infrastructure areas means that most of these sectors continue to be relatively weak investment avenues.

1.4.1 Financial Sector Reforms

Aggregate deposits mobilized by the banking system of Rs. 10,970 billion as of March 2002 have grown at 15.5% since 1993, while Gross bank credit in the same period increased at a CAGR of around 18.6% to Rs. 6,836 billion. However, the increase in funds mobilised has not been accompanied by concurrent gains in the efficiency of deployment of funds.

While credit to industry remains the larger portion of credit portfolios, analysis shows that the credit risk profile across a range of industries has moved from a pre-reforms position, where the performance of most companies (a proxy for their credit-worthiness) was bunched around the median, to a post-reforms situation where the performances of companies within a particular industry show wide dispersion. Thus, companies are now either high credit risks, or low credit risks.

The increased risk profile, the high historic Non-Performing Asset (NPA) levels (In absolute terms, NPAs continue to grow and remain very high at around Rs. 500 billion), and the absence of adequate fresh lending opportunities have resulted in an increasing tendency on the part of banks to invest (over the mandated requirements) in relatively risk-free Government or Government-backed securities, popularly known as Statutory Liquidity Reserve (SLR) securities.² To deal with the problem of NPAs, the reform strategy has been built around recovery (through the Ordinance on the Securitization and Reconstruction of Financial Assets in June 2002 and the setting of the Asset Reconstruction Company), recapitalisation, and change in ownership.

Capitalisation needs of the banking sector still remain high and a CRISIL and Standard & Poor study estimates that the additional capital requirement for scheduled commercial banks is of the order of US\$ 11-13Bn. As of March 2002, the Government of India remains the majority shareholder in most of the PSBs, with its shareholding extending to 100% in several cases. Consequently, political considerations could impede the smooth implementation of the restructuring process at these banks. In future, the process of recapitalization and restructuring of public sector banks could be integrated if the process adopted for recapitalization would be through the strategic sale of Government holdings in these banks to equity investors, which will also address issues of management quality arising from direct Government ownership.

A series of capital market scams and co-operative bank failures has brought into sharp focus the need for improvement of regulation and reduction of regulatory confusion in the banking and capital markets sectors. Assistance for strengthening of regulation is an area which presents a potential opportunity for ADB.

A key impediment in the financing of infrastructure projects remains the inadequately developed secondary market for debt and the availability of long-term funding. Most Development Finance Institutions (DFIs) are in poor health (IFCI, IDBI) or are looking to convert (IDBI) or have already converted themselves to commercial banks (ICICI). Asset liability mismatches constrain lending for longer tenor (~15-20 years or more). Products addressing this need developed by institutions such as IDFC address some of these issues but demand for such products has been low with few actual projects seeking funds.

Cumulative disbursements of loans by DFIs to microfinance institutions (MFIs) in 1998 was only Rs 78 m reaching less than 1% of the poor in India. Thus there is a tremendous scope for increasing reach of MFIs. Constraints to expansion of MFI roles are undercapitalisation resulting from their legal form as societies and trusts rather than corporate entities making it difficult to raise debt, limited regulation and poor asset quality resulting from inadequate credit risk management processes.

² This is also because such securities have lower Capital Adequacy Ratio (CAR) requirements.

1.4.2 Public Administration and Governance

Poor governance in the public sector has had adverse impacts on India's private sector. Institutional strengthening interventions in key areas like Customs, Excise and Sales Tax administration would greatly help in improving the investment climate in India. Contracting bodies in infrastructure areas such as SEBs, Municipal bodies and others also have a poor governance record manifest in the form of poor record keeping, lack of integrity in accounting information delayed, employee indiscipline, etc, which severely restricts their ability to contract with the private sector.

In the private sector, despite generally good corporate governance standards, some of the leading causes of investor grievances are due to inadequate protection of minority shareholder rights and lack of provision of timely, accurate and comprehensive information to shareholders which might help them in taking better informed investment decisions.

1.4.3 Competition Policy

Excessive regulation of entry and exit with a higher requirement for permits (10 permits in India vis-à-vis 6 in China and a significantly larger no of days to start a firm (90 days vis-à-vis 30 days in China) relative to most countries is a key factor contributing to less competitive markets in India.

Competition regulation in the country is under evolution since the Government decided to replace the existing Monopolies and Restrictive Trade Practices Act (MRTP), 1969 and introduced The Competition Bill, 2001 in Parliament in August 2001. The bill seeks to replace the MRTP Commission with a Competition Commission of India. It would be difficult to gauge the impact of the constitution of this Commission till such time as the Bill is finalised and passed by Parliament.

1.4.4 Legal and Judicial reform

Legal delays and uncertainty on property rights, speed of the courts, inadequacy of bankruptcy and foreclosure laws, inflexibility of labour laws significantly increase risk perception and consequent costs to the private sector. Despite a superior Anglo-Saxon legal system, the legal system was found to be a positive factor only in 3% of the FDI cases as reported in a Planning commission study. A recent world bank report cites that the biggest negative of the courts in India is the speed at which they operate. Poor bankruptcy laws and delay in bankruptcy proceedings are a part contributor to the high NPAs of the Financial system. Clearly, addressing these issues will add to the competitiveness of the private sector in India.

1.4.5 Infrastructure Development and Reforms

Historically, India has invested around 5.5% of its GDP in infrastructure development, which is highly inadequate. Of this, around 80% has been contributed by the public sector. In contrast, high growth Asian economies like Taiwan and South Korea consistently invested close to 10% of GDP in infrastructure.

By most standards, and in all sectors, delivery of infrastructure services has lagged behind demand, which has been fuelled by the tremendous increase in population, accelerating urbanisation and by the success of India's industrial growth. The delays, cost overruns, missed opportunities and lack of competitiveness due to infrastructure bottlenecks and shortages erode the productivity of the economy. It is thought that the GDP growth rate is affected to the extent of 150 to 200 percentage points due to these factors.³

Different sectors have seen different levels of government activity seeking to increase private sector investment. Telecom, power and highways could be considered as

³ Source: India Infrastructure Report, 2001, 3-i Network

relatively newer sectors open to private sector participation, whereas housing and health have traditionally been a sector in which the private sector has played a dominant role. The ports sector has seen more moderate levels of activity while in water and sewerage, PSP is still in its infancy stages. Factors constraining increased private sector participation or growth of private sector include

Regulation: Regulatory bodies have established a fairly good track record in some of the sectors such power and telecom. However regulatory uncertainty remains a cause for disputes as is evident in the Telecom sector where interconnect, numbering and technology choices have been the subject of constant dispute or in the Port sector where there are apprehensions from different stakeholders that a lack of a uniform tariff regulation for ports, port terminals and minor ports, could distort the competitive environment. Need for strengthening of regulators can be considered a key constraint

In some sectors like water, road transport or healthcare, regulation is either non-existent or inadequate. Lack of regulation is often a cause for poor quality of service - for instance, in the road transport sector formation of State Road Transport Authorities could enable better service standards, similarly in the health sector, quality of health care delivery systems could improve with greater regulation.

Project Development and Implementation process: Understanding of project development processes is still in a nascent stage and often constrained by inexperience of implementing agencies. Insufficient funds for conducting baseline studies – SEBs are unable to provide credible data used by private sector bidders to bid for distribution projects, lack of a pre-feasibility study or other studies to establish viability are often a key impediment. A significant proportion of recent infrastructure projects have also been plagued either by delays in implementation ('fast-track' power projects) or by post implementation issues (Kakinada port). The poor project-implementation record compounds the problem of low-fund availability and increases the already high inherent risk of infrastructure projects. This highlights the need for sustained and enhanced support to improve the technical capabilities of the bodies that will procure private sector participation.

Legal and Policy Frameworks: As of now, in most infrastructure sectors, there are no serious legal impediments to PSP. Given more immediate and pressing problems in areas such as financial capability of public institutions and project structuring, legal hurdles are potential constraints but not limiting constraints, except for one key area – legislations relating to land reforms. The main problems are the lack of clarity in ownership of land and long delays in settling title disputes. Though steps have been initiated to correct these anomalies, it could take a long time since the complexities of issues involved.

Capability and Performance of Public Sector Enterprises/Institutions: The ability of public agencies to deal with the private sector and procure their services depends on their own performance and financial health. Examples are roads (annuity projects), power (procurement of electricity by the SEB) and bulk water supply (bulk procurement of water by the ULB). Many projects in the power and water sector have stumbled primarily due to shortcomings on these aspects. Therefore PSU and ULB reforms are critical for PSP in some of the infrastructure sectors.

Private Sector Capability: barring a handful or so large corporate developers, most private developers have an extremely local focus, not venturing beyond more than one-two cities. For instance, in the road transport sector, the existing private players are highly unorganised and have small and localised operations, which makes it difficult for them to achieve economies of scale and scope. Also, the large number of unorganised players, without a sound regulatory framework, makes regulation of the sector a daunting task. In sectors such as road and water supply, the private sector is still in its infancy stages.

1.5 ADB Assistance Strategy and Road Map

Keeping in mind ADB's comparative advantage, gaps that can be filled by ADB assistance and priority initiatives have been identified. A road map for the PSD strategy has been prepared. A sector-wise summary of issues, actions have presented here. A detailed list of projects where direct lending opportunities are possible has also been identified in the Annexes to this report.

1.5.1 Ports

Actions By Issue	Schedule	ADB	Govt
Improving connectivity & back up infrastructure for ports	Y1	✓	IR, NHAI
Streamlining planning & coordination issues & roles of various agencies responsible for port development	Y2	✓ TA ⁴	MoST, TAMP
Addressing labour inefficiencies and excess work force in Port Trusts	Y2	✓ TA	PTs, MoST
Corporatisation of Port Trusts	Y3	✓ TA	MoST
Lending Funds to new port projects	Y2-5	✓	

1.5.2 Power

Actions By Issue	Schedule	ADB	Govt
Institutional strengthening of power regulators	Y1	✓ TA	State Govt.
Institutional strengthening of SEBs	Y1	✓ TA	State Govt.
Financial restructuring of SEBs	Y3	✓ TA	State Govt.
Direct financial support to SEBs and distribution entities	Y3	✓	
Direct lending opportunities to private sector during transition period issues in Power distribution	Y3	✓	
Opportunities for direct lending to generation entities	Y2-5	✓	

1.5.3 Telecom

Actions By Issue	Schedule	ADB	Govt
Resolving interconnection & tariff issues in telecom	Y1	✓ TA	MoC
Institutional coordination and role of various agencies in the telecom sector	Y1	✓ TA	MoC
Privatisation of BSNL & MTNL	Y2		MoC, DoD
Meeting high investment requirement for setting up telecom networks	Y1-5	✓ TA	

1.5.4 Passenger Road Transport

Actions By Issue	Schedule	ADB	Govt
Formation of Independent State Transport Authorities (STA)	Y3	✓ TA	State Govt
Increasing autonomy of STUs			Govt
Modular privatisation of assets of STUs	Y5	✓ TA	State Govt
Promote economies of scale of private sector transport providers	Y3	✓ TA	RTA

1.5.5 Housing

Actions By Issue	Schedule	ADB	Govt
Increasing the availability of land and developed sites for housing construction	Y2	✓ TA	State Govt, ULBs
Improvement of urban planning process	Y1-5	✓ TA	State Govt, ULBs
Provision of funds to the private housing developers and housing finance institutions	Y1-5	✓	
Increase lines of credit for micro-finance initiatives	Y1	✓	

⁴ Technical Assistance

1.5.6 Highways

Actions By Issue	Schedule	ADB	Govt
Strengthening the institution of the Central Road Fund and constituting a Road Board for its management	Y2	✓ TA	NHAI, MoRTH
Increasing role for PSP in highway development	Y1-5	✓ TA	NHAI
Strengthening of State PWDs and their contracting capacity	Y1-5	✓ TA	State Govt, PWDs
Increasing availability of capital and long-term debt to private sector road developers	Y1-5	✓	

1.5.7 Water Supply and Sewerage

Actions By Issue	Schedule	ADB	Govt
Tariff and regulatory reforms	Y1-3	✓ TA	State Govt
Improving O&M of existing assets	Y1-3	✓ TA	State Govt, ULBs
Improving institutional capability and financial credibility of local bodies	Y1-5	✓ TA	State Govt, ULBs
Addressing shortage of funds for water sector	Y3-10	✓	

1.5.8 Health

Actions By Issue	Schedule	ADB	Govt
Regulation of private sector health providers	Y1	✓ TA	MoH
Setting up a national health accounting system	Y1-5	✓ TA	MoH
Setting up a health insurance/social security system	Y3-7	✓ TA	Central Govt
Financing the health insurance/social security system	Y7	✓	

1.6 Conclusion

Though considerable progress has been made in increasing the role of the private sector in infrastructure, significant investment potential could be unleashed after each stage of successful reforms. In telecom, the private sector is more visible than the erstwhile government monopolies. Firm steps forward have been taken in the highways and ports sector, which need to be consolidated.

Many key reforms are yet to take place, be it reduction of transmission and distribution losses or revision of water tariffs or improving the financial health of the public utilities that will transact with the private sector. It is imperative that the sequence of reforms is timed correctly. A prudent strategy would be to focus on technical assistance, institutional capability building and support activities, but at the same time create high visibility successes through pilot and demonstration projects in sectors in which PSP is still at an early stage.

Strengthening the private sector's capability is also an important need. This could be achieved through enhancing their capital base and widening the range of debt instruments available in the market. Supporting deserving projects through insurance and guarantee products would bring the risk profile of these projects more in-line with the risk bearing ability of the private sector and financial markets, thus giving an impetus to PSP.

2. INTRODUCTION

This chapter provides a background to the assignment, approach and methodology and structure of the report.

2.1 Background

The Asian Development Bank (ADB) is one of the prominent multilateral development finance institutions active in India. The Bank's primary objective is to help the recipient country achieve broad based economic growth and poverty reduction. Its primary tools are loans and technical assistance, which it mainly provides to governments for specific projects and programs. In 2001, the Bank approved seven loans totalling US\$1.5 bn and 12 technical assistance grants to India.

At present, the Bank is assisting India through carefully defined development projects like the Private Sector Infrastructure Facility.

2.2 Objective of the Study

Sustainable poverty reduction measures would aim at providing jobs, credit, housing, roads, electricity, and access to the markets (ports, road transport), as also the education, water, sanitation, and health facilities for the poor. Given the traditional importance of the private sector in some of these physical and social infrastructure areas and its increasing significance in the erstwhile government areas of function, the efforts to reduce impediments to private sectors development could provide thrust to the poverty reduction process.

The objective of the Private Sector Assessment (PSA) is to develop a coherent country strategy for Private Sector Development (PSD) in areas including infrastructure. The strategy should promote a strong and dynamic private sector that will contribute to long-term economic growth and sustained poverty reduction. The assessment would supplement and build on ongoing country economic sector work and will be an input to the Country Strategy and Program (CSP) exercise of ADB.

The strategy supports achieving higher and sustainable pro-poor growth, improved income and reduced poverty by removing infrastructure constraints and increasing investment. To achieve this, ADB's operational focus is on alleviating infrastructure bottlenecks and improving supply side efficiency by supporting priority public investment and catalyzing private investment in energy, transport and communications and focusing on social infrastructure including urban development and housing. Emphasis is given to creating an environment that is conducive to Private Sector Participation (PSP).

To meet its objective, the Bank has engaged CRISIL Infrastructure Advisory to identify the specific legal, policy, regulatory, financial, project development and other issues that are impeding faster growth of private investment in infrastructure. The study covers the telecom, ports, highways, power, urban water supply & sewage, urban housing, health and education sectors.

2.3 Terms of Reference

The terms of reference for the study are as follows:

1. Provide an overview of the nature and scope of the private sector in India
2. Analyse the causal relationship and linkages between PSD, economic growth and poverty reduction in India (e.g. contribution to output, employment, services etc.)
3. Identify the strengths, weaknesses and constraints of private sector participation in the infrastructure (including urban infrastructure), healthcare, education and financial sectors and study aspects including:
 - a) Financial sector reforms – the need for internal controls, recapitalization, restructuring and privatization of state banks, the problem of non-performing

assets, tax and regulatory impediments, the availability of credit including microfinance

- b) Corporate Governance
 - c) Competition policy and Foreign Direct Investments
 - d) The ownership role of the state and performance of SOEs
 - e) Impediments to long-term sustainable development – agriculture, manufacturing and service sectors
 - f) Public Sector Governance and Decentralization
 - g) Legal and judicial reforms
4. Identify directions for reform / action
 5. Conduct discussions with relevant government officials on the adequacy of the diagnosis and the feasibility and appropriateness of the proposed actions and the directions for change.
 6. Identify strategic initiatives for ADB assistance and prepare a policy and action matrix containing:
 - a) Key constraints to PSD (only a manageable number)
 - b) Reforms required (with some determination of costs)
 - c) High value business opportunities
 - d) Public / private partnership opportunities
 - e) Role of other agencies and
 7. Develop a PSD strategy component as part of the country strategy and determine priorities for ADB activities

2.4 Sector Coverage

The study was required to cover physical infrastructure, health, education and the financial system. Since the focus of the study is towards increasing economic growth and reducing poverty, different sub-sectors within physical infrastructure were analysed in terms of the demand for these facilities, the broad-based nature of the benefits of greater private sector participation and its likely impact on growth and poverty reduction. Based on this evaluation, the following sectors were chosen:

- Highways
- Housing
- Water supply and sewerage
- Ports
- Road Transport
- Power
- Telecom

2.5 Methodology

The methodology used by CRISIL Infrastructure Advisory in executing the assignment is given below.

First, an exhaustive literature survey based on important reports, discussion papers, seminar proceedings and publications of State and Central Government, multilateral agencies and others, was undertaken.

Next, identified critical issues were shortlisted, extensively debated within the organization and further discussed with several outside experts, project developers, State and Central Government functionaries and multi-lateral institutions.

The issues were also presented and discussed in an interim presentation held at the ADB office in New Delhi on August 1, 2002.

Based on the insights gained from this process, CRISIL Infrastructure Advisory summarized the impediments in private sector investments in Indian infrastructure.

2.6 Deliverables

The deliverables for the study included the following:

1. Outline of the report, provided to ADB by the end of the first week after commencement of the assignment. It included a briefing to ADB executives on the proposed methodology.
2. Interim presentation, discussing the key issues in infrastructure development, held on August 1, 2002 at the ADB office in New Delhi.
3. Draft Report; and
4. Final Report, with an executive summary, encompassing the findings of the assignment.

2.7 Outline of the Final Report

This report is structured as follows:

Chapter 1 (Executive Summary) provides snapshot of the analysis, findings and recommendations of the report.

Chapter 2 is a background to the assignment and approach and methodology.

Chapter 3 commences the study by looking at broad trends in India's economy with emphasis on the role of the private sector and changes therein over the course of time. Developments, post-liberalisation in 1991, have been given special mention. The role of the private and public sectors has been analysed in terms of share in GDP, share in investment and contribution to growth. The trend analysis has been limited to major sub-sectors such as agriculture, industry and services. A framework for analysing the impact of infrastructure investments on poverty and growth has also been developed.

Chapter 4 looks at the key issues as relevant to the overall investment climate of India. Specific issues like the need for financial sector reforms are analysed. Key issues hampering an enhanced role for the private sector in India are also analysed in this chapter.

Chapter 5 identifies the key trends and issues in PSP in infrastructure. It also provides an overview of the general characteristics of the Indian infrastructure sector and policy, regulatory and project development impediments in private sector investments. The specifics of these issues with respect to individual sectors have been more fully described in the respective sector annexure.

Chapter 6 identifies and prioritises areas of activity for ADB keeping in mind sector needs, ADB's comparative advantage and activities of other aid and donor agencies.

3. OVERVIEW AND STATUS OF THE PRIVATE SECTOR IN INDIA

This chapter provides a background to the assignment and approach and methodology used.

3.1 Introduction

Despite the existence of a 'not very encouraging' environment, the private sector always occupied an important place in the economy. In the 1960s it contributed 87 percent to India's Gross Domestic Product⁵ (GDP) and was a key employment generator. One reason for this was that a large chunk of GDP originated in the agriculture sector and almost the entire GDP in agriculture originated in the private sector. With the policy focus shifting on the public sector, the period from 1960s to the 1980s witnessed a declining contribution of the private sector to overall investment and GDP.

In the beginning of 1990-91, India faced a severe Balance of Payments (BoP) crisis, to tide over which it had to take assistance from the International Monetary Fund (IMF) and the World Bank (WB). The crisis of 1990-91 provided an opportunity to re-examine India's development strategy and the new direction adopted was based on the thinking that economic activity would be boosted by removal of discretionary controls and according a greater role to market forces. The reform agenda included, apart from a fiscal consolidation program, deregulation of industry, liberalization of foreign trade, foreign investment and the financial sector. An enhanced role of private sector was a key component of the reform process.

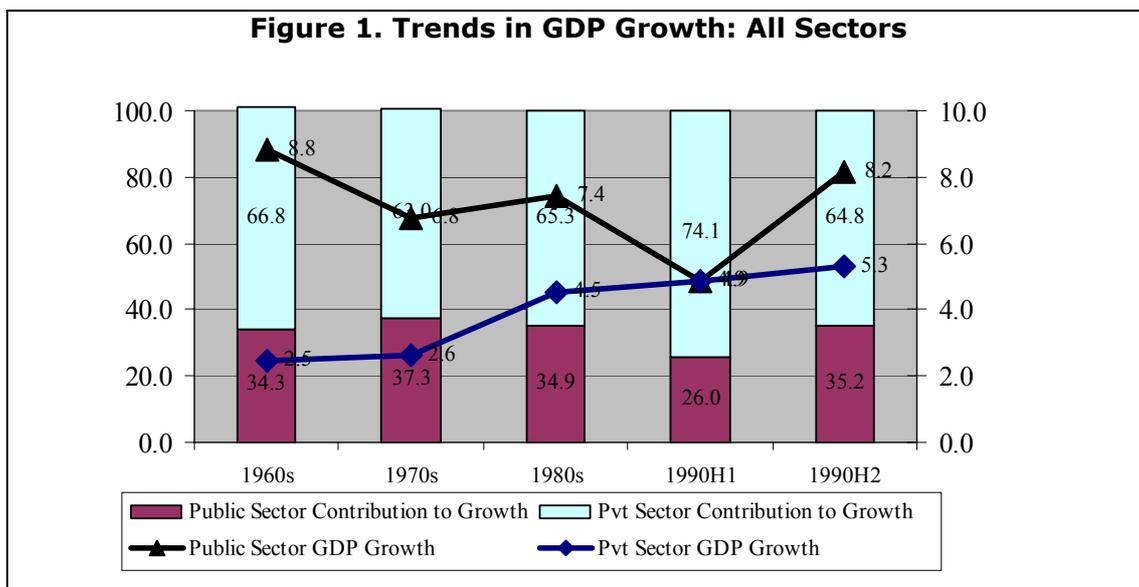
The National Accounts Statistics (NAS) data, now available with 1993-94 as the base year, permits us to examine the changes in structure of investment and GDP across broad sectors (all tables and charts in this Chapter are based on NAS data). This helps in identifying directional changes in public and private sector participation in the economy. In what follows, we examine the impact of the reforms on the investment and GDP originating in the private sector vis-à-vis the public sector.

3.2 Trends in Investment and GDP- All-Sectors

Figure 1 documents aggregate trends in GDP growth for the period spanning 1960s to the end of 1990s. The growth rates have been obtained by fitting a log-linear trend. The growth rate of GDP originating in the public sector has always been higher than the growth rate of GDP originating in the private sector. Only during the first half of nineties⁶ (1990H1) did both public and private sectors register growth rates of 4.9 percent each. But in the second half, GDP growth in public sector again outpaced the private sector GDP growth. The most important reason for higher growth in public sector GDP was due to increases in salaries and wages after the implementation of the Fifth Pay Commission's recommendations for Government employees.

⁵ GDP growth rates have been computed in real terms.

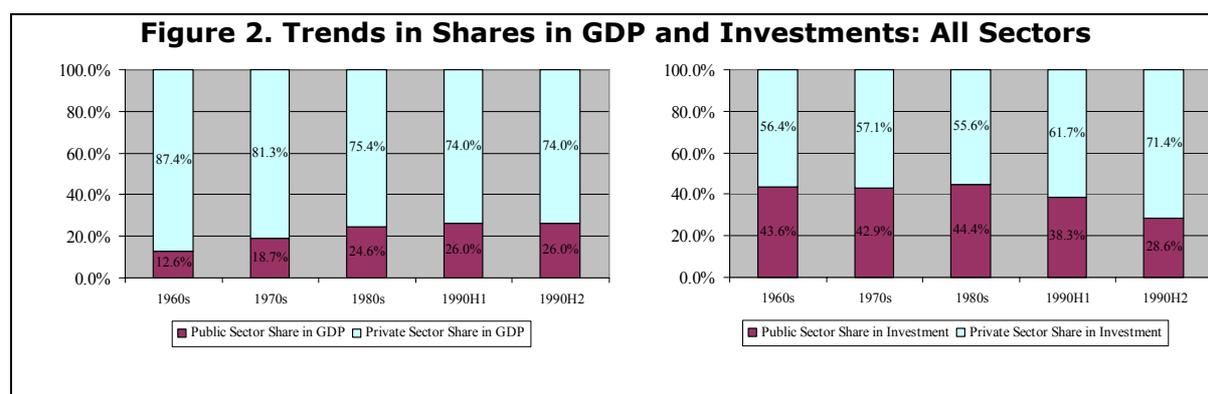
⁶ 1990H1 = 1990-91 to 1994-95; 1990H2 = 1995-96 to 1998-99 (public sector data is available only upto 1998-99).



The only period in 1990s when the private sector grew faster (7.6 percent per annum) than the public sector (5.7 percent per annum) was from 1993-94 to 1996-97. This was the period when a number of reform measures were unleashed to attract the private sector viz. liberalizing the FDI inflows, industrial de-licensing and the economy got a significant external demand boost from devaluation. This could not be sustained and the private sector is still struggling to come out of the downturn that set in during 1997-98.

Despite public sector registering higher growth rates than the private sector, the contribution of private sector to overall growth was always higher because of its significantly higher share in GDP. As the policies of the government in the past were aimed at promoting the public sector, its share in total GDP kept on rising till the 1980s. Even in 1990H1, the share of public sector in total GDP was rising. This trend has been checked in 1990H2, which witnessed a marginal drop in public sector share in GDP. The trend of the declining share of public sector in GDP was more marked during 1993-94 to 1996-97 – the boom period for the private sector.

As opposed to the poor growth in private sector GDP, there has been a clear shift in the composition of investment in the favour of private sector. The share of private sector in total investment shot up from 56 percent in 1990s to 71 percent by 1990H2 (Figure 2).



Although private investment at the aggregate level picked up significantly in the 1990s, a commensurate increase in its share in GDP was not witnessed.

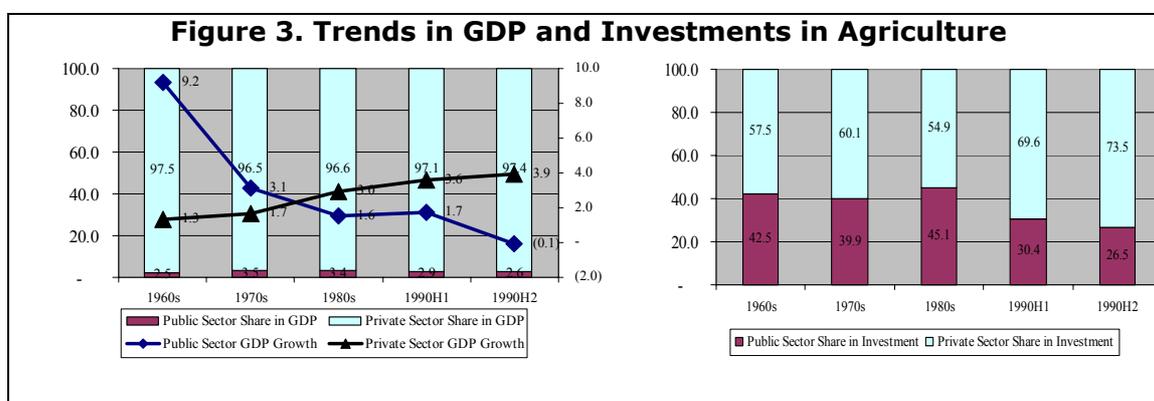
3.3 Trends in Investment and GDP- Sector Trends

All the sectors of the economy did not mimic the aggregate trends. The private sector was better placed in some areas to respond to reform initiatives and consequently displayed buoyancy in investment and growth. A sector analysis helps in identifying these sectors.

3.3.1 Agriculture

Almost the entire GDP in agriculture originates in the private sector. In the 1990s, the share of private sector in agricultural GDP was over 97 percent (figure 3).

The growth in agricultural GDP in the public sector has been decelerating since the 1960s and by 1990H2 it turned negative. In contrast, the private sector GDP in agriculture grew at almost 4 percent in 1990s. As against its low contribution to GDP, the share of public investment in agriculture has historically been quite large, although it has consistently fallen throughout the nineties. Share of public investment in agriculture fell from 45 percent in the 1980s to below 27 percent by 1990H2. Despite falling public sector investment in agriculture, overall investment in agriculture measured as a proportion of GDP in agriculture did not suffer.



Although the shortfall in public sector investment in agriculture has been made up by private sector investment, the nature of private sector investment raises doubts about the viability of such investment. As opposed to public investment, which is associated with positive externalities, private investment is primarily geared towards appropriation. The negative impact of falling public investment has started manifesting itself in falling productivity and depleting ground water resources.

3.3.2 Industry

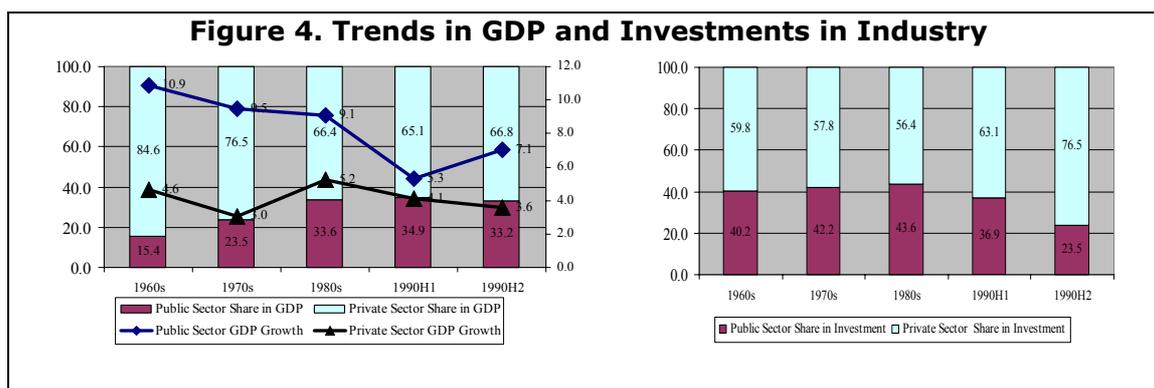
Overall

The industrial sector includes manufacturing, mining and quarrying, electricity, gas, water supply and construction.

The industrial growth in the private sector vis-à-vis public sector has quite been poor. Even during 1990s, on the average the public sector outpaced the private sector, the difference in growth rates became more noticeable in 1990H2 (Figure 4).

Private sector always had a dominant share in GDP originating in the industrial sector. The government policy of encouraging the public sector led to a decline in the share of the private sector in industrial GDP from 85 percent in the sixties to 66 percent in the nineties. But with a renewed focus on private sector in the 1990s, the contribution of private sector to industrial GDP increased to 67 percent in 1990H2

Investment by the private sector increased significantly in 1990s. The private sector's share in total investment in industry increased by almost 20 percentage points in the last decade



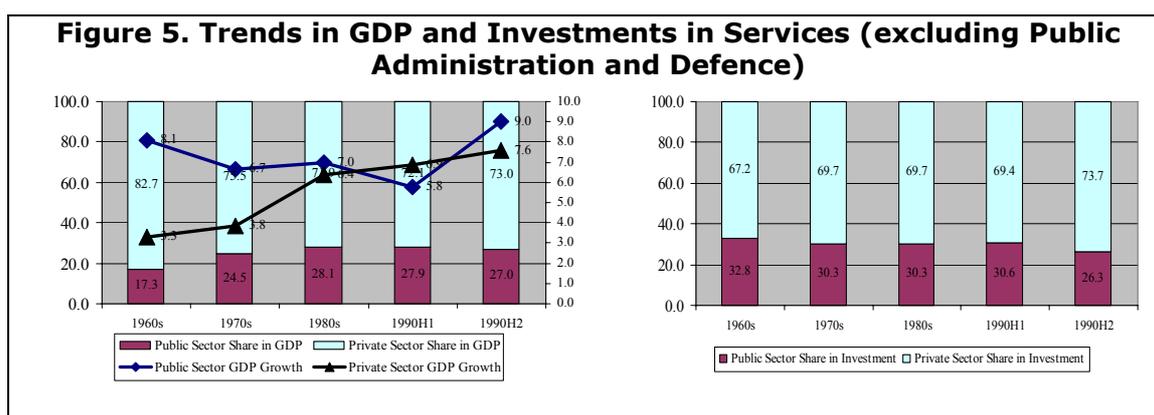
Clearly, heavy investment by the private sector did not translate into corresponding performance on the growth front. Only during 1993-94 to 1996-97 was the growth in real GDP of private sector industry higher than that of the public sector. The industrial slowdown after 1996-97 accentuated this differential even further.

3.3.2.1 Manufacturing

The manufacturing sector, with a dominant share in industrial GDP, mimics the overall trends of industry in the nineties. The share of private sector in investment in the manufacturing sector increased from 80.4 percent in 1980s to 93.3 percent in the 1990H2- an unambiguous sign of government withdrawing from this sector. The growth the private sector GDP in the manufacturing sector in the nineties stayed below that in public sector. Only during the short period 1993-94 to 1996-97 when the economy as a whole was booming, did the private sector GDP growth was in double digits and higher than public sector.

3.3.3 Services

Services is the fastest growing sector of the economy. The service sector GDP grew at 7-8 percent per annum and increased its share in overall GDP from 41 percent in 1990-91 to almost 50 percent by 1999-00. Here, services excludes public administration and defence as they are exclusively provided by the public sector. During 1990s, both the private and the public sector increased their growth performance over the earlier period with private sector GDP growing faster than public sector GDP in 1990H1 (Figure 5).



The share of private sector in service sector GDP too increased from 61 percent in 1980s to 64 percent in 1990H2. The share of private sector in the services sector investment went up from 69.7 percent to 73.3 percent.

Within services, the private sector GDP growth during the nineties was particularly buoyant in the financial sector, transport (without railways) and community and social services (excluding public administration and defence).

3.3.3.1 Banking and Insurance

Real GDP in banking and insurance clocked double-digit growth rates in the nineties. The trend growth in real GDP in the private sector too was close to 17 percent per annum in 1990s.

The share of private sector in total investment in banking and insurance went up from 36 percent in the 1980s to almost 70 percent in 1990H2.

Thus, unlike the trends in overall private sector investment and GDP, private banking and insurance witnessed increases in investment, which translated into higher growth rates and increased share of the private sector in GDP.

3.3.3.2 Transport (other than railways)

Transport (other than railways) includes road, water and air transport. This sector always had a dominant private sector presence but the share private sector in GDP originating in this sector had fallen from 72 percent in 1960s to 69 percent in 1980s.

In the nineties this trend was significantly reversed. Not only did the share of private sector go up from 74 percent to 83 percent in 1990s, its share in GDP also increased from 70 percent to 77 percent in the corresponding period.

3.3.3.3 Community and Social Services

Community and Services include health, education and a variety of personal services. The share of private sector in GDP had come down from 83 percent in 1960s to 61 percent by 1990H1.

Private sector investment in community and social services increased from 51 percent in 1980s to 65 percent in 1990H1 and 72 percent in 1990H2. The increased investment share of private sector in 1990H1, did not translate into a higher growth in that period

However, 1990H2 witnessed a pick up in private sector GDP growth (8.7 percent). Consequently, the trend of falling share of private sector in GDP was checked.

3.4 A Framework for Analysing Poverty Linkages

3.4.1 A General Approach

Poverty is typically measured in terms of an income or expenditure criterion, which is based on the amount of money needed (for an individual or household) to afford a pre-defined basket of goods and services. The composition of the basket may, of course, vary across countries, or even regions within a country, based on standards of minimum requirements or minimum acceptable standards of consumption.

Since the concept of "affordability" is central to poverty measurement, the prices of the goods that comprise the consumption basket also have an impact on measured poverty. For a given level of income, a decrease (increase) of the prices of one or more of these goods can have a favourable (adverse) impact on poverty.

With reference to a poverty line, the impact of changes in the structure and performance of any particular sector on poverty, generally, can be classified into two categories: direct and indirect.

3.4.1.1 Direct Impacts

These essentially relate to changes in the variables referred to above. Three types of direct impacts can be identified:

- Impact on livelihoods through expansion of employment or production opportunities
- Impact on access to essential requirements
- Impact on prices of essential requirements

Clearly, any change that expands the immediate opportunities for poor people to earn, or enhance, their incomes will have a favourable impact on poverty. With respect to prices, it is important to distinguish between two distinct sources of impact. On the one

hand, goods or services considered essential may have simply not been available before, implying zero consumption or infinite prices. The change in the operating environment in a sector, or sectors, may make these available. Their presence in the consumption basket implies a favourable impact on poverty. Under different circumstances, these may be available, but at prohibitive prices. Any change that increases their supply and contributes to a price reduction will, likewise, have a favourable impact on poverty.

Direct impacts are, by definition, manifested in relatively short periods of time. Whether the beneficial impacts of sectoral changes are sustainable over time depends on the strength of what may be classified as indirect impacts.

3.4.1.2 Indirect Impacts

These are the impacts that sectoral changes have on the processes by which poverty is eliminated. Sustaining the momentum of a poverty reduction process requires the initiation of certain structural changes in both individuals and the communities in which they live and carry out their economic activities. Two channels of indirect impacts can be identified.

- Impact on the processes of human capital formation and preservation amongst poor people.
- Impact on social capital, or the community's inherent capabilities to improve the economic condition of its members

The first set of effects may not bring any immediate benefits, but it is clearly a critical requirement for sustainability. If people are poor because they do not possess any skills or attributes which the labour market puts a decent value on, the only sustainable way out of poverty is to create and preserve such skills. However, an important criterion for effectiveness is the extent to which a change in the structure and performance of the relevant sector contributes to skill formation and preservation amongst its poorer constituents.

The second source of indirect impacts is gaining in prominence. Research findings increasingly suggest that the nature of the community and its internal institutions have a significant impact on the productivity of poverty alleviation programmes. Social capital, broadly speaking, refers to the collective capabilities for self-governance. With respect to poverty, communities with well-developed mechanisms for dispersing productive activity across their members and providing safety nets to (temporarily or permanently) deprived people are likely to experience far greater benefits from typical policy interventions.

3.4.2 Private Sector Development and Poverty Impacts

In generic terms, the entry of private providers of a whole range of goods and services can have impacts that will fall into one or more of the categories elaborated on above. This project focuses on four specific sectors (physical infrastructure, education, health and financial system). In order to provide a context for the poverty impacts of private activities in these four sectors, it would be useful to respond to two questions:

1. Assuming that the policy framework poses no barriers to private entry (or expansion), what is the most likely form in which private providers will participate?
2. Are these forms of participation likely to have favourable impacts on poverty, either directly or indirectly?

In the table given below, a summary of the likely outcomes and their categorisation in terms of the impact classification is provided. A more detailed discussion of some of the relationships suggested in the table follows.

Table 2. Private Sector Participation and Poverty Impacts

Sector	Likely Modes of Participation	Likely Direct Impacts	Likely Indirect Impacts
Physical Infrastructure			
Transport	Tolled stretches of highways; BOO, BOOT, BOT contracts; Last mile connectivity (though may not be financially viable).	Increasing two-way access to markets; Increasing employment opportunities; Lower transportation costs. Livelihoods, Access, Prices	
Power	Small generators, using local resources, supplying through local network or grid; Community-level distributors, buying from local suppliers or grid.	Increasing employment opportunities; Increasing productivity; Use of appliances; Access to information through electronic media. Livelihoods, Access	
Telecom	WLL, rural reach, etc.	Lower information costs; Lower transactions costs; Increasing opportunities for decentralised production and employment. Livelihoods, Access, Prices	
Finance			
Institutional	Financing commercially viable localised infrastructure or business ventures	Increasing employment opportunities; Increasing productivity. Livelihoods	
Micro-finance	Indigenous resource or traditional skill-based livelihoods in community setting	Increasing employment opportunities; Increasing productivity. Livelihoods	Preservation of traditional means of livelihood Social Capital
Social Infrastructure			
Health	Integration of modern and traditional forms of prevention and treatment under a facilitating regulatory framework		Increasing access to preventive and curative care; Lower costs. Human Capital
Education	Efficient and accountable service provision under a facilitating regulatory and subsidy framework		Increasing access to educational services; Lower costs. Human Capital

The table attempts to summarise the *a priori* perceptions about the impact of expanding activity in all these sectors on poverty. Two points need to be emphasised about the assessments in the table.

First, clearly, the scope of private sector participation in some of these sectors, notably power and telecom, goes far beyond what is described in the table. Obviously, large generators can be in the private sector, as can mobile or fixed line telecom providers. Further, these kinds of investments can have an impact on poverty through their impact on growth and efficiency in the economy. However, this discussion tries to keep the focus on a more proximate relationship between expanding private sector presence and poverty reduction. The entries in the various cells of the table reflect a judgement on the kinds of private activity, which would be characterised by such a proximate relationship.

Second, the list of effects is meant to be more illustrative than selective. Infrastructure investments could have important indirect effects, for example, on strengthening social capital through greater awareness about and access to the rest of the world. These are

not laid out simply; the table entries reflect a judgement on the most important impact of expanding activity in a particular sector.

To sum up, this section lays out a framework within which it is possible to identify the ways in which facilitating private sector development will positively impact on poverty.

3.5 Conclusion

The above analysis of trends in investment and growth in public and private sectors at the broad sector level reveals the differential impact of the reform process that was unleashed in the 1990s. While there has been a significant pick up in private investment in some sectors, a corresponding increase in growth rates in private sector GDP has not been witnessed. Only the period of mid nineties witnessed a noticeable increase in growth in GDP originating in the private sector.

The sectors that saw higher growth rates in the private sector include banking and insurance, transport (excluding railways) and community and social services. The boom of private sector growth in manufacturing activity (of the mid nineties) has fizzled out.

The above analysis, based on NAS data, is useful in understanding the broad trends in private sector participation in the economy. These broad trends are an aggregate of movements at the sub-sector level, the analysis of which is not possible from the NAS data. To identify constraints to private sector participation and work out a PSD strategy for sectors like power, telecom, ports, health education, a sub-sector exploration is required. This is dealt with in the following chapters.

4. CONSTRAINTS TO PRIVATE SECTOR DEVELOPMENT- ENABLING ENVIRONMENT

This chapter presents the key characteristics of the private sector and issues that are encountered in the development of a dynamic private sector. Since this chapter pertains to the general environment faced by the private sector, its findings are as relevant to the private sector in the agriculture, manufacturing or service sectors as it is to the infrastructure sector. It would also be relevant to firms irrespective of their size – small, medium or large.

4.1 Introduction

The 1990s has seen most transition economies aggressively pursuing the cause of private participation in manufacturing, services and agriculture and infrastructure. However, unlike manufacturing and agriculture, where the lumpiness of investments and payback periods are relatively smaller, private participation in infrastructure has been a bigger challenge on account of the various associated risks.

The focus of post-reform policy in India also has been to attract private investments in expanding India's infrastructure. However, the results of these reform measures have, at best been mixed. Existing imperfections in the financial sector has constrained the funding of projects in India. At the same time, the lack of or slow pace of reforms in key infrastructure areas means that most of these sectors continue to be relatively weak investment avenues. In some sectors private investment is supported by government guarantees, which is nothing but taxpayer financing in a 'disguised' or 'off-balance sheet' form.

4.2 Financial Sector Reforms

The financial system plays a key role in the economy by raising financial resources from surplus units and transferring them to deficit spenders. The Indian financial system has shown drastic gains, in terms of its ability to raise funds. However, the increase in funds mobilised has not been accompanied by concurrent gains in the efficiency of deployment of funds.

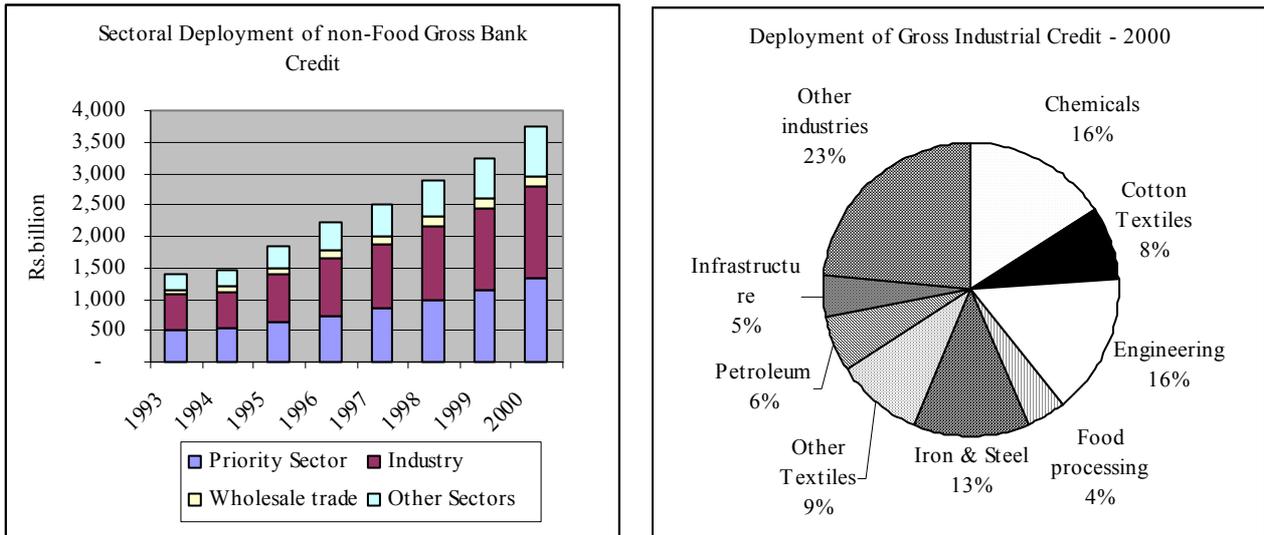
The aggregate deposits mobilized by the banking system increased at an average annual growth rate of 15.5% from Rs. 2,996 billion as of March 1993 to Rs. 10,970 billion as of March 2002. Gross bank credit increased at an average annual growth rate of around 18.6% from Rs. 1,471 billion to Rs. 6,836 billion resulting in an improvement in the credit-deposit ratio over the period.

Credit to industry continues to constitute the most significant portion of the credit portfolio of commercial banks (see figure below). However, high historic Non-Performing Asset (NPA) levels and the absence of adequate fresh lending opportunities have resulted in an increasing tendency on the part of banks to invest (over the mandated requirements) in relatively risk-free Government or Government-backed securities, popularly known as Statutory Liquidity Reserve (SLR) securities.⁷ According to some reports, the total excess investment in SLR securities was around Rs. 1,600 billion or nearly 15% of total deposits.⁸

⁷ This is also because such securities have lower Capital Adequacy Ratio (CAR) requirements.

⁸ Financial Reforms and Development, The Hindu Business Line, April 26, 2002

Figure 6. Deployment of Bank Credit

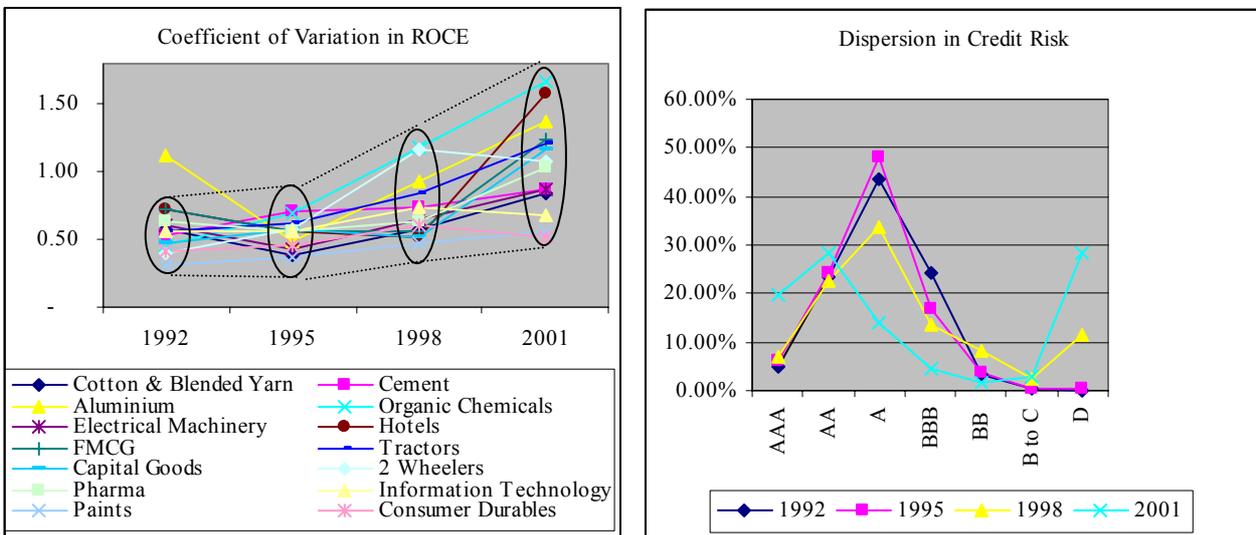


Source: RBI

4.2.1 The Problem of Non-Performing Assets

The onset of first generation reforms in the Indian economy has seen a tremendous divergence in the performance of firms in India's industrial sector. The credit risk profile across a range of industries has moved from a pre-reforms position, where the performance of most companies (a proxy for their credit-worthiness) was bunched around the median, to a post-reforms situation where the performances of companies within a particular industry show wide dispersion (figure 7). Companies are now either high credit risks, or low credit risks.

Figure 7. Increase in Variability of Performance of Firms within an Industry

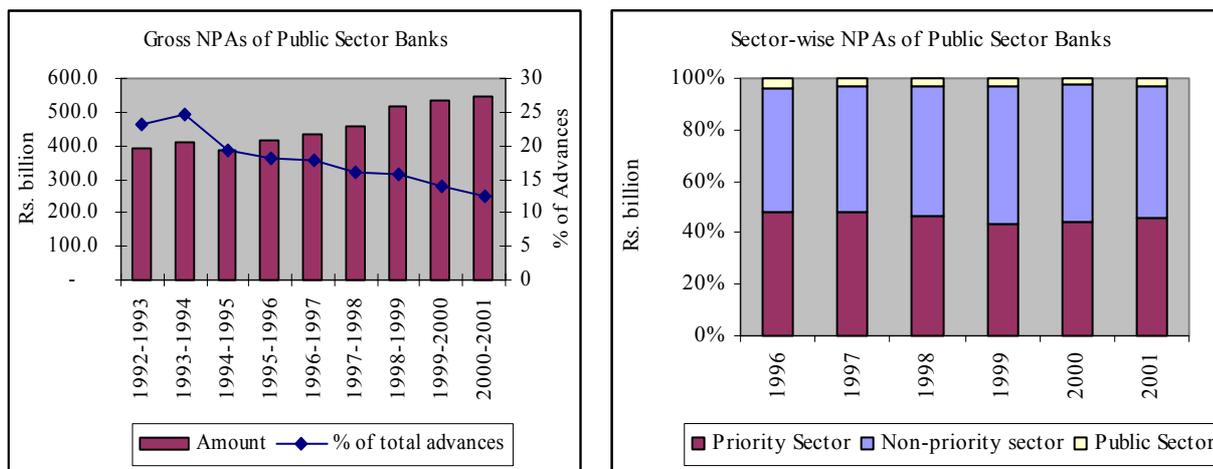


Source: CRISIL estimates

Stringent regulatory and prudential requirements, enforced by the Reserve Bank of India (RBI) in the mid 1990s and increased investments by banks in SLR securities, has resulted in a decline in bank Non-Performing Assets (NPAs) as a percentage of assets and net advances. However, in absolute terms, NPAs continue to grow and remain very

high at around Rs. 500 billion (figure 8). Debt Recovery Tribunals and Settlement Advisory Committees have been unable to make a significant dent in the problem.

Figure 8. NPAs of Public Sector Banks



Source: RBI

To deal with the problem of NPAs the committee on Financial Sector Reforms (Narsimham Committee, 1991) suggested an Asset Reconstruction Fund, as an institution that would buy out troubled loans from banks and make special efforts at recovering value from the assets. However, the implementation of this suggestion got delayed due to doubts on the efficacy of transferring the NPAs from one institution to another. The second Committee on Banking Sector Reforms (Narsimham Committee – II) revived the concept of the ARF again in 1998, which recommended creation of an Asset Reconstruction Company (ARC) to take over the NPAs from the banks.

Subsequently, the Government of India has promulgated an **Ordinance on the Securitization and Reconstruction of Financial Assets** in June 2002, under which ICICI, IDBI, HDFC, UTI and SBI would set up an ARC. There have been conflicting reports on the proposed capital base of the ARC, with figures varying from Rs. 100 mn⁹ to Rs. 14 bn¹⁰. In this regard, a Credit Information Bureau could play a significant role in obtaining and sharing data on borrowers in a systematic manner to aid credit decision of banks¹¹.

The ARC would need to have a capital base that is strong enough to sustain the poor quality of assets on its books. Thus, capitalization of the ARC would be an immediate priority. In addition, the ARC and the Credit Information Bureau would also require technical assistance in designing a fast and efficient system for asset recovery and in designing systems for assimilation, analysis and dissemination of credit related data, respectively.

4.2.2 Recapitalization of Public Sector Banks

Recapitalization of the Public Sector Banks (PSB) has been underway since 1991 in line with the recommendations of the Narsimham Committee. The total recapitalization support by the Government of India over the period 1994-2000 was nearly Rs. 164.5

⁹ ARC Likely To Commence Operations In Two Months, The Financial Express, August 24, 2002

¹⁰ Asset reconstruction company -- World Bank opts out; ADB, IFC seek time – The Hindu Business Line, Feb 08, 2002

¹¹ RBI Working Group on Credit Information Bureau, June 1999

bn.¹² PSBs also approached the capital markets for raising fresh equity capital and raised a total amount of Rs. 69.7 bn over the period 1993-1996 through issue of equity in domestic markets and through Global Depository Receipts (GDRs).¹³

However, the capital and reserves of these banks are still estimated to be inadequate to meet the growing level of NPAs and to absorb likely loan losses in future. According to estimates made by CRISIL and Standard & Poor's, the additional capital requirement for scheduled commercial banks is of the order of US\$ 11 – 13 billion.¹⁴

4.2.3 Restructuring and Privatisation

Though there are only three PSBs (Indian Bank, UCO Bank and United Bank of India) that are still classified as weak banks, structural weaknesses within the banking system are widely prevalent. As of March 2002, the Government of India is the majority shareholder in most of the PSBs, with its shareholding extending to 100% in several cases. Given the significant degree of Government ownership, political considerations could impede the smooth implementation of the restructuring process at these banks.

While there is a consensus in favour of the privatisation process, the actual pace of privatisation has been slow. The depressed condition of the primary market for new issues in recent years has also discouraged banks from going to the market to raise capital.

To accelerate the privatization process, the government has proposed to lower the minimum government ownership in State banks from 51% to 33%, without changing the public sector character of these banks. This Bill was approved in November 2000.

Similarly, the RBI also announced plans to divest its holding institutions such as State Bank of India (SBI) and National Housing Bank. However, the privatisation process has not yet taken off in earnest. In future, the process of recapitalization and restructuring of public sector banks could be integrated if the process adopted for recapitalization would be through the strategic sale of Government holdings in these banks to equity investors. Such a process would not only address issues relating to capital adequacy requirements but would also address management quality issues arising out of the large Government holdings in these banks.

In addition, there is significant scope for restructuring in other Government held investment institutions like UTI, LIC and GIC. The total fund requirement for bailing out UTI is estimated at around Rs. 55 bn over the period April 2002 to May 2003. The GoI has already provided Rs. 8 bn in a bailout package for UTI and is contemplating putting in another Rs. 5 bn.¹⁵ It is also considering raising funds from the capital markets to fund the bailout. Privatisation of these institutions presents an investment opportunity for the private sector arm of agencies such as ADB.

4.2.4 Inadequately Developed Market for Long-Term Debt

Most Development Finance Institutions (DFIs) are in poor health (IFCI, IDBI) or are looking to convert (IDBI) or have already converted themselves to commercial banks (ICICI). They are unwilling to lend long-tenor funds (~15-20 years or more), as that is

¹² Where Did India Miss a Turn in Banking Reform? Center for the Advanced Study of India, University of Pennsylvania

¹³ Among recapitalized PSBs, some banks have returned capital to the government in an effort to boost their Earnings Per Share (EPS) and thus enable them to get prices for their shares. So far, five banks returned capital to the government with the total amount of Rs 69 bn. Source: Banking Sector Reforms in India and China: Does India's Experience Offer Lessons for China's Future Reform Agenda? *Japan Bank for International Cooperation*, March 2002

¹⁴ Indian Banking System's Capital Shortfall, Credit Week – February 2001

¹⁵ Govt mulls bond issue for US-64, Business Standard, August 26, 2002

much longer than the maturity of funds that they raise and it would result in an asset-liability mismatch for them. Commercial banks with their relatively shorter-term outlook are more focussed on working capital financing and are also unwilling to park long-tenor funds.¹⁶

Consequently, infrastructure and other long-gestation projects have found it difficult to raise funds in the market. There have been efforts to meet this gap, especially through the setting up of the Infrastructure Development Finance Company (IDFC). IDFC has introduced products such as take-out financing but the demand for them has been low due to low overall funding demand from actual projects seeking funds.

Total annual disbursements by all FIs has been growing steadily and was Rs. 110.73 bn in 2000-01, whereas outstanding credit to infrastructure by scheduled commercial banks was just Rs. 85.36 bn as on June 2000 (less than even 5% of total bank credit). Despite this growing trend, there still exists a large mismatch between the funds availability and requirement when compared to requirements of over Rs. 10,000 bn between 1996-2005 (as discussed in the subsequent chapter).

The absence of a long-term debt instruments in the market and absence of benchmark yield rates also makes it difficult for financial institutions to offer long-term funds.

4.2.5 Large Government Debt Holdings

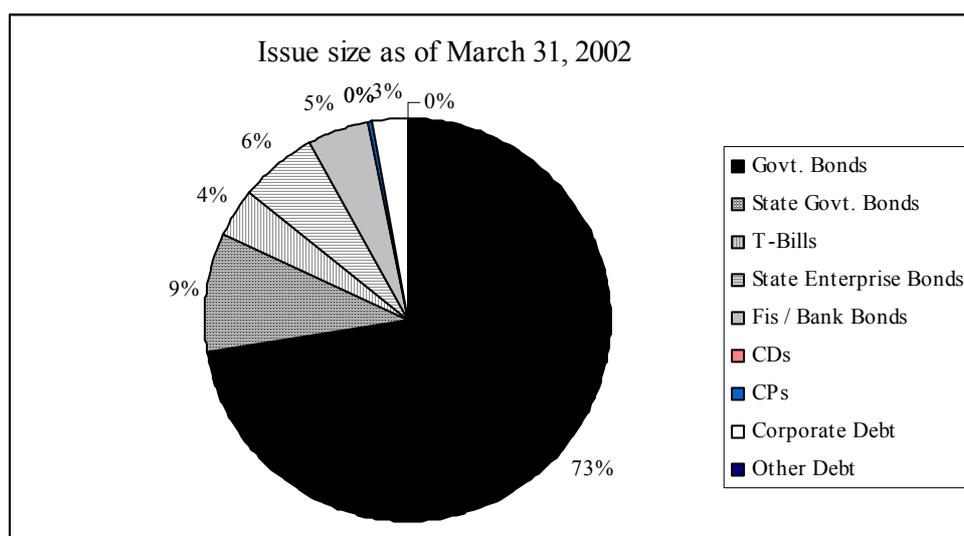
A large part of the funds mobilized by the financial system are pre-empted and absorbed by the Government, either in the form of holdings in SLR instruments or to maintain the CRR, as per the requirements of the RBI. Consequently, bank credit to the private sector is limited and tends to cross-subsidise banks' lending to the Government. In addition, the relatively lower credit-risk on Government debt also makes it an attractive destination for insurance and pension funds. Management of Government debt would be critical in order to ensure greater access to the corporate sector to funds in the financial system.

4.2.6 Inadequately Developed Secondary Corporate Debt Market

Government Securities (G-Secs) account for almost 75% of the outstanding stock and nearly 90% of the volumes traded in the secondary market. Almost 90% of corporate debt is privately placed. Even within this segment, almost 58% of the issuances are by FIs & Banks and about 26% represents issues of Public Sector Undertakings (PSUs) & Central/ State Govt. Guaranteed bonds. The debt securitisation segment is expected to increase manifold post-reduction in risk weights (for CAR) as announced in the Monetary and Credit policy for FY 2002-03. Key areas for future reform in the debt markets include regulating access to call money markets, phasing out non-bank participation in the call money markets, phasing out Primary Dealers (PDs) from the call money market, limiting the lending of and borrowings by scheduled commercial banks in the call money market to within prescribed prudential limits and dematerialisation of the market.

¹⁶ Almost two-thirds of scheduled commercial bank deposits have a maturity of one to five years and less than 10% have a maturity of more than five years.

Figure 9. Composition of Debt Market



4.2.7 Fragmentation of Equity Markets

In all, there are 22 functioning stock exchanges in India which is extremely high considering that more advanced markets like the United Kingdom have been operating efficiently with a single stock exchange.¹⁷ Worldwide 15 exchanges have already been demutualised (almost all in last two years) and another 14 have member approval for de-mutualisation. The high number of stock exchanges in India results in issues in regulation and information efficiency. Given the national reach of exchanges like the Bombay Stock Exchange and the National Stock Exchange, merger of stock exchanges could be explored as a means of reducing the number of exchanges and improving information flows and regulatory reach.

4.2.8 Issues Related to Internal Control and Regulation

While the RBI has increased regulatory oversight on the Indian banking sector, significant improvements are still to be effected, especially in the area of regulation of co-operative banks. RBI is the regulatory agency responsible for oversight vis-à-vis urban co-operative banks, whereas State co-operative banks and District Central Co-operative banks fall under the regulatory purview of the National Bank for Agriculture and Rural Development (NABARD). The duality of control over co-operative banks often results in confusion over the role of regulatory agencies and dilution of control over the institutions, as demonstrated by the series of scams involving co-operative banks (like the Madhavpura Mercantile Co-operative Bank). One possible solution could be to setup a separate supervisory board for co-operative banks as suggested by the RBI. Alternatively, the option of improving information flows and systems within and across

A series of co-operative bank failures forced the RBI to investigate co-operative banks and alerted it to dangers in securities trading by them. Amongst the chain of discoveries that followed were:

- *Nedungadi Co-operative Bank was completely controlled by a broker of the Bombay Stock Exchange and used primarily to fund his speculative activities.*
- *Madhavpura Mercantile Co-operative Bank's association with the broker Ketan Parekh had resulted in losses of over Rs 10 bn.*

While the RBI could exercise control on the activities of the co-operative banks it had no control on the activities of brokers who fall under the purview of SEBI.

Source: Extracts from "Ten Years Later, RBI Struggles With Scandal", The Financial Express, April 22, 2002

¹⁷ Rising to the Challenge in Asia: A study of financial markets: Volume 5 – India, Asian Development Bank, 1999,

regulatory institutions and more stringent reporting requirements for co-operative banks could be implemented.

There have been significant improvements in regulation of the securities market since SEBI was setup in 1992, especially in areas like electronic settlements, screen-based trading, enforcement of capital adequacy norms for stockbrokers, introduction of mark-to-market margins, dematerialisation, strengthened surveillance mechanisms and stricter disclosure norms and rolling settlements. However, in spite of the stricter oversight measures, market operators have still been able to exploit the system, as demonstrated by the various recent scams. Significant improvements can still be implemented in areas like compliance issues, especially in the smaller stock exchanges and mandatory compliance with Corporate Governance norms for listed companies. ADB could assist in the process by sponsoring technical assistance projects aimed at studying practices followed by other regulatory agencies and helping SEBI in benchmarking its practices with best-in-class regulatory practices elsewhere.

4.2.9 Micro-Finance

Micro-finance is defined as the provision of a broad range of financial services to the low-income and poor households and their enterprises. Current estimates of the number of NGOs involved in mobilising savings and providing micro-loan services to the poor is estimated to be in the range of 500-600. The network of cooperative societies and Regional Rural Banks (RRBs) established by the Government to meet the financial needs of this segment of the population has been a failure. The resultant vacuum has been filled by the advent of significant numbers of NGOs into microfinance. In recent years, NABARD, SIDBI and Rashtriya Mahila Kosh (RMK or National Women's Fund) have also started providing bulk loans to MFIs. NABARD also provides refinance to commercial banks that lend to Self-Help Groups (SHGs).

The cumulative disbursement of loans by DFIs to MFIs was Rs. 78 mn in 1998, reaching 1.5 mn households, or not even 1% of the poor in India. The total credit from commercial banks to the weaker sections is estimated at Rs. 290 bn at the end of March 1998, compared to total rural deposits of Rs. 1,330 bn. Thus, there is tremendous scope for increasing the reach of MFIs. The main constraints that will be faced in their expansion are as follows:

- **Capital:** Most of the MFIs are under capitalised. This is mainly due to their legal form (most are Societies/ Trusts), which do not have any concept of equity. This will restrict these MFIs' ability to seek adequate debt in the long run. In fact, most lending schemes to MFIs, such as by the RMK, are structured to suit NGOs registered as Societies/Trusts.
- **Regulation:** Presently, there is miniscule regulation of the sector. A recent RBI/NABARD taskforce has suggested a self-regulatory mechanism whereby the association/federation of MFIs would set accounting norms, code of conduct, etc. However, the regulatory set-up is not yet in place.
- **Earnings:** Most NGOs are making losses from their micro finance operations. This is mainly due to the fact that the lending rates, cost of funds, operating costs and loan losses were not following a financially sustainable model.
- **Asset Quality:** The overall asset quality of the MFIs seems good given the country's background on credit indiscipline and poor loan repayment rates. However, the asset quality could be further improved by focussing on the financial management skills of the MFIs.

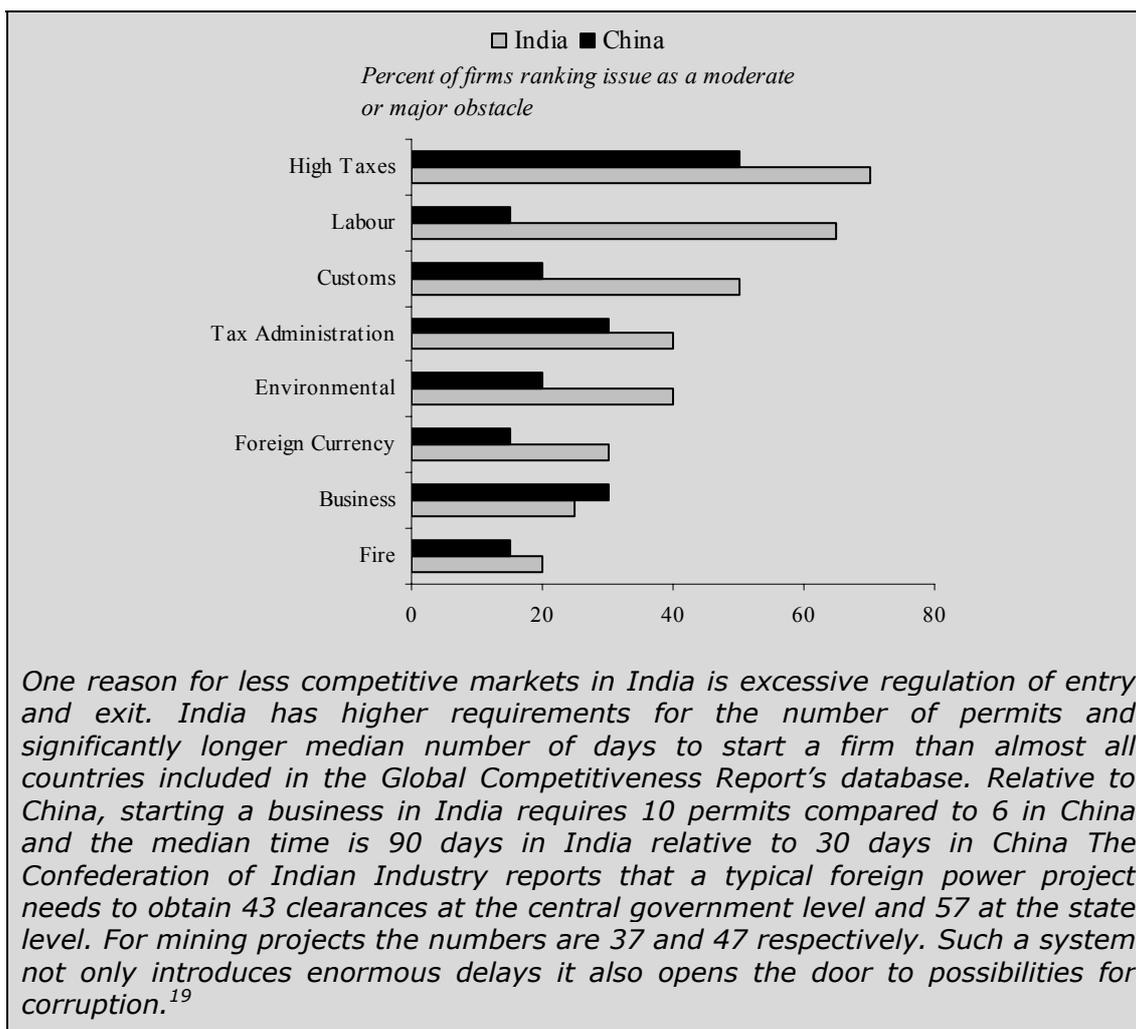
4.3 Public Sector Administration & Governance

Poor governance in the public sector has had adverse impacts on India's private sector. Extensive corruption has raised the costs of doing business, from getting approvals and

investment clearances to customs, taxation and purchase of public services. Corruption has been highlighted at all levels of government (Central, State, Local, Utility and Enterprise level). Several investment climate surveys have listed corruption as one of the biggest concerns of doing business in India. A survey on the business environment in India carried out by IFC lists corruption as one of the three big risks facing businessmen in India.¹⁸

Institutional strengthening interventions in key areas like Customs, Excise and Sales Tax administration would greatly help in improving the investment climate in India. Studies benchmarking Indian public administration practices with progressive economies would be especially helpful in this regard.

Figure 10. Regulatory Obstacles, 1999 (for Business in India)



4.4 Corporate Governance

Various studies conducted by professional organizations have shown a strong correlation between good corporate governance practices and market over-performance of corporates.²⁰ A survey carried out by CRISIL on Corporate Governance practices in emerging market economies of Asia ranked India as third in terms of the adherence to

¹⁸ The other two risks being commercial law enforcement and slow and opaque bureaucratic decision-making. Source: Business Environment and Surveys, IFC – March 2002

¹⁹ Source: Improving the Investment Climate in India, World Bank, February 2002

²⁰ Source: McKinsey's Survey on Corporate Governance, June 2000 & Credit Lyonnaise Securities Asia's survey on Corporate Governance of April 2001.

internationally accepted norms on Corporate Governance, behind Hong Kong and Singapore.

Despite generally good corporate governance standards, some of the leading causes of investor grievances in India are issues like:

- Protection of minority shareholder rights and
- Provision of timely, accurate and comprehensive information to shareholders which might help them in taking better informed investment decisions

Corporate governance is a much more critical issue in Public Sector Enterprises (PSE), as demonstrated in the box below.

*In the **power sector**, the State Electricity Boards are Statutory Corporations of the respective State Governments and are under the administrative control of the respective Department of Power. Political interference in administrative decision-making of the SEBs has resulted in a gradual erosion of their financial viability. Lack of rigorous administrative control has also resulted in a culture of widespread indiscipline amongst the employees of the SEBs. Accounts of most of the SEBs are outdated and are not easily available for review by the public. The integrity of accounts of SEBs is also under question, especially with respect to the reporting of operational performance. For instance the actual T&D losses of the Orissa SEB was found to be much higher than the reported T&D losses at the time of privatisation. Investor mistrust of the integrity of SEB accounts has also caused problems in the SEB privatisation process.*

4.5 Competition Policy

With the increasing integration of India with the global economy, Indian companies have to face increasingly higher levels of competition, both from within the country and from abroad. Recognizing the need to provide a level playing field for all players in the country, the Government decided to replace the existing Monopolies and Restrictive Trade Practices Act (MRTP), 1969 and introduced The Competition Bill, 2001 in Parliament in August 2001. The bill seeks to replace the MRTP Commission with a Competition Commission of India. The bill covers areas like prohibition of abuse of dominant power in a market and regulation of acquisitions, mergers and amalgamation of firms above a certain size. The role of the Commission would be to prevent business practices from having an adverse effect on competition, to protect the interests of consumers and to ensure freedom of economic action. The bill has been referred to a Parliamentary Standing Committee and will be finalised in due course. It would be difficult to gauge the impact of the constitution of this Commission till such time as the Bill is finalised and passed by Parliament.

4.6 Legal and Judicial reform

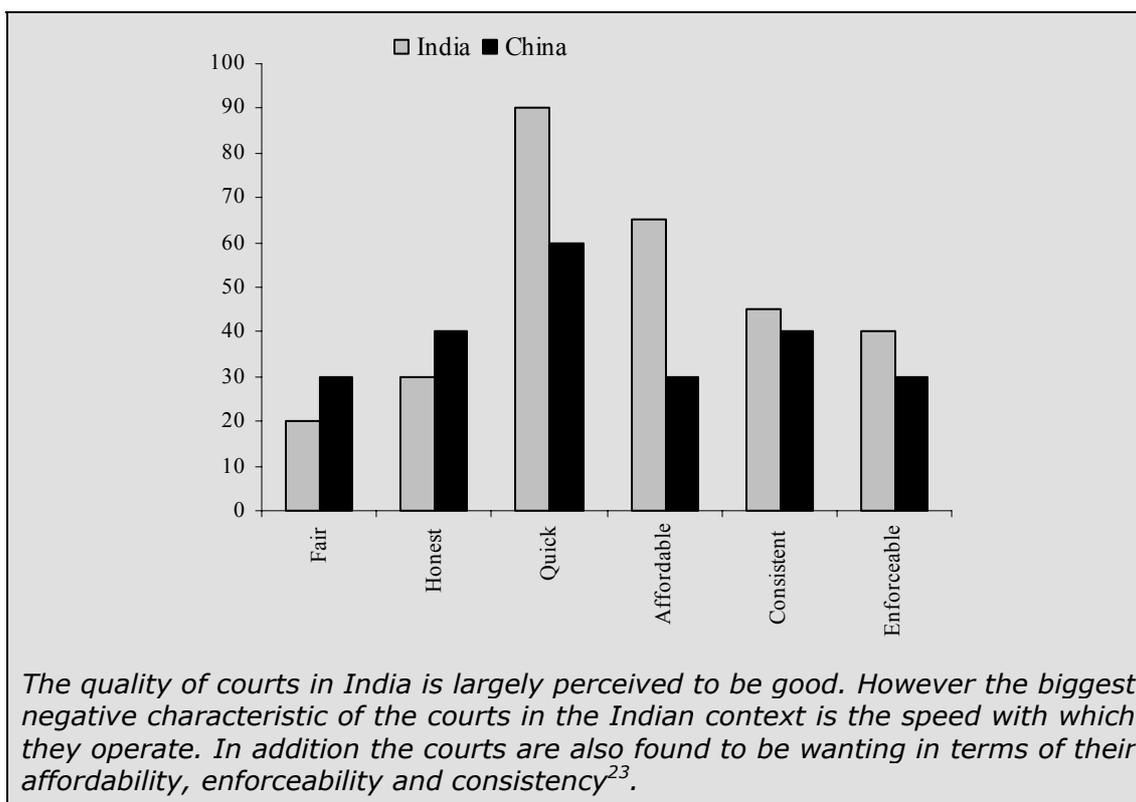
Another big negative factor in India's business environment has been the slow pace of legal and judicial reforms. Significant legal delays and uncertainty over property rights add to creditors' reluctance to lend to projects with high-risk profiles. Judgements on loan recovery processes, even for collateralized loans, often take up to 10 years. The establishment of specialized Debt Recovery Tribunals should have helped reduce some of the backlog, but in practice improvement remains slow. Recent studies have put the lost growth opportunity due to distortions in the land market in India at 1.3% of GDP per year.²¹ The main contributors to these distortions are the lack of clarity in ownership of land and long delays in settling title disputes.

Though India's Anglo-Saxon legal system is considered to be superior to the legal systems of most emerging countries and is cited as one of the attractive features of the Indian economy, it was found to be a positive factor in only 3% of FDI cases (in contrast,

²¹ Source: The Growth Imperative, McKinsey - 2001

26% of all those surveyed cited this as an important factor in their global investment decisions).²²

Figure 11. Percent Firms reporting poor judicial system, 1999



The numerous legal hurdles that have to be cleared before corporate restructuring further compound the problem of NPAs in the financial system. Despite significant reforms, key regulatory and tax issues continue to be the major obstacles that impede restructuring. Some of the key issues that have been highlighted in past studies on the subject are:

1. Inadequacy of bankruptcy and foreclosure laws and the lack of a facilitating environment for debt restructuring - Lack of well spelt out ground rules and frameworks for debt renegotiations are key reasons for adding to the time taken in completing restructuring.²⁴ Problems in this area are also in part due to the high levels of Government ownership in key lending institutions. Estimates show that it is entirely common for bankruptcy proceedings to take more than 2 years, and over 60% of liquidation cases before the High Courts have been in process for more than 10 years. Not surprisingly, when looking at the share of firms that go bankrupt, India has a much lower share (0.04% of total number of firms) than other emerging markets, such as Thailand.²⁵ The clauses on insolvency included in the Companies Bill 2001 aim to address these issues. The bill is currently pending in Parliament.
1. Inflexible labour laws impair the ability of manufacturers to reduce costs, liquidate unviable businesses and redeploy assets to more profitable businesses. The Global Competitiveness Report identifies restrictions on the hiring and firing of workers as one of the greatest challenges of doing business in India. A Confederation of Indian

²² Source: Report of the Steering Group on FDI, Planning Commission, 2002.

²³ Source: World Business Environment Survey - World Bank, 2000

²⁴ Business Restructuring - An analysis of issues and trends in India, PricewaterhouseCoopers, 2001

²⁵ Improving the Investment Climate in India, World Bank, February 2002

Industry (CII)-World Bank survey estimates that a typical firm in India would have 17% more workers than it desired and that the labour laws and regulations were the main reason why it could not adjust to the preferred level. The Budget 2001 speech of the Finance Minister announced initiatives to bring about changes in prevailing labour legislations in the country. These related to making the mandatory prior-approval requirement for retrenchment of labour applicable only for companies employing atleast 1000 workers instead of the current 100 workers and enhancing the separation period pay to 45 days for every year of completed service from the current 15 days. The budget speech also proposed to facilitate hiring of contract workers and promotes outsourcing activities. However, little progress has been made on the implementation of these proposals.

2. Stamp duty regulations, capital gains taxes and restrictions on carry forward of unabsorbed depreciation and business losses (though they are taxation issues per se, their modification requires legal changes) can significantly increase transaction costs, introduce uncertainty and impose restrictive covenants on companies attempting to restructure.

4.7 Conclusions

A good investment climate is essential for increasing PSP in its economy. Amongst the several constituents of a good investment climate are factors like a vibrant financial sector that is able to raise and efficiently allocate resources, a public administration system that designs and implements policies measures that facilitate smooth private sector activity and a legal system that upholds private property rights and allows businesses to operate in a free and fair environment.

As discussed above, there is huge scope for improvements on most of the above factors in India.

A perspective on the overall investment environment can be drawn from the willingness of foreign investors to invest their capital in India. India has been drawing approximately 0.5% of its GDP as FDI inflows, whereas comparable economies like China (3.8%), Brazil (5.7%) and Thailand (2%) have been able to steal a quantum lead on India.²⁶

²⁶ This number has been disputed by the IFC, which estimates that FDI in India is actually much higher at around 1.7% of GDP whereas FDI in China is actually much lower at around 2% of GDP. The reason for the discrepancy stated by IFC is that India's computation of FDI excludes reinvested earnings, subordinated debt and overseas commercial borrowings (which are included as standard practice elsewhere), whereas numbers reported by China are higher than actual numbers due to 'round-tripping'. Round-tripping refers to money that leaves China and comes back as FDI to take advantage of tax benefits. According to the Far Eastern Economic Review (Aug 2002), upto 50% of FDI in China would fall under this category.

5. CONSTRAINTS TO PRIVATE SECTOR PARTICIPATION- INFRASTRUCTURE

This Chapter describes the impacts of poor infrastructure and key initiatives required in each infrastructure sector for mitigating constraints to private sector development.²⁷ The adequacy of the diagnosis and feasibility and appropriateness of the proposed reforms, actions and directions for changes were arrived at after internal analysis, review of other studies and open literature and discussions with government officials, private sector developers and financial institutions.

5.1 Introduction

The benefits of liberalization that started in 1991 have been evident in the last few years. The Indian economy has performed well on several fronts. The real GDP has been growing by around 5-8% per annum since the beginning of the 1990s, attaining a high during 1996-97. India's foreign exchange reserves stand at over US\$55 bn. The current account deficit is manageable and the savings rate is healthy. However, to sustain the GDP growth, investment in infrastructure has to be increased appreciably and this has yet to materialise.

5.2 Costs of Inadequate Infrastructure

By most standards, and in all sectors, delivery of infrastructure services has lagged behind demand. The demand has been fuelled by the tremendous increase in population, accelerating urbanisation and by the success of India's industrial growth. Supply, till the early 1990s was the sole responsibility of the Government. The planning exercise, through the Five-Year Plans set out objectives for creation of infrastructure. However, these targets were rarely achieved and the gap between demand and supply progressively increased.

Though the growth in absolute terms in infrastructure has been impressive, it has not kept pace with demand or international standards. Per capita production of electricity in India is one-ninth of what it is in South Korea, while the number of phone lines per 1000 persons is one-sixth. Incidentally, both India and Korea started out on their path of planned development at roughly the same time in the early 1950s.

While the length of Indian national highways has grown by 70% in the last 50 years, goods and passenger traffic has grown by more than 5000% in the same period. Commercial vehicles in India travel an average of 200km to 250km in a single day compared to over 600km in developed countries. The economy approximately loses Rs. 200 to Rs. 300 bn each year²⁸ due to these inefficiencies, not to mention safety and pollution problems.

The ports of Rotterdam and Singapore, individually, logged 288mmt and 274mmt of traffic in 1995 versus a mere 235.6mmt handled by the country's 11 major ports. If a port operates at more than 70% capacity, it implies that incoming ships would be kept waiting. The congestion at the Indian ports is clear from the high capacity utilization of upto 140% in a few ports. The average berthing and turnaround time at Indian major ports is 12 days compared to a few hours in modern international ports. The additional cost burden due to use of second and third generation vessels (due to shallow drafts of Indian ports) has been estimated to \$250 million/year.²⁹ Container delay at Indian ports costs an additional \$ 70 million/year.

²⁷ The background to these issues and recommendations and details of the sector are given in the respective sector annexure.

²⁸ Source: Rakesh Mohan Committee Report

²⁹ Source: Rakesh Mohan Committee Report

Many Indian states are facing an acute shortage of power. The energy shortage was estimated at 7.3% (average) and 12.5% (peak) in the year 2001-02.³⁰ Commercial Losses due to power shortage went up from Rs. 42 bn in 92-93 to 63 billion in 94-95. A recent study by consulting organisation McKinsey suggests that India can save US\$12 bn by 2005 by improving efficiency in power transmission and distribution for bringing down the demand for new capacity from 18GW to 6GW.³¹

Recent studies have put the lost growth opportunity due to distortions in the land market in India at 1.3% of GDP per year.³² The main contributors to these distortions are the lack of clarity in ownership of land and long delays in settling title disputes.

These bottlenecks and shortages due to poor infrastructure result in delays, cost overruns, missed opportunities, lack of competitiveness in international markets erode the productivity of the economy. It is thought that the GDP growth rate is affected to the extent of 150 to 200 percentage points due to these factors.³³

5.3 Fund Requirement

Historically, India has invested around 5.5% of its GDP in infrastructure development, which is highly inadequate. Of this, around 80% has been contributed by the public sector. In contrast, high growth Asian economies like Taiwan and South Korea consistently invested close to 10% of GDP in infrastructure. Several authoritative studies have been undertaken to estimate the quantum of funds required for the upgradation of Indian infrastructure. The table below gives the estimates made in the India Infrastructure Report, 1996 (also known as the Rakesh Mohan Committee Report).³⁴

Table 3. Investment Requirements - 1996-2005

Sector	Gross Investment in Rs. Bn (FY 1996 - FY 2005)
Power	6,244
Urban Infrastructure	2,878
Roads	950
Ports	250
Other transport	2,046
Communications	1,915

Most State Governments and the Central Government are already in a financial crisis. It is unlikely that they would be able to enhance budgetary support for infrastructure in the near term. Thus, it is clear that if such large investment targets were to be met, additional resources from the private sector would need to be channelled into infrastructure.

5.4 The Indian Experience with PSP in Infrastructure- Introduction

Over the last eleven years, since liberalization began, the Government of India has introduced a series of legal and policy changes for attracting private investment in various infrastructure sectors. However, the success achieved has not been upto expectations and in many sectors, as is described above, significant demand-supply

³⁰ Source: Annual Report, Ministry of Power

³¹ Source: Financial Express, 26 August 2002.

³² Source: The Growth Imperative, McKinsey - 2001

³³ Source: India Infrastructure Report, 2001, 3-i Network

³⁴ These requirements were derived from growth assumptions for the Indian economy. Some of these assumptions were quite high (primarily in the manufacturing sector - 11% annual growth) and have not matched actual performance of the economy. Hence, the requirements could be lower in reality.

imbalances and bottlenecks remain. The lack of demonstrable success could be traced to a number of factors, which will be discussed shortly.

Different sectors have seen different levels of government activity seeking to increase private sector investment. Telecom, power and highways could be said to be fairly open to private sector participation, whereas housing has traditionally been a sector in which the private sector has played a dominant role. The ports sector has seen more moderate levels of activity while in water and sewerage, PSP is still in its infancy stages.

In July 1994, the Union Government announced the first Telecom Policy that laid down the framework for opening the telecom sector to private investment. The Government invited PSP in a phased manner, initially for value added services such as Paging Services and Cellular Mobile Telephone Services (CMTS) and thereafter for Fixed Telephone Services (FTS) through a process of competitive bidding. After some initial hiccups that set the industry back by about 2-3 of years, the liberalization process has stabilised. Many private developers were over-enthusiastic and bid unrealistically high license fees. The New Policy framework (1999) focused on creating an environment, which enables continued investment in the sector and allowed creation of communication infrastructure by leveraging on technological development. It also sought to address the issues being faced by the existing operators as well as defined a framework for new operators to enter the market.

In the power sector, reforms have been initiated at both the state and central government levels. Initially, the government announced that over 30,000 megawatts power would be generated with liquid fuel like Naphtha, Low Sulphur Heavy Stock (LSHS) etc. The state governments enthusiastically finalised several MoUs, as well as selected bidders through competitive bidding route. After the elapse of three years, the government discovered several difficulties in fuel linkage, problems of naphtha transportation, burden of foreign exchange etc. and so far a majority of the liquid fuel power plants have still not reached financial closure. Successes have been in the form of numerous states passing reform legislation, functionally unbundling vertically integrated SEBs, setting up independent Electricity Regulatory Commissions (ERCs) and focusing on significant reforms within the distribution sector, including private participation in the ownership and/or management of distribution units.

Major Ports and state maritime boards, to develop ports and terminals through private sector participation, have undertaken a number of initiatives. Nhava Sheva International Container Terminal at JNPT (outside Mumbai), PSA Terminal at Tuticorin (Tamil Nadu), APEDA at Kandla (Gujarat), are some of the examples of development of additional terminals through private participation. The state maritime boards have also developed greenfield projects with private sector participation, viz., Pipavav, Mundra and Dahej in Gujarat and Kakinada in Andhra Pradesh.

In highways, the National Highway Act, 1956 was amended in 1995 to allow private participation in projects for National Highway (NH) development and to enable the levy of tolls on national highways. It also offered various incentives to encourage private sector participation including permission for upto 100% direct FDI, income tax benefits for the project company for 10 years, reduction of import duties and tax concessions to the financial institutions. Upto Rs 60 bn from private sector participation is expected to flow into the NHDP in the next 5 years.

The following sections look at India's PSP experience in more detail. The experience has been evaluated with reference to important parameters such as regulation, financing, openness to foreign investment, project development process, legal and policy framework, capability and performance of public agencies and institutions and capability of private sector.

5.5 Regulation

Regulation has assumed heightened importance in recent years. The key drivers for this have been the opening up of the power and telecom sectors. Regulatory bodies have established a fairly good track record in these sectors. They have often held positions that ran counter to government directives or interests, thus demonstrating their independence (see *box*).

5.5.1 Telecom

The sector has been characterised by several changes in policy and regulation. The frequency of changes and the lack of consistency have increased the perception of regulatory risk attached to the sector.

The Telecom Regulatory Authority of India (TRAI) is largely regarded as an unbiased body though not as operator oriented as it was in its previous guise. The complaint is more towards its inability to implement the policies of the government and force the incumbent to comply with the same - a lack of teeth issue.

The TRAI would automatically become a stronger entity when it assumes the role of the Convergence Commission of India (CCI), when the Convergence Bill is passed as an Act of Parliament.

5.5.2 Power

Central Electricity Regulatory Commission (CERC) was constituted 1998 at the Central level and is in operation since then. Nineteen States viz. Orissa, Haryana, Andhra Pradesh, Uttar Pradesh, Karnataka, West Bengal, Tamil Nadu, Punjab, Delhi, Gujarat, Madhya Pradesh, Arunachal Pradesh, Maharashtra, Rajasthan, Himachal Pradesh, Assam, Chhatisgarh, Kerala and Uttaranchal have either constituted or notified the constitution of State Electricity Regulatory Commission (SERC). SERCs of Orissa, Andhra Pradesh, Uttar Pradesh, Maharashtra, Gujarat, Karnataka, Rajasthan, Delhi, Madhya Pradesh, Himachal Pradesh and West Bengal have already issued tariff orders.

Tariff reforms were undertaken by Regulatory Commissions and were characterised by attempts at tariff rationalisation, transparent administration of subsidies and their delivery mechanisms. However, the results of such initiatives have not been as desired because of political reasons or lack of implementation mechanisms.

A credible and predictable regulatory approach that outlines medium to long-run approach to tariff needs to be set out by the regulator. A multi-year tariff framework appears an essential pre-requisite to take care of perceived 'regulatory risk'. An operational framework for ensuring recovery of those costs, which are beyond the control of the utility, would also need to be put in place.

5.5.3 Ports

The Indian Ports Act, 1908 and the Major Port Trusts Act, 1963 have been amended to vest all tariff fixation powers in Major Ports with the Tariff Authority for Major Ports (TAMP). The scope of the Authority also extends to private operations in the Major Ports

Case Study: TRAI vs Government of India

In telecom, basic telephony service, licensees have been allowed to provide limited mobility to their subscribers within a local charging area. However, roaming services for the subscribers moving between local charging areas are disallowed. TRAI has taken the view that the limited mobility services should be implemented using the V5.2 air interface specifications with the stated intent of thereby limiting the mobility to the local charging area. The Department of Telecommunications has differed with this view and has advised both MTNL & BSNL that they may use the A+ air interface standard based on the MSC architecture. The Basic Service operators oppose the TRAI view contending that the V5.2 standard is outdated and even though it is more costly to implement, it is less efficient as compared to the A+ standard. The Cellular operators have supported the TRAI view claiming it a necessary step to prevent roaming from occurring. The matter is currently sub judis.

Note: The example given above is that of the Regulator taking a view, which was subsequently opposed by the Government. The example of the regulator 'acting' against the Government would require us to look at the older avatar of TRAI, which was dissolved - hence irrelevant.

administered by Port Trust. The Major Ports administered by corporate entities (e.g. Ennore Port), Minor Ports or greenfield private (minor) ports do not come under the ambit of TAMP, and the maritime boards and corporate entities administering these ports are given complete tariff autonomy. So far there have been no cases of significant effects of this discrimination, yet there are apprehensions from different stakeholders that a lack of a uniform regulatory mechanism could distort the competitive environment.

5.5.4 Water

In water sector, water tariffs in the majority of cities of India are too low to enable cost recovery even with zero physical and commercial losses. Revision of tariffs is infrequent and subject to tremendous public opposition. Since, consumers have become used to paying unrealistically low tariffs, PSP projects become extremely prone to affordability related risks. India is yet to see the formation of a body similar to UK's Office of Water Services (OFWAT).

5.5.5 Road Transport

In road transport sector, given the new complexities due to private sector participation and the increased need for sector regulation to achieve the objectives of passenger road transport, an Independent State Transport Authority would play an important role in the sector reforms.

5.5.6 Health

Private sector health providers in India remain largely unregulated. The price of treatment and quality of healthcare provided by the private sector shows a very wide degree of variability. Accountability is largely lacking. Over-medication and over-charging of patients is an oft-cited complaint. The problem is critical for the poorer sections on account of their relative lack of information on expectations of price and quality of treatment.

5.6 Infrastructure Financing

As discussed earlier, the most infrastructure sectors need large amount of funds, however, lack of adequate long-term funding is one of the bottlenecks. In India, most equity for projects is brought in form of strategic equity by large industrial groups. Slow progress has dampened the interest of many of these groups and that of international investors. Equity markets are also in a slump. Lastly, there has not been an active market in direct private and institutional equity in infrastructure projects. Long-term debt of more than 10-12 years maturity is also hard to come by. This results in a mismatch in the cash flows of projects and places immense strain on them in the initial years of their operation. Availability of longer maturity debt would definitely boost investor and business interest in infrastructure. Funding issues in some of the sectors have been summarised below:

5.6.1 Urban Housing

Given the huge investments required in this area, the scarcity of funds will continue to be an important constraining factor. All but the largest housing construction companies still predominantly rely on informal sources of finance. Though the retail housing finance has grown immensely in the last five years, the economically weaker sections of society who live in slum or squatter settlements still don't have access to formal sources of finance. This has been because of reasons such as eligibility requirements, lack of well established guarantors and financial asset holdings that qualify as acceptable collateral, inability of these persons to provide financial information in the form required by lenders and lack of evidence of regular income. Micro-finance schemes have made some progress and their coverage needs to be widened. The financing capability of NHB and HUDCO also need to be enhanced further if the housing shortage is to be tackled effectively and quickly.

5.6.2 Highways

Similarly, in highways the current set of private sector players are operating on an extremely small capital base since most of them they have evolved from being simple contractors. Availability of long-term capital can dramatically improve developer capability and interest in highway development at present stage in India.

5.6.3 Urban Water Supply and Sewage

In the water supply and sewage sector the estimated requirement for funds is far greater than what the Central and State Governments can provide for through plan allocations. Private sector funds have so far been scarce given the kinds of problems that the water and sewage sector faces. Finally, local bodies are too weak to support PSP projects or invest themselves. Thus, credit enhancement mechanisms for local bodies can go a long way in helping them raise resources and in attracting private sector interest in this sector.

5.6.4 Education

Government spending levels on education need to be increased and brought in line with the targeted 6% spending as per the National education Policy. The systems for resource distribution and regulation of spending need to be revamped to avoid the problems of thinly dispersed funds, crowding-out of maintenance and operational expenditure by salaries and infrequent capital investments. In addition, spending needs to be targeted at poor and rural areas. A significant start can be made in this direction by reallocation of the government subsidies for secondary and tertiary education towards elementary education. This would ensure that the poor receive the maximum benefit from government spending on education.

A critical requirement is to ensure that the resources that are currently allocated towards primary education get spent efficiently. This implies the involvement of communities in the planning, monitoring, financing and oversight of education services. Carefully planned decentralization of the education system can facilitate this process. It also implies undertaking significant measures to improve the administration quality and accountability of public education facilities and undertaking a comprehensive review of the oversight process for public educational institutions.

5.7 Foreign Investment

Most sectors have fairly liberal rules regarding FDI. However, the FDI inflow has not been upto expectation in all sectors due to problems in other influencing factors. Power and telecom have attracted the most FDI. The limit on FDI in various sectors is as follows:

Table 4. FDI Limits

Sector	FDI Limit	Details, Restrictions and Conditions
Roads	100%	Foreign equity upto 100 percent (with total foreign equity upto Rs. 15 bn) in construction and maintenance of roads, highways, toll roads, vehicular tunnels, pipelines, and ropeways permitted.
Ports	100%	Foreign investment upto 100 percent is permitted in construction and maintenance of ports and harbours and in projects providing support services to water transport, such as operation and maintenance of piers, loading and discharging of vehicles.
Telecom	100%, 74% or 49% in different categories	Foreign direct investment of up to 100 percent permitted in- <ul style="list-style-type: none">• Manufacturing of telecom equipment• Internet services (not providing international gateways)• Infrastructure providers (Category I)• E-mail services• Voice mail services Foreign direct investment of up to 74 percent (upto 49 percent under

		<p>automatic route) is permitted in:</p> <ul style="list-style-type: none"> • Internet services (providing international gateways) • Infrastructure providers (Category II) • Radio paging services <p>Foreign direct investment of up to 49 percent is permitted in:</p> <ul style="list-style-type: none"> • National long distance services • Basic telephones services • Cellular mobile services • Other value added services
Urban infrastructure and housing	100%	100% FDI permitted for development of integrated townships including housing, commercial premises, hotels, resorts etc. (conditions on minimum area/housing units) Requires prior government approval.
Power	100%	<ul style="list-style-type: none"> • There is no upper limit for foreign direct investment in respect of projects relating to electric generation, transmission and distribution (other than atomic reactor plants). <p>Private participation in transmission is limited to construction, maintenance and operation of transmission lines by the Central Transmission Utility and State Transmission Utility.</p>

5.8 Project Development and Implementation Process

Project development, i.e. conceptualising projects, conducting feasibility studies, structuring the project and conducting the procurement process remain areas of serious concern. To some extent, the lack of success can be attributed to the inexperience of government agencies in handling privatisation issues, privatisation being a recent introduction in India. At the same time, it highlights the need for sustained and enhanced support to improve the technical capabilities of the bodies that will procure private sector participation. In some cases, bids are invited in haste, without undertaking sufficient studies or evaluating all legal, institutional and financial aspects (see *box*).

A significant proportion of recent infrastructure projects have been plagued either by delays in implementation ('fast-track' power projects) or by post implementation issues (Kakinada port). The poor project-implementation record compounds the problem of low-fund availability and increases the already high inherent risk of infrastructure projects.

In power sector also, policy and planning studies are required to develop frameworks, models and project implementation schedules. Baseline data need to be collected and provided to investors. Investors perceive high levels of risks with respect to unreliable base line data. Such data is critical for investors who need to understand the risks in a particular distribution company's business before bidding. Cash strapped SEBs and State Governments seldom are able to provide financial resources for collecting such reliable data.

Case Study: Privatisation of 7 Minor Ports by Government of Maharashtra

The first site to be tendered was the Rs.5.5bn, 5 mmtpa, Alewadi project, 100 km. north of Mumbai.

Traffic Prospects: The Tarapur Industrial Area (TIA), located 6 km. from the project site and currently serviced by the Mumbai and JNPT ports, was to serve as the primary hinterland. Coal for a large power plant user (BSES) (currently being transported partly by road/rail and partly by sea from Paradip Port on the East coast to Magdalla in Gujarat and then onward by road/rail) also offered good switching prospects. However, BSES also has its own captive jetty at Dahanu and is exploring the possibility of the use of barge unloaders. BSES requirements were expected to contribute close to 40% of the traffic in Phase 1 of the project. TIA was to contribute 25%.

The initial response from the private sector (bid document purchases) in terms of the number of parties, both Indian and international, particularly in light of the progressive BOOT package, was very encouraging. The final response to tenders was, however, far from comforting. Only one bid by P&O Australia Ports Pty Ltd. was actually tendered and that too for an alternative site in the vicinity- Vadhavan. The discernable reasons for the lack of response were primarily

- Reservations regarding the natural site conditions at Alewadi -- the breakwater and dredging costs alone exceeded Rs. 2 bn.
- Excessive dependence on the bulk requirements of a single captive user BSES (40% of Phase I throughput). Additionally, there was no firm commitment that BSES would effect a switch to the new port from Bombay or its existing captive jetty at Dahanu. Till the tender date, uncertainty regarding BSES's own participation in the bid, kept other bidders away.

*The basic commercial viability of the proposal was thus foremost in question. The veracity of the Government prepared TEFR was also in question. **The fact that in the sequencing of the programme, Alewadi was the first to be offered was more due to the ready availability of site studies (rather than an overall attractiveness of the project).***

5.9 Legal and Policy Frameworks

This area has seen considerable activity since liberalisation. A number of important legislations have been amended, e.g. the Indian Ports Act, 1908 and the Major Port Trusts Act, 1963 have been amended to vest all tariff fixation powers with TAMP; the National Highways Act was amended to enable the government to toll them; the Urban Land Ceiling Act has been scrapped and so on. These steps have had a salubrious effect on the sector in general and PSP in particular. New legislation such as the Telecommunications Convergence Bill, Electricity Act, 2000 are also being proposed. They are expected to significantly alter the current roles of players in favour of regulators.

Some states such as Gujarat, Andhra Pradesh and Karnataka have enacted legislation (or issued policies through government orders) on PSP in infrastructure. In general, these legislations detail the procurement process, institutional and administrative mechanisms for approving projects and the support provided by the government. States like Maharashtra and Gujarat have also amended their Motor Vehicle Acts to enable tolling. A comprehensive policy and contractual framework consisting the BOOT Policy and Model Concession Agreement for BOOT Ports has been adopted by Gujarat to ensure uniformity and transparency in the treatment of private developers and various projects have already been implemented under its aegis.

Given more immediate and pressing problems in areas such as financial capability of public institutions and project structuring, legal hurdles are potential constraints but not limiting constraints, except for one key area – legislations relating to land reforms. The main problems are the lack of clarity in ownership of land and long delays in settling title disputes. Though the ULCRA has been repealed in some states, other states continue with it. Governments have simply failed in anticipating urban development patterns, providing for it or regulating it. City plans do not recognise or provide for high-density multi-use areas.

Some of the policy and institutional issues in various sectors have been summarised below:

5.9.1 Ports

Although the private sector involvement in ports and commercialisation in the sector are in a nascent stages of evolution, it is a opportune moment to review the objectives of various institutions such as TAMP, NSPC³⁵, Maritime Boards, and Ports Trusts to ensure that the planning and coordination in the sector is not weakened by multiple management control, inadequate communications and duplication of operative and administrative procedures.

5.9.2 Telecom

Telecom has seen relatively vibrant private sector response, and therefore the issues are dynamic in nature. Some of the policy issues are:

Interconnection: In India, interconnection has become the primary issue of concern for many private operators. As per the terms of the license, customers have the right to choose their domestic and international long distance service providers. However, this requires changes to be made in the network of the incumbent. BSNL has so far claimed technical non-feasibility as the reason for the delays, depriving the Domestic and International Long Distance Service Licensees direct access to its customers. Private operators are also not getting physical interconnection with the incumbent at all the points they would like. The pricing of the interconnection is another area of concern for private operators.

Availability of spectrum & clearances: Spectrum is allocated to the private operators through a license issued by the Wireless Planning and Co-ordination Wing (WPC) of the Department of Telecom (DoT). Upon obtaining the license, the licensee has to obtain the approval of the Standing Advisory Committee on Frequency Allocation (SACFA) for each of the sites at which the licensee intends to erect an antenna for using the allocated spectrum. The delay in grant of the WPC license and SACFA clearance has been cited by the licensees as one of the reasons for their delay in implementing their licenses and loss of revenue. Obtaining a Right of Way (RoW) has also proved to be a costly and time-consuming process.

License obligations: The older licensees for basic services are facing difficulties due to their obligation for providing Village Public Telephones (VPTs) in their license areas. The provision of VPTs is considered by private operators to be financially unviable.

Lack of "Level playing field": This has been in areas like access to and pricing of interconnection, license fee payable (BSNL license fees are reimbursed to it by the Government), number portability, directory services, etc. Private players who have obtained their licenses in the latest rounds of licensing have had to pay less as entry fee as compared to the players who came in the first round of licensing. The incumbents have also been denied a level playing field in certain areas e.g. both BSNL and MTNL (Incumbent access provider in the two largest cities of Mumbai and Delhi) have been denied an International Long Distance License until 2004. Additionally, as the incumbent, the tele-density targets set in the Plans are mostly sought to be achieved through BSNL as the incumbent operator.

5.10 Capability and Performance of Public Sector Enterprises/Institutions

³⁵ Navigational Safety in Ports Committee.

The ability of public agencies to deal with the private sector and procure their services depends on their own performance and financial health. This is especially the case where the contractual relation with the customer is still maintained by the public sector and the responsibility of collecting user charges lies with the public agency. Examples are roads (annuity projects), power (procurement of electricity by the SEB) and bulk water supply (bulk procurement of water by the ULB). Many projects in the power and water sector have stumbled primarily due to shortcomings on these aspects (see box).

Case Study: Power Projects Stalled by MPEB's Escrowable Capacity

By 1997, Madhya Pradesh Electricity Board (MPEB) had entered into power purchase agreements worth Rs. 65 bn. CRISIL conducted an assessment of MPEB's escrowable capacity and based on this, financial institutions agreed to fund projects with a total capacity of 2561 MW. Due to a revision of growth forecasts (of tariff and customer base), unsatisfactory reform measures and other commitments of MPEB, CRISIL downgraded the escrowable capacity to just 900 MW. So far, none of the four projects involved projects has reached financial closure.

It is widely accepted that most public agencies involved in providing infrastructure are inefficient, over-staffed and commercially unviable. This directly impacts their ability to create projects that are attractive to the private sector. The problem is of special concern in power utilities and urban local bodies (that provide the bulk of water, sewage and sanitation services).

Table 5. Performance of SEBs

	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
Return on capital (%)	-5.7	-2.2	-7.9	-12.3	-18.8	-26.3	-27.1
Commercial profit/loss (Rs. mn)	61252	87696	113049	139627	199716	230279	260130

The following table shows that in most urban services and cities, cost recovery is less than one-half. In projects such as bulk water supply and water/sewage treatment, the private sector will have to recover its investment from charges paid by the ULB. Given the financial difficulties of the ULBs (due to lack of commercial orientation as well as resistance to tariff rationalisation), the private sector considers it too risky to invest in the urban sector.

Table 6. Cost Recovery in ULBs

Service	Bangalore	Aurangabad	Mangalore
Water Supply			
RE/1000 ltr	3.84	1.32	1.24
RR/1000 ltr	3.50	0.74	0.68
% Cost Recovery	91%	56%	55%
Sewerage			
RE/100 ltr	0.87	0.28	0.49
RR/100 ltr	0.20	0.05	0.00
% Cost Recovery	23%	18%	0%
Solid Waste			
RR/tonne	0.34	0.38	0.11
RR/tonne	0.09	0.06	0.06
% Cost Recovery	26%	16%	55%
All figures in Rs. RE: revenue expenditure RR: revenue receipts Source: NIUA as quoted in India Infrastructure Report 2001, 3-i Network			

Low levels of cost recovery are accentuated by the problems of over-staffing, organisational inefficiencies, poor management decisions and over-ambitious and un-realistic mandates (cutting across ULBs, State Transport Undertakings, Port Trusts, SEBs) (See Box)

Thus, the poor financial health of public agencies is constraining them from investing in improvements and preventing them from sourcing private sector services.

For example, poor operation and maintenance of existing water assets lead to high physical losses in the system. Along with weak information systems, and billing & collection, this means that average local bodies won't recover more than 50% of the cost of water supply. Poor O&M is partly due to poor financial health (due to poor cost recovery) and partly due to weak technical and management practices. Thus, there is an urgent need to upgrade skills related to technical maintenance and billing and collection. As already discussed, poor financial health will limit the ability of a ULB to enter into a fruitful partnership with the private sector. Few private players would also be willing to take over a system with high losses and low levels of system information.

Case Study: Maharashtra State Road Development Corporation

MSRDC was established in 1997 with the specific mandate to develop the prestigious Mumbai-Pune Expressway. Earlier, the State Government had failed to secure a private developer for the project. MSRDC came out with flying colours and completed the project in good time. However, the entire project (~Rs. 20 bn) was financed by debt. MSRDC's success was also the cause of its un-doing. Soon, the Government entrusted various other highway, bridge, fly-over, mass transport and city road projects to it. MSRDC financed these through more borrowings. The Government has not yet delivered on its promises to supplement MSRDC's income through a cess or grants. The expressway has failed to attract the projected traffic and toll revenue. *In 2000-01 MSRDC made a loss of Rs. 168 mn.*

Similarly, the sustenance of existing PSEs and the utilisation of infrastructure created through the PSEs need to be considered while assessing the need for additional capacities through private sector development. For instance, in road transport sector it is essential to reform STUs so that the existing resources and infrastructure are put to best use. Otherwise, unregulated private sector participation would take away the market share of STUs, thus rendering the fleet, trained manpower, bus depots, workshops and terminal infrastructure of STUs further under-utilised. Therefore, optimisation of existing resources of STUs and restructuring of STUs should also be a high priority.

Similarly in ports, restrictive provisions on tariff and limitations on the execution of contracts by the Port Trusts still remain. In the case of Major Ports, privatisation initiatives are retarded by administrative requirements rather than by legislative prohibition. Successful corporatisation and, later on, privatisation of existing major ports could open new fronts for PSP. However, a pre-requisite would be the need for adequate skill upgradation and institutional strengthening of the Port Trusts to orient them to manage the private sector interface efficiently and in a balanced manner.

Also, privatisation of existing port facilities is unattractive given the current strength and inefficiency of labour employed. Private operators are deterred from taking over existing terminals by their bloated workforces. The strong industrial and political clout of the labour thwarts introduction of new labour practices and the ability to substitute labour by capital equipment to bring in desired efficiencies is inhibited.

In the health sector also, improving the performance of the public sector is critical to the overall goal of improving India's health indicators, not only in terms of improved access to quality health services but also in terms of a broader role that the public sector should play in overseeing and monitoring the performance of private sector service providers. Immediate steps required in this direction would be improving the funds-devolution chain, greater decentralization of resource collection and allocation, arresting leakages in the system and improving administration, management planning and budgeting for

public sector hospitals and clinics. This would require a relook at the roles to be played by various institutions and providing complementary institution-building training and support mechanisms for these institutions.

5.11 Private Sector Capability

The private sector is highly developed in the telecom and power sectors. Housing has traditionally been an area in which the private sector has played a dominant role. However, barring a handful or so large corporate developers, most private developers have an extremely local focus, not venturing beyond more than one-two cities. Quality of construction is a serious issue in the housing sector. In sectors such as road and water supply, the private sector is still in its infancy stages.

In highway construction, a start has been in attracting PSP, but mostly in the form of annuity projects (where a very low share of the risk is borne by the private sector and with assured returns). Here, private players are constrained by the small size of their capital base. So far, the water sector has not seen any major success in a large project requiring the private sector to invest significant sums. Some experience has been gained by the private sector through small operation and maintenance contracts.

Similarly, in road transport, the existing private players in the sector are highly unorganised and have small and localised operations, which makes it difficult for them to achieve economies of scale and scope. Also, the large number of unorganised players, without a sound regulatory framework, makes regulation of the sector a daunting task.

5.12 Other Impediments

Other than the issues discussed above, given the high risk profile of infrastructure projects, the lack of additional enablers such as back up infrastructure also sometimes hamper the private sector development.

For example in ports, a private sector port developer can possibly develop infrastructure within the port and undertake limited upgradation of connectivity, but he would be normally unable to develop a long connectivity linkages. A classic example of this is the greenfield port at Pipavav in Gujarat. It has a very good geographic location and a deep hinterland (central & northern India), yet it has not been able attract traffic because the nearest broad-gauge rail link is at Surendranagar, 280 km from the port. In such cases, the economic benefits of the port projects could outweigh the cost of developing the back up infrastructure, and therefore, infrastructure linkages should be established on urgent basis.

In health sector, most of the expenditure on health-care in India comes in the form of out-of-the pocket expenditure incurred at the time of treatment. Risk pooling mechanisms are largely absent, especially amongst the poorer sections of society that need it most. Developing a comprehensive health insurance system that reduces the costs associated with treatments of critical illnesses (which in most cases would signal the onset of the cycle of poverty) would be central to all efforts for future poverty alleviation measures.

6. ADB ASSISTANCE STRATEGY

The previous chapters have identified the key constraints to private sector development and thereby, have identified the specific initiatives and directions that are needed for reform. Keeping in mind ADB's comparative advantage, gaps that can be filled by ADB assistance, some priority initiatives for ADB have been identified in this chapter. Thus, this Chapter envisions the specific lending opportunities and the concomitant reforms in each sector as an integrated strategy for reform.

6.1 Roadmap for Private Sector Development

The following tables capture the key parameters in the roadmap for increasing the role of the private sector in infrastructure. In the tables, 'sector impact' refers to the overall impact on the economy whereas 'sector output' refers to the deliverables in terms of products, services or changes that would cause the 'sector impacts'.

6.1.1 Ports

Item	Indicators					
	Timeframe within					
	5 years ago	Current	5 years	10 years	15 years	
A. Sector Impacts	Incentive for efficiency improvements created & trade cost isolated from Port Trust inefficiency Small beginning made in labour reforms	Private investment supplements public sector efforts	Greater impetus to international trade Full operational and commercial autonomy to Port Trusts Coordinated approach to planning and implementation	Greater allocative efficiency in port investments & greater investment flows Port productivity in line with international norms		
B. Sector Outputs	Formation of TAMP and amendment of legislation Merger of Labour Boards Privatisation of greenfield Minor Ports	Formation of Maritime Authority being considered Corporatisation of Major Ports Privatisation of new terminals at Major Ports	Reorganised administrative and regulatory framework Uniform regulation of all ports	Full privatisation of Major Ports		
C. Sector Issues and Constraints	Strengthening of and increased autonomy to Port Trusts Labour inefficiencies and restrictive work practices Inadequate back up infrastructure Planning & coordination issues and uncertainty regarding the powers & ambit of the TAMP and other agencies					
D. Actions, Milestones, and Investments	By Issue		Schedule	By Agency		
				ADB	Others/ External	Govt
Improving connectivity & back up infrastructure for ports			Y1	✓	WB, IFC	IR, NHAI
Streamlining planning & coordination issues & roles of various agencies responsible for port development			Y2	✓ TA ³⁶	WB	MoST, TAMP

³⁶ Technical Assistance

	Addressing labour inefficiencies and excess work force in Port Trusts	Y2	✓ TA	WB	PTs, MoST
	Corporatisation of Port Trusts	Y3	✓ TA	WB	MoST
	Lending Funds to new port projects	Y2-5	✓	WB, IFC	

6.1.2 Power

Item	Indicators					
	Timeframe within					
	5 years ago	Current	5 years	10 years	15 years	
A. Sector Impacts	Private capital supplementing public funds in generation	Increase in accountability and efficiency through corporatisation Private capital supplementing public funds in generation and distribution	Increase in accountability and efficiency Improved credit-worthiness of public utilities and impetus to privatisation of distribution	Greater flow of private investment Reduced public debt and burden on public finances		
B. Sector Outputs	IPPs make a beginning ERC legislation and formation of CERC	SEB unbundling SEB corporatisation Transmission privatisation begins Regulatory Commissions being formed in States	All ERCs constituted Financial restructuring of SEBs			
C. Sector Issues and Constraints	Need for institutional strengthening of SEBs Need for institutional strengthening of regulators Need for financial restructuring of SEBs Resolving procedural and transitional issues in privatisation of distribution Shortage of funds for capital investment and working capital					
D. Actions, Milestones, and Investments	By Issue		Schedule	By Agency		
				ADB	Others/ External	Govt
	Institutional strengthening of power regulators		Y1	✓ TA	WB, DFID	State Govt.
	Institutional strengthening of SEBs		Y1	✓ TA	WB, DFID	State Govt.
	Financial restructuring of SEBs		Y3	✓ TA	WB, DFID	State Govt.
	Direct financial support to SEBs and distribution entities		Y3	✓	WB, IFC	
	Direct lending opportunities to private sector during transition period issues in Power distribution		Y3	✓	WB, IFC	
	Opportunities for direct lending to generation entities		Y2-5	✓	WB, IFC	

6.1.3 Telecom

Item	Indicators				
	Timeframe within				
	5 years ago	Current	5 years	10 years	15 years
A. Sector Impacts			Minimum Government ownership and control of sector Reduction in Regulatory Risk	Substantial improvement in access to present day non-commercial segments	

B. Sector Outputs	TRAI formed Value added services opened to pvt sect Basic services opened to pvt sect	VSNL privatised	BSNL and MTNL privatised Strengthening of regulatory framework			
C. Sector Issues and Constraints	Ensuring institutional coordination and streamlining roles of various agencies Resolving interconnection, accounting separation and tariff issues High investment requirements especially w.r.t. unattractive rural areas and VPT obligations					
D. Actions, Milestones, and Investments				By Agency		
	By Issue		Schedule	ADB	Others/ External	Govt
	Resolving interconnection & tariff issues in telecom		Y1	✓ TA	WB	MoC
	Institutional coordination and role of various agencies in the telecom sector Privatisation of BSNL & MTNL		Y1 Y2	✓ TA	WB	MoC
Meeting high investment requirement for setting up telecom networks		Y1-5	✓ TA	WB, IFC	MoC, DoD	

6.1.4 Passenger Road Transport

Item	Indicators					
	Timeframe within					
	5 years ago	Current	5 years	10 years	15 years	
A. Sector Impacts	Elimination of public sector monopoly	Unregulated growth of small-scale low-quality private sector	Competition freed and stable regulatory regime Incentive to create economies of scale in private sector Improved return on capital for public assets	Reduced burden on State-level public finances Improved urban environmental conditions		
B. Sector Outputs	Amendment of Motor Vehicles Act		Formation of independent regulatory Road Transport Authorities Financial restructuring of RTCs	Privatisation of RTCs		
C. Sector Issues and Constraints	Unregulated growth of a low-quality private sector Conflict of interest as governments are regulators and operators of transport corporations Unviability of RTCs is a hindrance to their privatisation					
D. Actions, Milestones, and Investments				By Agency		
	By Issue		Schedule	ADB	Others/ External	Govt
	Formation of Independent State Transport Authorities (STA) Increasing autonomy of STUs Modular privatisation of assets of STUs		Y3 Y5	✓ TA	WB	State Govt
	Promote economies of scale of private sector transport providers		Y3	✓ TA	WB	State Govt RTA

6.1.5 Housing

Item	Indicators					
	Timeframe within					
	5 years ago	Current	5 years	10 years	15 years	
A. Sector Impacts		Reduction in market imperfections and supply restrictions	Urban renewal and impetus to economic and cultural growth of cities Improved attractiveness for foreign investors Impetus to organised growth & quality private housing developers	Sustainable urban growth and improved environment conditions Reduction in social and economic disparities		
B. Sector Outputs	National Housing Policy Draft National Slum Policy formulated Growth of private housing finance providers	Repeal of ULCRA, Model Acts, etc.	Greater spread of micro-finance institutions Improved urban planning process Regulation of standards and quality			
C. Sector Issues and Constraints	Supply of land and developed sites still restricted by regressive laws in most States Poor urban planning process and weak ULBs preclude adequate infrastructure Informal and LIG sector still cant access institutional finance due to institutional and procedural difficulties Outdated legal systems w.r.t. tenancy, titles, stamp duty etc. Large-scale slum redevelopment projects have failed and new formats need to be promoted Poor control/regulation of quality of processes and materials used in construction					
D. Actions, Milestones, and Investments	By Issue		Schedule	By Agency		
				ADB	Others/ External	Govt
	Increasing the availability of land and developed sites for housing construction		Y2	✓ TA		State Govt, ULBs
	Improvement of urban planning process		Y1-5	✓ TA	WB, USAID	State Govt, ULBs
	Provision of funds to the private housing developers and housing finance institutions		Y1-5	✓	WB, USAID	
	Increase lines of credit for micro-finance initiatives		Y1	✓	WB, USAID	

6.1.6 Highways

Item	Indicators				
	Timeframe within				
	5 years ago	Current	5 years	10 years	15 years
A. Sector Impacts	Creation of specialised institutions and fiscal incentives	Pace of NHDP increased with significant PSP portion	More accountability in use of public funds Greater access to markets and increase in trade opportunities	Reduced burden on public finances	

B. Sector Outputs	NHAI operationalised NH Act amended to allow pvt sect and tolling Policy and tax incentives	PSP in NDP O&M being privatised Road Fund created	Independent Road Board needed Strengthening of State-level institutions and dedicated funds Greater extent of PSP in future highway projects			
C. Sector Issues and Constraints	Need to give greater emphasis to PSP in future highway construction and maintenance programmes Lack of adequate professionalism and accountability in the operation of the CRF is a potential constraint State-level PWDs/RDCs lack technical competence and financial viability Under-developed long-term debt market and lack of institutional equity investors					
D. Actions, Milestones, and Investments	By Issue		Schedule	By Agency		
				ADB	Others/ External	Govt
	Strengthening the institution of the Central Road Fund and constituting a Road Board for its management		Y2	✓ TA	WB	NHAI, MoRTH
	Increasing role for PSP in highway development		Y1-5	✓ TA	WB	NHAI
	Strengthening of State PWDs and their contracting capacity		Y1-5	✓ TA	WB	State Govt, PWDs
Increasing availability of capital and long-term debt to private sector road developers		Y1-5	✓	IFC		

6.1.7 Water Supply and Sewerage

Item	Indicators					
	Timeframe within					
	5 years ago	Current	5 years	10 years	15 years	
A. Sector Impacts		Beginning in o&m by private sector	Capital inflows from private sector Improved credit-worthiness of ULBs	Improved urban environmental conditions Reduced mortality and morbidity due to water-borne diseases		
B. Sector Outputs	Accounting reforms	Accounting reforms Tariff increases Limited O&M improvements through PSP Technical capability strengthening	Institution strengthening Regulatory bodies Tariff reforms	Corporatisation of utilities Water Concessions for entire cities		
C. Sector Issues and Constraints	Poor financial health of ULBs due to tariff rigidity, high technical and commercial losses Poor technical capability of ULBs in O&M and contracting with private sector					
D. Actions, Milestones, and Investments	By Issue		Schedule	By Agency		
				ADB	Others/ External	Govt
	Tariff and regulatory reforms		Y1-3	✓ TA	WB, USAID, DFID	State Govt
Improving O&M of existing assets		Y1-3	✓ TA	WB, USAID, DFID	State Govt, ULBs	

	Improving institutional capability and financial credibility of local bodies	Y1-5	✓ TA	WB, USAID, DFID	State Govt, ULBs
	Addressing shortage of funds for water sector	Y3-10	✓	WB, IFC, USAID	

6.1.8 Health

Item	Indicators					
	Timeframe within					
	5 years ago	Current	5 years	10 years	15 years	
A. Sector Impacts			Improved quality of health care provided by private sector Lower mortality	Improved human productivity and quality of life Improved access and safety nets		
B. Sector Outputs			Improved regulation of private sector Improved health care statistics	Formation of health care insurance/social security system		
C. Sector Issues and Constraints	Developing and implementing a social security/health insurance system Lack of a national health care accounting system Unregulated growth of private sector health care providers					
D. Actions, Milestones, and Investments	By Issue		Schedule	By Agency		
				ADB	Others/ External	Govt
	Regulation of private sector health providers		Y1	✓ TA	WB, USAID	MoH
	Setting up a national health accounting system		Y1-5	✓ TA	WB, USAID	MoH
	Setting up a health insurance/social security system		Y3-7	✓ TA	WB, USAID	Central Govt
Financing the health insurance/social security system		Y7	✓	WB		

6.2 High Value Opportunities for ADB

In order to identify priority high value business opportunities for ADB, the study evaluated each sector in terms of key constraints to PSP with a view to identify sectors where:

1. Lending activity can be initiated in the near future;
2. The requirement of funds is likely to remain sufficiently high in the foreseeable future;
3. Significant level of attendant reform has already been carried out successfully; and
4. Private sector participation in the sector is demonstrated and established.

Based on the foregoing parameters, a table of recommendations has been developed. Housing, highways, ports, power, telecom and financial sector reforms have been identified as high value opportunities.³⁷ Areas of reform have been divided in three sections as given below:

6.2.1 Creating Enabling Conditions

These are the set of parameters under which the public and private sectors have to operate. They primarily include factors such as the regulatory environment, legal and

³⁷ A list of upcoming projects in these sectors has been provided as Annexure 10.

policy framework, financial markets and public-private participation formats for undertaking projects.

6.2.2 Public Sector Reform

Public sector organizations are the primary procurers of private sector expertise in design, finance, construction, operation and maintenance of infrastructure projects. Hence, the success of a PSP endeavour will depend to a large extent of the capability of the public sector. This capability extends to both technical and financial matters. The sub-categories of issues dealt with include planning and coordination, institutional and public enterprise reform, financial restructuring of public sector entities and sector restructuring (unbundling, corporatisation and privatisation).

6.2.3 Private Sector Development

This set of recommendations seeks to improve the private sector's capability to partner the public sector in infrastructure development. The areas of reform include assistance in increasing the financial strength of private firms and increasing the variety of financing instruments that they can access.

6.2.4 Summary of Recommendations For High Value Opportunities

Creating Enabling Conditions	Public Sector Reform	Private Sector Development
PORTS		
Improving connectivity & back up infrastructure for ports Streamlining planning & coordination issues and roles of various agencies responsible for overseeing port development	Addressing labour inefficiencies and excess work force in Port Trusts Corporatisation of Port Trusts	Lending Funds to new port projects
POWER		
Institutional Strengthening of Power Regulators	Institutional strengthening of SEBs Financial Restructuring of SEBs Direct financial support to SEBs and distribution entities	Direct lending opportunities to private sector during transition period issues in Power distribution Opportunities for direct lending to generation entities
TELECOM		
Resolving interconnection & tariff issues in telecom Institutional coordination and role of various agencies in the telecom sector	Privatisation of BSNL & MTNL	Meeting high investment requirement for setting up telecom networks
HOUSING		
Increasing the availability of land and developed sites for housing construction Increasing the access of the poor to formal sources of finance and micro-finance	Improvement of urban planning process	Provision of funds to the private housing developers and housing finance institutions for targeted lending Increase lines of credit for micro-finance initiatives
HIGHWAYS		
Strengthening the institution of the Central Road Fund and constituting a Road Board for its management	Increasing role for PSP in highway development Strengthening of State PWDs and their contracting capacity	Increasing availability of capital and long-term debt to private sector road developers
FINANCIAL SECTOR		
Strengthening regulatory functions of RBI and SEBI Development of long-term debt markets Development of secondary markets for corporate debt	Recapitalization and privatisation of the Public Sector Banks and FIs Corporatisation and consolidation of stock exchanges	Support to the ARC, Credit Information Bureau

6.3 Role of Other Aid Agencies

The activities of other bilateral or multilateral aid agencies in India have been mapped to minimise duplication of efforts by the various organisations. The study has restricted itself to only those assistance programs that are currently underway.

Sector	Lending to Public Sector Projects	Enabling Environment	Public Sector Reform	Private Sector Development
Ports	ADB			★
Power			ADB, WB, DFID	★
Telecom	CIDA			IFC ★
Transport	WB		WB	
Roads	ADB, WB, OECF		WB	★
Housing	ADB, WB, OECF	★	WB	USAID, ADB, IFC ★
Water Supply and Sewage	USAID, WB, AUSAID, JBIC, ADB		USAID, WB	
Health	USAID, CIDA, AUSAID, WB		WB	WB, USAID
Financial Sector		USAID		★
Education	WB, GTZ			UNICEF
★ High-value opportunities for ADB as identified in section 6.2				

6.4 Conclusion

As the preceding sections have shown, considerable progress has been made in increasing the role of the private sector in infrastructure. In telecom, the private sector is more visible than the erstwhile government monopolies. Firm steps forward have been taken in the highways and ports sector, which need to be consolidated.

Many key reforms are yet to take place, be it reduction of transmission and distribution losses or revision of water tariffs or improving the financial health of the public utilities that will transact with the private sector. It is imperative that the sequence of reforms is timed correctly. A prudent strategy would be to focus on technical assistance, institutional capability building and support activities, but at the same time create high visibility successes through pilot and demonstration projects in sectors in which PSP is still at an early stage.

Strengthening the private sector's capability is also an important need. This could be achieved through enhancing their capital base and widening the range of debt instruments available in the market. Supporting deserving projects through insurance and guarantee products would bring the risk profile of these projects more in-line with the risk bearing ability of the private sector and financial markets, thus giving an impetus to PSP.

7. ANNEXURE 1 - PORTS

7.1 Sector Structure

There are 12 Major Ports under the executive responsibility of the Central Government. The Major Ports together accounted for around 76% (281 mn mt) of the total port traffic handled in 2000-01. Of these 12 Major Ports, 11 are administered by respective Port Trusts formed under the Major Port Trust Act, 1963. The Port Trusts are statutory bodies, which operate on semi-autonomous, non-profit, non-tax principles under the jurisdiction of the Ministry of Shipping, Government of India. There are 192 Minor & Intermediate Ports, which are administered by the respective State Maritime Departments/Boards. Together Minor Ports handled about 24% (86 mn mt) of total sea-borne traffic in 2000-01. Ports in India are governed, administered and regulated by a number of Government and statutory nodal authorities.

The Ministry of Shipping: The Major Ports are controlled by the Ministry of Shipping (MoS) headed by a Cabinet Minister. Apart from ports, the Ministry also controls shipping, and inland waterways. The Ministry functions as a central policy framing & port planning authority as well as the supervisor & approver of Port Trust functions.

Port Trusts & Board of Trustees: Port Trusts are established as Local Bodies. This entitles the Port Trusts to function for public purposes and take on a part of the Government's affairs, rights and responsibilities in local areas. Under the "local body" status, as organizations with a non-profit objective, they are exempt from paying corporate taxes.

The Dock Labour Board (DLB): The DLB, a tripartite body of workers, employers and Government representatives was set up in the 1950s. Four labour schemes - Stevedoring, Foodgrain Handling, Clearing & Handling and Chipping & Painting - were formulated. Labour needed to be hired through the DLB for any of these schemes.

Tariff Authority for Major Ports (TAMP): As described below, the Central Government has recently instituted an independent Tariff Authority for Major Ports (TAMP).

Navigational Safety in Ports Committee (NSPC): The Navigational Safety in Ports Committee (NSPC) has been instituted as a non-statutory standing committee, mandatory clearance from which is required before the commissioning of any new port facility.

State Maritime Boards: Three states (Gujarat, Maharashtra and Tamil Nadu) have instituted State Maritime Boards. The powers, freedom and authority of the Maritime Boards are similar to those of the Boards of Trustees of the Major Ports.

The Indian Ports Act, 1908 and the Major Port Trusts Act, 1963 have been amended to vest all tariff fixation powers in Major Ports with the Tariff Authority for Major Ports (TAMP). The Major Ports that are administered by Port Trusts come under the jurisdiction of TAMP. The scope of the Authority also extends to private operations in the Major Ports administered by Port Trust. The Major Ports administered by corporate entities (e.g. Ennore Port), Minor Ports or greenfield private (minor) ports do not come under the ambit of TAMP.

7.2 Sector Performance

The aggregate port capacity of all Major Ports as on 31st March 2002 was 291mn mt as against a total traffic of 281mn mt. The capacity utilisation level at 97% compares very unfavourably against the internationally desired standard of 70%. A port-wise, commodity-wise comparison would further reveal bottlenecks in the capacity. Excessive capacity constraints directly impact the quality of service rendered by the ports by way of high pre-berthing detentions, high turnaround time of ships and less than adequate maintenance and upkeep of facilities.

Natural constraints like low draft also directly limit the maximum size of vessels calling at Indian ports. In 2000-01, 68.3% of the total vessels that called at Indian ports were of size smaller than 30,000 DWT. This is despite the fact that bulk cargo (dry and liquid) accounts for about 65% of the cargo handled. Thus, an increase in cargo volumes perforce translates into a large number of smaller sized vessels, which adds to the congestion.

Inefficiencies and delays are compounded by technological obsolescence of equipment, constrained stack yards and warehouse facilities, unavailability of adequate navigation facilities, excessive labour, highly unfavourable manning scales, lengthy customs and documentation procedures, poor intra-port management, a fragmented service provider network and hugely inadequate back-up infrastructure and linkages. Planning and coordination of cargo handling activity is weakened by multiple management control, inadequate communications and duplication of operative and administrative procedures.

The lack of efficiency and the restrictive practices characterising labour at Indian ports is well documented. Labour remains one of the key issues impacting productivity. Some of the critical concern areas include:

- Innumerable and archaic work categorisations constraining substitutability- Labour resistance to undertake certain classes of work and resistance to interchanging and substituting
- Lack of flexibility of labour to adopt to different job requirements
- Unrealistic and outdated piece rate norms
- Ineffective and poorly designed incentive schemes
- Gang systems of work allocation leading to over-manning and inflexibility
- Institutionalised speed money payments
- Notional booking of labour in mechanised and container handling although not actually assigned

The Major Ports Trusts have an official labour force of 76,698 (Class B) for an annual throughput of 281mn mt in 2000-01. Over and above this, there are about 7,000 workers of the Dock Labour Board. The labour costs account for 45% of the operating expenditure at the Major Ports, as compared to just 15% on operation and maintenance. The extent of over-manning is to be judged from the fact that a substantial amount (40%) of the annual throughput is liquid bulk in nature and doesn't require a significant manpower.

As Port Trusts are set up under a separate statute, they have separate accounting norms and they report only to the Ministry of Shipping. Currently most Major Ports Trusts follow pay-as-you-go policies in meeting employee retirement liabilities, which could amount to large sums, if properly accounted for. The corporatisation of Major Port Trusts would help in re-stating the accounting statements and identify unfunded liabilities. The increased autonomy after corporatisation would also mean additional fiscal responsibility and closer scrutiny by lenders and investors.

Investments of about Rs. 150 bn are already underway in various projects at Major and Minor ports. A part of this investment (~Rs. 50 bn) has come from borrowings by Major Ports and budgetary allocations, and the balance through PSP. Various estimates show that the sector would need additional Rs. 15,000 to Rs. 200 bn to augment the sectoral capacity to the desired level of 550 mmt.³⁸. This additional investment could be both in facility upgradation and in greenfield development. However, the former option would yield better results, if accompanied with adequate reform measures at existing Major Ports.

7.3 Reform and PSP Initiatives

Major ports and state maritime boards, to develop port terminals through private sector participation, have undertaken a number of initiatives. Nhava Sheva International Container Terminal at JNPT, PSA Terminal at Tuticorin, APEDA at Kandla, are some of the examples of development of additional terminals through private participation. The state maritime boards have also developed greenfield projects with private sector participation, viz., Pipavav, Mundra, Dahej (Gujarat), Kakinada (Andhra Pradesh).

Ennore Port, the 12th Major Port in the country, has been set up on landlord concept and is being administered by a corporate entity – Ennore Port Ltd. – set up under the Companies Act, 1956.

Foreign direct investment upto 100% under automatic route is permitted in projects for construction, operation and maintenance of port facilities in the country. However, so far only a few projects have been able to attract foreign investments, e.g. NSICT at JNPT, PSA at Tuticorin, PSA & Maersk at Pipavav and ISPL at Kakinada & Dhamra.

Through a Voluntary Retirement Scheme (VRS) and supercession of the DLB, MbPT gained flexibility to deploy the labour interchangeably within the four labour schemes, although with some limitations. Followed by this example, many other Major Ports have merged their DLBs with Port Trust Labour. Though flexibility of redeployment is still a problem, the merger of dock labour with port trust labour has been the beginning of labour reforms in the sector.

A neutral regulatory body, the Tariff Authority for Major Ports (TAMP), has been set up to guard against monopolies in ports. Increasingly, the authority is aiming to reward efficiencies in the port operations – a positive step towards bringing in accountability in port management. The jurisdiction of TAMP covers only the Major ports which are administered by Port Trusts or private terminals in Major Ports which are administered by Port Trusts. Further scope for regulatory reforms calls for uniformity of regulation across players.

7.4 Issues in Development of PSP

The key issues that are impacting port development are:

7.4.1 Increased Autonomy to Port Trusts

The Major Port Trusts Act, 1963 and the State Maritime Board Acts include provisions for participation by the private sector. However, restrictive provisions on tariff and limitations on the execution of contracts by the Port Trusts still remain. In the case of Major Ports, privatisation initiatives are retarded by administrative requirements rather than a legislative prohibition.

³⁸ The India Infrastructure Report - Rakesh Mohan Committee

To remedy this, more autonomy needs to be granted to the Port Trusts. However, a pre-requisite would be the need for adequate skill upgradation and institutional strengthening of the Port Trusts to orient them to manage the private sector interface efficiently and in a balanced manner. Successful corporatisation and, later on, privatisation of existing major ports could open new fronts for PSP and efficiency improvements.

7.4.2 Labour Inefficiencies and Restrictive Work Practices

The presence of Dock Labour Schemes impedes the establishment of a terminal concept within the existing facilities of Major Ports. These schemes lack flexibility and the workers affiliated to one scheme would not do the tasks pertaining to others. The benefit of mechanised handling is offset by the impossibility of reduction in labour costs. Privatisation of existing facilities is unattractive given the current strength and inefficiency of labour. The strong industrial and political clout of the labour thwarts introduction of new labour practices.

7.4.3 Inadequate Back up Infrastructure

Hinterland connectivity is a very important factor for success of any hinterland-serving port – in fact, a good port is as good or bad as its connectivity to its hinterland. A private sector port developer can possibly develop infrastructure within the port and undertake limited upgradation of connectivity, but he would be normally unable to develop long connectivity linkages.

The classic example of this is the greenfield port at Pipavav in Gujarat. It has a very good geographic location and a deep hinterland (central & northern India), yet it has not been able attract traffic – not even its natural potential – because of its poor rail connectivity. The nearest broad-gauge rail link is at Surendranagar, 280 km from the port.

7.4.4 Planning & Coordination Issues and Uncertainty Regarding the Powers and Ambit of TAMP and Other Bodies

Currently TAMP's mandate is limited only to Major Ports administered by port trusts and private operators within Major Ports administered by Port Trusts. The scope for further regulatory reforms calls for uniformity of regulation across players. So far there have been no cases of significant effects of this dichotomy in regulation. Yet, there are apprehensions from different stakeholders that this could distort the competitive environment.

Various institutions in the sector also need to coordinate the planning and development of various projects, so that they do not adversely affect the viability of one other and discourage further private investment. The objectives of various institutions such as TAMP, NSPC, Maritime Boards, and Ports Trusts need to be reviewed to ensure that the planning and coordination in the sector is not weakened by multiple management control, inadequate communications and duplication of operative and administrative procedures. Thus, a single over-arching authority may be required to ensure uniformity and coordination of planning and for the unification of sectoral goals across institutions involved in the sector. The Ministry of Shipping has already proposed a study to evaluate the possibility of setting up of Maritime Authority of India.

8. ANNEXURE 2 - POWER

8.1 Sector Structure

Power is a concurrent subject as per the Constitution of India, with the involvement of both the Central and State Governments. Distribution, however, is the exclusive responsibility of the State Governments. Central Power Sector Utilities (CPSUs) such as National Thermal Power Corporation (NTPC), National Hydro-electric Power Corporation (NHPC), North Eastern Power Corporation (NEEPCO), Power Grid Corporation of India Limited (PGCIL), etc. were created by the Government of India to help the States. The State Electricity Boards (SEBs), which were formed under the Electricity Supply Act, 1948 are responsible for generation, transmission and distribution of electricity within the state. The development of the sector, till the time of liberalization, was envisaged at the state level through monopolistic SEBs and with the CPSUs supporting SEBs.

The distribution sector is still a monopoly of the SEBs with very limited involvement of the private sector. There are a small number of pre-existing private licensees such as Tata Power, BSES, CESC, etc. and new private licensees have been scarcely added in the last decade.

With the reforms being undertaken in various states, State Electricity Regulatory Commissions have been formed. Before their formation, at the central level, it was the Central Electricity Authority (CEA), which was responsible for the tariff-related issues of the central generating stations and grant of techno-economic clearance and the stipulation of norms. At the state level, the State Governments and the SEBs were responsible for regulating the sector.

8.2 Sector Performance

For many years, India's power sector has experienced massive and chronic problems. Its technical, commercial and financial performance has been very poor.³⁹

As of 31st March 2002, the total installed capacity in the country was 104,917 MW. The Availability and Plant Load Factors (PLF) at the all-India level have gradually improved to 80% and 69%. Against the 9th Plan target of capacity addition of 40,245 MW, the actual addition is only about 19,015 MW i.e., 47.2%. While capacity addition in the Central Sector was 4,504 MW i.e. 37.8% as against the target of 11,909 MW, capacity addition in the State Sector was 9,450 MW i.e. 87.9% as against the target of 10,748 MW. Capacity addition in the Private Sector was only 5,061 MW, which is about 28.8% of the target of 17,589 MW. As can be seen, private sector investment has been far beyond target. In spite of the Government's policy of encouraging private sector investment, many constraints have surfaced, key amongst which are the following:

1. Poor financial health of SEBs which are the sole purchasers of power generated by private sector.
2. Unwillingness of lenders to finance large projects with low returns and long payback periods

³⁹ Commercial losses (without subsidy) of the SEBs increased from Rs.45.60 bn in 1992-93 to Rs.252.59 bn in 2000-01 (revised estimates) and are further projected to increase to Rs. 331.77 bn in 2001-02. Source – Annual Report (2001-02) on "The Working of State Electricity Boards & Electricity Departments" published by the Planning Commission (Power & Energy Division), May 2002

3. Delays in obtaining various clearances like techno economic clearance, pollution clearance, forest and environmental clearance
4. Difficulty in obtaining fuel linkage agreements (including licenses for importing fuels such as coal, diesel, naphtha and LNG)

Control of retail power tariffs by State Governments has led to populist tariff setting, especially for farmers and other rural consumers (the bulk of the electorate).⁴⁰ As a result, the SEB's are denied the minimum tariff yields required for financial viability.

The performance of power distribution in India is characterised by considerable inefficiencies, which have resulted in poor quality of service and huge financial losses. This situation is attributable to several factors including lack of commercial orientation, high T&D losses, absence of independent tariff setting in the past, low investments, unwieldy size and monolithic structure, work culture and low levels of metering, billing & collections.

At the same time, State Governments often fail to impose commercial discipline on the SEBs. State Governments rarely hold senior SEB management accountable for measurable commercial performance.⁴¹ As a result, the SEBs have become increasingly inefficient. SEBs rely on the government for a sizable portion of their cash requirements because their inability to access non-government financing owing to poor financial performance.

8.3 Reform and PSP Initiatives

Overall power sector reforms can be broadly classified as follows:

1. Structural reform – Primarily undertaken at the Government level and includes milestones such as:
 - Enactment of Reform Acts⁴²
 - Change in sector structure⁴³

⁴⁰ Residential and especially agricultural consumers are heavily subsidized. These two groups enjoyed a subsidy of Rs 427 bn in 2001-02 (estimated) as against Rs 199 bn in 1996-97. About 70 percent of the Rs 427 bn went to agriculture. Average tariff was estimated at about Rs 2.40 per kilowatt-hour in 2001-02 (estimate), compared to average costs of Rs 3.5 per kilowatt-hour that year. In fact the gap between average tariff and average cost of supply has increased from a level of 50 paisa/ kilowatt-hour in 1996-97 to 110 paisa/ kilowatt-hour.

⁴¹ Although publicly reported energy losses have been about 21 percent throughout India, closer examination of SEB losses often shows serious underreporting. In Orissa, where loss reduction and revenue enhancement measures have been active for some time now, actual losses were found to be far greater than the amount reported prior to reform, at around 46 percent. This greater accuracy was due to better information about sales and losses than existed before corporatisation and privatization. Orissa's experience may be typical of all SEBs, and preliminary work in a number of other states bears this out. A similar trend has been observed in the States of Andhra Pradesh, Uttar Pradesh, Karnataka, West Bengal, Gujarat, Maharashtra, Rajasthan and Haryana where the T&D losses reported prior to reform were far less than those reported post-reform.

⁴² The States of Orissa, Haryana, Andhra Pradesh, Uttar Pradesh, Karnataka, Rajasthan, Madhya Pradesh and Delhi have enacted their State Electricity Reforms Acts which provide, inter-alia, for unbundling/ corporation of SEBs, setting up of SERCs etc.

⁴³ The SEBs of Orissa, Haryana, Andhra Pradesh, Karnataka, Uttar Pradesh, Rajasthan and Delhi have been unbundled/ corporatisation. While the generation and distribution companies have been both privatised in Orissa, only the distribution companies in Delhi have been privatised.

2. Tariff Reform – Primarily undertaken by Regulatory Commissions⁴⁴ and characterised by attempts at tariff rationalisation, transparent administration of subsidies and their delivery mechanisms.
3. Institutional Strengthening – Primarily undertaken by the SEBs/Private companies and attempts at turnaround and financial viability of the entity.

The Central Government is also working on comprehensive legislation in the form of the Electricity Bill 2001 that is intended to replace the existing Electricity (Supply) Act, 1948, Indian Electricity Act, 1910, and Electricity Regulatory Commissions Act, 1998. The Electricity Bill 2001 has already been tabled by the Central Government in Parliament and is under review by a Standing Committee.

Strategies for distribution improvement have focussed on metering of all consumers, reduction of losses at the sub-transmission and distribution level, increased investment for strengthening the system and reducing losses in transmission, and reforms and restructuring in SEBs. The Central Government is currently implementing an ambitious program aimed at reforming the Distribution sub-sector under the Accelerated Power Development and Reform Program (APDRP). This program envisages techno-commercial intervention at the project-level to enhance viability of the sub-transmission and distribution system.

8.4 Issues in Development of PSP

With respect to PSP in distribution, its nature and pace of introduction should be determined by the specifics of individual State administrations (e.g. political commitment, implementation capacity), as well as the circumstances of respective SEBs (e.g. financial situation, consumer profile, system performance). However, certain generic issues should be taken into account in developing a policy towards privatization of distribution operations. In a nutshell, these issues are:

8.4.1 Risks due to lack of Political Commitment and from Existing Legal and Regulatory Frameworks

1. Legal framework – Existing enforcement procedures for penalising electricity theft would need to be further reinforced in addition to timely and full payment of electricity bills by government agencies such as municipalities, etc.
2. Regulatory framework –A credible and predictable regulatory approach that outlines medium to long-run approach to tariff needs to be set out by the regulator. A multi-year tariff framework appears an essential pre-requisite to take care of perceived 'regulatory risk'. An operational framework for ensuring recovery of those costs, which are beyond the control of the utility, would also need to be put in place. Determination and acceptance of reliable baseline data on distribution loss, collection efficiency and its acceptance while fixing reasonable and achievable targets for improvements (for determining tariff) would be useful. Capital expenditure recognition over the medium term would also spell out the appropriate signals to the investors.

⁴⁴ Central Electricity Regulatory Commission (CERC) was constituted 1998 at the Central level and is in operation since then. Nineteen States viz. Orissa, Haryana, Andhra Pradesh, Uttar Pradesh, Karnataka, West Bengal, Tamil Nadu, Punjab, Delhi, Gujarat, Madhya Pradesh, Arunachal Pradesh, Maharashtra, Rajasthan, Himachal Pradesh, Assam, Chhatisgarh, Kerala and Uttaranchal have either constituted or notified the constitution of State Electricity Regulatory Commission (SERC). SERCs of Orissa, Andhra Pradesh, Uttar Pradesh, Maharashtra, Gujarat, Karnataka, Rajasthan, Delhi, Madhya Pradesh, Himachal Pradesh and West Bengal have issued tariff orders.

3. Base line data – Investors expect the technical and financial information provided to them at the time of privatization to be as accurate as possible. Such information includes reliable data on T&D losses, the true picture of condition of assets and liabilities of distribution entities (including unfunded pensions).
4. Financial Restructuring Plan (FRP⁴⁵) – It is necessary that the restructured entities should be funded on the basis of reliable assessment of operational and financial conditions of the SEBs and they should be provided with an opportunity for revival and also for facilitating private sector participation in the power sector. Private investors would then be able to take comfort that the assets and liabilities have been realistically valued and therefore, they would be able to make an accurate estimate of the value of the restructured entities. The FRP and the dis-aggregation should address the issues related to employee and other liabilities, assessment & possible write-off of backlog of receivables, treatment of past losses and asset valuation approach.
5. Communication – It is important to formulate and implement a well structured communication strategy addressed to all stakeholders including elected representatives, bureaucrats, SEB employees, media and public explaining the rationale and the need for privatization, as also a reasonable speed with which improvements can be achieved.
6. Procedural aspects of privatisation – The process of inviting private investors and the criteria for selection should be clear and transparent to investors.

8.4.2 Support During Transition Period

The Private investor upon taking control of the distribution entity would be inheriting a company, which would be beset with problems of the past such as high T&D losses, lack of commercial orientation and non-remunerative tariffs, etc. It would be futile to imagine that mere privatization would solve these problems immediately. A transition period, during which the distribution business would need to be provided support, would be essential for the entity to transform itself to a well-managed profitable entity. The transition path set for the private investor would need to consider the following major issues:

1. Revenue gap and arrangements for financing the same. A definite plan for meeting the requirement of funds during transition period has to be agreed prior to privatisation.
2. Capital project funding and working capital gaps. Such entities would find difficulties in garnering funds from outside sources.
3. Regulatory issues – Issues such as period of the licenses, introduction of competition in the future, etc. would need to be resolved prior to privatisation
4. Legal issues – Until the Electricity Bill 2001 comes into effect, the appropriate State Government would need to consider issuing an ordinance on the subject of theft.
5. Other issues – for example escrow related issues.

⁴⁵ The FRP aims to remove all the past distortions in the financial statement(s) of the erstwhile SEB before the disaggregation (functional unbundling of the structure depending upon the privatization model chosen) is done.

9. ANNEXURE 3 - TELECOM

9.1 Sector Structure

The roles of the government i.e. Licensing, Regulating & Adjudicating has been trifurcated among three entities.

1. Department of Telecommunications (DoT) is the Licensing Authority
2. Telecom Regulatory Authority of India (TRAI) is the Regulator
3. Telecom Dispute Settlement and Appellate Tribunal (TDSAT) is the Adjudicator

9.1.1 Telecom Regulatory Authority of India (TRAI)

The Telecom Regulatory Authority of India was set up through the Telecom Regulatory Authority of India Ordinance 1996. The aim was to set up an independent authority to supervise the functioning of different Telecom service providers. However, there was disagreement between TRAI and the Government in relation to whether it could regulate the functioning of the government as a licensor. It was decided in the High Court that it could not do so. The TRAI Act 1997 was amended in 2000 and the framework now in place can be briefly described as follows.

The functions of the original TRAI was split between two bodies: TRAI and the Telecom Dispute Settlement and Appellate Tribunal (TDSAT) with the recommendatory and regulatory powers being with TRAI and the dispute settlement functions being shifted to the Appellate Tribunal. TRAI makes recommendations related to the issue of licenses, competition, technological improvements etc. The regulatory functions of TRAI are related to compliance with the license conditions, setting tariffs, regulating interconnection, defining quality of service etc.

9.1.2 Telecom Disputes Settlement and Appellate Tribunal (TDSAT)

The functions of the TDSAT are:

1. To adjudicate disputes between:
 - A licensor and licensee
 - Two or more service providers
 - Between a service provider and a group of consumers

The fact that now the disputes are covered by a quasi-judicial authority is a positive feature of the new regime that has been put into place. Earlier disputes between the government as a licensor and the licensee did not fall under the purview of TRAI.

2. To hear and dispose of appeal against any direction, decision or order of the TRAI: This is the appellate function of the Tribunal and is the alternative to filing an appeal in the High Court. An appeal from any order, other than an interim order, of the tribunal lies with the Supreme Court. There is no appeal from an interim order of the tribunal.

9.2 Sector Performance

The telecom sector today is characterised by very high degree of activity with a high level of participation from the private sector. Some of the key indicators for the sector include:

Table 7. Telecom Indicators

Parameter	Value
Tele-density	Approx. 4.5
Number of Basic Telephone Lines (as on end of May 2002)	39.5 Million
Percentage of private lines	1.8%
Number of Cellular Telephone Lines (as on end of May 2002)	6.99 Million
Percentage of private lines	97%
Cellular / Fixed line Penetration	17.7%
Investments in Cellular (2001-02)	Rs. 159.3 Billion
Total size of Cellular Market (2001-02)	Rs. 53 Billion
Total size of Telecom Market (2001-02)	Rs. 321 Billion ⁴⁶

Since the beginning of the last decade, there has been a very growth (approx 18%) in the number of telephone lines provided. While the period of growth has been concomitant with the entry of private participation most of the growth in Basic Telephony lines has been achieved by the Public Sector Utilities (BSNL & MTNL).

The growth in basic telephone lines in the country has been far from even. While the average tele-density in the four Metros (Delhi, Mumbai, Kolkatta, Chennai) is 14.6 percent, it is only 3.2 percent in the rest of the country. Of the 607,491 villages that need to be given access to telephones, only 468,016 have yet been covered. While the private sector had been given a target of 97,807 Village Public Telephones (VPTs) by September 2000, it had only installed 846 VPTs as on 31st March 2002⁴⁷.

As per the New Telecom Policy 1999 (refer section 9.3.2), government has targeted a tele-density of 7% by 2005 and 15% by 2010. In order to meet this target, DoT has estimated an investment requirement of approximately Rs. 3630.70 bn.

9.3 Reform and PSP Initiatives

Private participation in the Telecom services market in India is relatively new with the first licenses being issued only a decade ago

9.3.1 National Telecom Policy 1994

In July 1994, the Union Government announced the first Telecom Policy. The Government invited private sector participation initially for value added services such as Paging Services and Cellular Mobile Telephone Services (CMTS) and thereafter for Fixed Telephone Services (FTS) through a process of competitive bidding.

Within three to four years of the execution of the licenses, the private sector was significantly affected by a financial crisis. Unrealistic amounts were quoted on the basis of which licenses were awarded without enough thought to the viability of the projects. Consequently, some of the licensees could not even execute the

⁴⁶ excludes net settlement revenues from foreign carriers

⁴⁷ The target has been revised to 50,000 VPTs by December 2002 (It is unlikely that this target will be met)

licenses awarded to them. Thirteen basic licenses failed to be executed and went into a second round of competitive bidding, which attracted a very poor response. Additional problems were caused by the conflicting role of the DoT both as the incumbent operator and the administrative regulator of the sector.

9.3.2 The New Telecom Policy (NTP) 1999

It also sought to address the issues being faced by the existing operators as well as defined a new framework for the new operators to enter the market. The NTP 1999 also provided for important general policy decisions relating to certain issues that had been restricting the development of the telecom sector. These include:

1. **Corporatisation of DoT:** The conflict of interest due to DoT being both the incumbent operator as well as the licensor had proved to be a hurdle in the effective implementation of policy. To overcome this hurdle, the NTP 1999 stipulated the corporatisation of DoT and its hiving off as an operating company with the administrative powers remaining with the DoT. Accordingly, in October 2000, Bharat Sanchar Nigam Limited (BSNL) was formed as a separate corporate body.
2. **Change in Legal Framework:** The NTP 1999 also sought to replace the outdated Indian Telegraph Act 1885 and the Wireless Act 1935 by new regulations.
3. **The duopoly regime** for licenses was terminated and replaced by a multiple player market.
4. All the cellular telephone service and basic telephone service companies opted for the migration package to the new license fee framework.

9.4 Issues in Development of PSP

The key issues facing the private sector today are:

9.4.1 Interconnection

As per the terms of the license, customers have the right to choose their domestic and international long distance service providers. However, this requires changes to be made in the network of the incumbent, as most of the subscribers are its customers. BSNL has so far claimed technical non-feasibility as the reason for the delays. Private operators are also not getting physical interconnection with the incumbent at all the points they would like. The pricing of the interconnection is another area of concern for the private operators. Currently, an interim share has been fixed by TRAI. However, going forward, the market power of the incumbent and the need for other players to seek interconnection from it may enable it to negotiate terms to its advantage.

9.4.2 Availability of spectrum, clearances etc.

Spectrum is allocated to the private operators through a license issued by the Wireless Planning and Co-ordination Wing (WPC) of the DoT. Upon obtaining the license, the licensee has to obtain the approval of the Standing Advisory Committee on Frequency Allocation (SACFA) for each of the sites at which the licensee intends to set up an antenna. Licensees have cited the delay in grant of the WPC license and SACFA clearance as one of the important causes for delay. Telecommunications networks require easement rights to lay cables – known in common parlance as 'Right of Way' (RoW). The obtaining of RoW has proved to be a very costly and time-consuming process.

9.4.3 License Obligations

The older licensees for basic services are facing difficulties due to their obligation for providing Village Public Telephones (VPTs) in their license areas. The provision of VPTs is considered by private operators to be financially unviable.

9.4.4 Clarity of regulation & policy

The frequency of changes and the lack of consistency have increased the perception of risk attached to the regulatory aspects of the sector. Some examples of inconsistency in regulation include

1. The decision of the Government to introduce the concept of "limited" mobility within the scope of the basic telephony license.
2. As per the International Long Distance Telephony License, Access providers are required to interconnect to the International Telephone service providers through a Domestic Long Distance Service Provider. This goes contrary to the NTP 1999, which states that Access Providers would be allowed to connect to the VSNL Gateways.

9.4.5 Lack of a "Level playing field"

The lack of a level playing field is due to several issues including those already discussed before. The lack has been felt by:

1. **The private players in comparison with the Incumbent:** This has been in areas like access to and pricing of interconnection, license fee payable (BSNL license fees are reimbursed to it by the government), number portability, directory services etc.
2. **Incumbent with respect to private players:** BSNL and MTNL (Incumbent access provider in the two largest cities of Mumbai and Delhi) have been denied an International Long Distance License until 2004. Additionally, as the incumbent the tele-density targets set in the Plans are mostly entrusted to BSNL as the incumbent operator.
3. **Private players in comparison with other private players:** Private players who have obtained their licenses in the last rounds of licensing have had to pay less as entry fee as compared to the players who came in the first round of licensing. Additionally, Basic Telephone service licensees are now being able to provide "Limited" mobility services even though they have not paid any additional license fee for the same.

9.4.6 Financing of projects

In addition to the usual difficulties in financing infrastructure projects, there are issues related to limits on FDI in the sector. Some companies have negotiated this issue through Holding Company structures and Preference Capital. However, denial of the opportunity to manage the companies may be a dampener on future investments.⁴⁸

⁴⁸ A recent workgroup of the Planning Commission on FDI has recommended increasing the equity cap on basic and mobile services upwards to 100%.

10. ANNEXURE 4 - PASSENGER ROAD TRANSPORT

10.1 Sector structure

The Public Transport Undertakings (STUs) in India, either owned by local bodies or State Governments, have been the major players in the field of passenger road transport. These public transport corporations are set up under the Road Transport Corporations Act, 1950, and have provided the much-needed linkages from villages to towns and from towns to cities. Until 1970's, with their liberal permit system and the capital contributions by the Central Government, the State Governments encouraged STUs to expand fleets. Today, STUs together operate a fleet of more than 100,000 buses.

The Motor Vehicles Act, 1988 brought deregulation and liberalised the public passenger road transport market. The Act scrapped the over-riding priorities and privileges conferred on STUs and created opportunities for private players in the public transport market. This helped growth in the availability of intermediate transport through maxi cabs, tourist taxis, omnibuses, etc.

The rapid changes in the auto industry policy since the middle of 1980's (lifting of curbs on annual production ceilings, abolishing license systems, encouraging foreign investment and full liberalisation in 1992) and the changing transport needs of the Indian middle class caused a shift from public transport systems to private transport modes like two-wheelers and four wheelers. The easy availability of financial credit for vehicle purchase has also helped the shift to private vehicles.

The Motor Vehicle Act, 1988 is the umbrella act for motor vehicle transport in the country. It defines the authority of State and Central Governments and of State Transport Authorities or Regional Transport Authorities. It also provides guidelines and provisions for various aspects including licensing of drivers of motor vehicles, licensing of conductors of stage carriages, registration of vehicles, control of transport vehicles, special provisions relating to STUs, control of traffic, etc. The act also provides for evaluation of a set of parameters while granting permission for operating passenger transport vehicles. The evaluation parameters include routes or areas to which the application relates, type and seating capacity of each vehicle, minimum and maximum number of daily trips proposed, timetable of normal trips, number of vehicles to be kept in reserve, arrangements for the comfort and convenience of passengers, etc.

The State Transport Corporation Act, 1950 enables state governments to create STUs and assign the administration, management, and operations of passenger transport to these STUs. The Act specifies guidelines for appointment of the management of an STU and its Board of Directors and defines the powers of the Board and the Management. It also outlines duties of STUs, financial accounting and auditing practices, and defines the powers of State Governments in giving instructions to STUs.

Passenger road transport in India is governed and regulated by a number of government and statutory bodies and agencies. Although the passenger road transport is largely a state level subject, the institutional arrangements in the sector are characterised by fragmented functional responsibility among the Central level, State level and local level bodies. The table below summarises the essential roles in the sector and their division among central, state and local bodies.

Table 8. Roles of Various Agencies, Road Transport

Roles	Central agency	State agency	Local agency
Policy	MORTH, MoUD & MoRD	STD	MC
Road infrastructure investment	MORTH, NHAI	PWD	MC
Bus transport planning and operations		STU/STD	MC
Bus regulations and licensing	MORTH	STD	
Motor vehicle regulations		STD/Police	
Traffic management and enforcement		STD/Police	

10.2 Sector Performance

Over the past few decades the share of road transportation in total surface traffic movement in India has been gradually increasing with a definite shift in traffic from the railways to road transportation. The road transport sector accounts for about 80% of passenger movement, about 60% of freight movement as compared to its estimated share of 20% and 11% in passenger and freight traffic in early fifties, respectively.

The growth in fleet strength of STUs has not kept up with traffic growth in the passenger transport sector as a whole because of privatisation initiatives and budgetary cuts. The STU fleet grew at 1.4% CAGR compared to 12% growth in private sector. Moreover, the load factor of most STUs declined significantly in the last decade. The average load factor came down to 66%⁴⁹ in 1998-99 from 77% in 1992-93, because of the sharing of economical routes with private sector and entry of unauthorised vehicles on STU routes.

Table 9. Operational Indicators of STUs

	1990-91	1998-99	CAGR
Fleet strength (thousand)	104.1	116.0	1.4%
Fleet utilisation (%)	85.3	89.9	0.7%
Annual km (bn)	8.81	11.76	3.7%
Vehicles km/bus (daily)	240	279	1.9%
Passenger served/day (mn)	59	67	1.6%

Source: India Infrastructure Report 2001

The financial performance of the STUs has been deteriorating because of the structural problems caused by STU policies of State Governments and internal inefficiencies of STUs.

Table 10. Financial Indicators of STUs

Figures in Rs. bn

	1990-91	1998-99	CAGR
Revenue	50.52	123.67	12%
Expenditure	57.31	142.84	12%
Profit	-6.79	-19.79	-14%

Source: India Infrastructure Report 2001

There are five main reasons for the poor financial performance of STUs, viz.,

- 1 Over-manning and high employee expenses
- 2 Loss of market share to private operators on remunerative routes

⁴⁹Simple average. Source: CMIE, Infrastructure, January 2001.

- 3 Subsidies and concessions
- 4 Inadequate pricing policies
- 5 Inadequate competition policy and lack of level playing field

10.3 Reform and PSP Initiatives

In line with its liberalisation policy, the Government of India decided to allow private sector participation in passenger road transport and issued a directive to STUs through the Planning Commission in 1992. The directive was aimed at reducing STUs' (and Government's) capital expenditure on fleet expansions and creating market space for private sector on profit making routes. These amendments scrapped the overriding priorities and privileges conferred on STUs and created an unbalanced market scenario (negatively affecting STUs, and) favouring private players entering the field. The total budgetary allocation towards STUs was also reduced and thus fleet expansion in the public sector was controlled.

As a result of these initiatives, there has been a significant increase in the private sector's role in the sector. However, the introduction of private operations has been in a haphazard manner. Most of the private sector operators do not have any long-term planning and their service standards are poor. Moreover, the inadequate regulation of the sector has led to unauthorised operations and poor safety standards. Though this newfound competition has awakened STUs to realise their inefficiencies and weaknesses to some extent, it has also disrupted the rhythm of STUs' operations and has had significant impact on performance of STUs.

10.4 Issues in Development of PSP

Some of the important steps in the sector reform are:

- 1 Formation of independent state transport authorities
- 2 Promote economies of scale in private sector
- 3 Autonomy to STUs and isolation from political decision making
- 4 Modular privatisation of assets of STUs

10.4.1 Formation of Independent State Transport Authorities

Given the new complexities due to private sector participation and the increased need for sector regulation to achieve the objectives of passenger road transport, an Independent State Transport Authority would play an important role in the sector reforms. The authority could have following roles:

- 1 Regulate passenger road transport within the state and promote competition, efficiency and economies of scale for the benefit of the sector
- 2 Collect data and forecast demand for passenger road transport
- 3 Assess economic and financial viability of the routes
- 4 Bundle viable and unviable routes and bid out such combinations of routes to transport operators and STUs
- 5 Ensure transport access to economically and socially backward regions, through appropriate cross-subsidisation mechanisms
- 6 Determine and approve passenger fare revisions based on cost structure and returns on investment
- 7 Coordinate with other modes of transport and other State Transport Authorities to develop efficient and effective transport systems
- 8 Devise ways to effectively use the public transport resources and infrastructure created by STUs
- 9 Advise governments on matters concerning public transport, such as vehicular pollution, passenger safety and urban planning

The authority should be a statutory body with requisite autonomy to deliver its functions. This would help in reducing the political interference in operations of STUs and in passenger road transport.

10.4.2 Promote Economies of Scale in Private Sector

Currently the private passenger road transport services are flooded with small operators, the fact that makes it difficult to regulate the sector for safety, frequency and comfort levels offered by private sector. Also the unorganised nature of such players renders them unable to offer comprehensive network of services in any particular market segments or region. Therefore, the State Transport Authorities should promote larger players, who can provide seamless services, safety, comfort and reliability standards.

10.4.3 Autonomy to STUs and isolation from political decision making

As discussed earlier, the poor performance of STUs is largely due to the government interference in three crucial aspects – employee policies, passenger concessions and fare revisions. In order to improve the performance of STUs, it is critical to set them on the path of commercial principles.

Although the employee policies is a sensitive issue and would require a lot of time and patience to resolve, the process of internal communication needs to be developed, which would help employees understand the competitive environment and the need for higher labour efficiencies. The need for re-training and repositioning within organisation could also be experimented and the further recruitment and capacity building could be curtailed.

Today passenger concessions and fare revisions are external elements which affect STUs' performance significantly. On one hand STUs should be asked to reduce costs, and on the other they should be allowed to revise fares in line with their 'reengineered cost structure'⁵⁰. In case governments intend to extend subsidies to passengers or concessions to certain social segments, governments should make good the gap between the 'basic fare'⁵¹ and 'subsidised fare'.

10.4.4 Modular Privatisation of Assets of STUs

Once the private sector is introduced in an organised manner and the regulatory and institutional mechanism is established to ensure accessibility, safety, frequency and affordability of passenger transport services from private sector players, the role of STUs could be further cut down gradually. Unbundling of STUs into independent and self-sustaining business units that can eventually be privatised is among the several possibilities that could be examined.

⁵⁰ After providing sufficient autonomy, STUs could be held responsible for their costs and asked to reengineer their cost structures.

⁵¹ Basic fare could be worked out based on the agreed cost structure (including returns) between state government and STU.

11.ANNEXURE 5 - URBAN HOUSING

11.1 Sector Structure

Though the development of urban areas is a state subject, the Central Government plays the role of guide and mentor. It provides technical and financial support (loans and grants) to State Governments for schemes that its sponsors. At the State Government level, urban issues are looked after by an Urban Development/Housing/Municipal Affairs Department. Ground-level development of housing is usually the responsibility of city level Development Authorities (e.g. Delhi Development Authority) or state-level Housing Boards (e.g. Madhya Pradesh Housing Board). The local bodies of self-government at the city and town level regulate housing construction activity by framing and implementing city masterplans (usually in association with the State Government Town and Country Planning Department or Development Authorities), town-planning schemes and building byelaws. The responsibility for provision of most allied urban infrastructure services rests with municipalities/urban local bodies

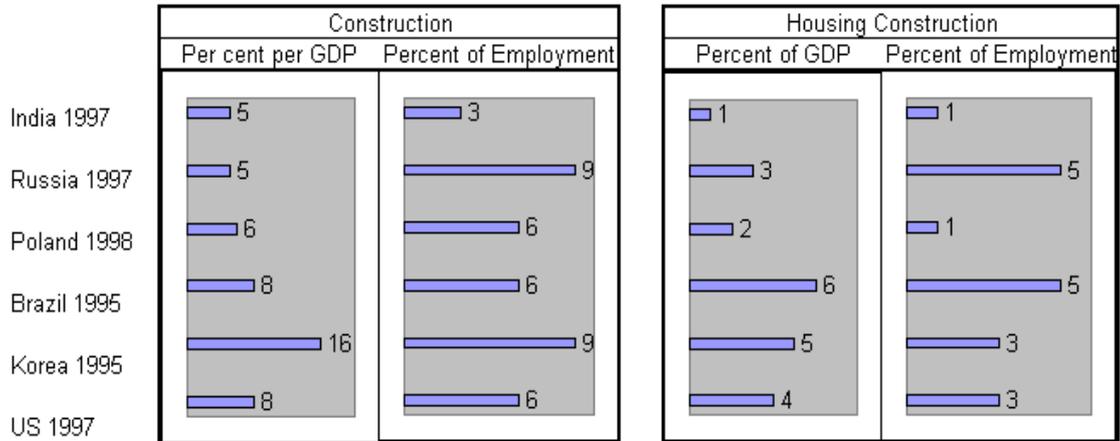
The cooperative sector also plays an important role in housing development. There are about 85,000 primary cooperatives (part of 28 State-level Apex Cooperative Housing Federations, which, in turn, are members of the National Cooperative Housing Federation of India). Their growth has been fostered by the intense shortage of land in large cities since government agencies prefer giving land to cooperative societies rather than individuals. This sector contributes to around one lakh dwelling units to the housing stock each year.

Medium-large scale organised activity in housing construction is restricted to the large cities. Entry into the construction industry is extremely easy as it does not require obtaining a license or technical qualification. The result is poor quality. Arrangements with customers are informal and disputes are common. A considerable amount of a developer's time and effort is spent in negotiating the bureaucratic maze of different agencies to secure permits related to land ceilings, development schemes and town planning, external development charges, building permission, utility connections, etc. As a result most developers in India have an extremely local focus and the industry is small-scale (mostly), low-quality and dependent on good relations with the administration.

It is also held that competition is mostly based on factors other than construction quality and cost (according to Mckinsey). The Mckinsey study also states "most Indian developers focus their efforts on land procurement, clearing red tape and push selling, paying little attention to building design and putting minimal pressure on contractors to reduce costs. They are able to maintain high profits by getting favourable land deals and not abiding by building/zoning laws. Despite high profits, competitors are unable to enter the market because of the scarcity of land and a lack of clarity about property rights on existing land titles. Only a few well-connected developers are able to overcome these obstacles." As a result the sector has remained relatively under-developed as suggested by the following figure.

Figure 12. International Comparison of Housing Industry

Size of Construction Sector



Source: McKinsey

The Urban Land Ceiling Regulation Act (ULCRA) was enacted primarily with the objective of preventing concentration of land in the hands of few and to curb speculation and profiteering in land. It was also meant to ensure that adequate amounts of land for public housing and other purposes became available to the government and to regulate the transfer of vacant land. However, the Act has not been able to achieve its desired effect. The Act was made applicable to 64 urban areas. The State Governments (which implement the Act) could physically acquire only 19,020 ha. or 9% of excess vacant land out of an area of 2,20,674 ha. estimated to be in excess of the ceiling limits. At the same time, as much as 56,640 ha. of excess vacant land were exempted under Sections 20 of the Act (on grounds of "public interest" or on account of "undue hardships"). Another 5327 ha. of the excess vacant land were exempted under Section 21 of the Act for the purpose of constructing dwelling units for weaker sections of society, though doubts have been raised on the eventual use to which the land was put to. It is widely held that the provisions of the act restricted the supply of land for meeting various needs and led to corruption.

The various Rent Control Acts in-force in the States have also impacted the housing sector by artificially freezing rents and de-linking them from market forces. Quite often property owners are unwilling to lease their properties out of fear that the rent would be capped or they would not be able to evict their tenants. It is estimated that there are over 300,000 flats in Mumbai alone that are lying vacant on account of this 'fear factor'.⁵² Most states impose very high registration charges on the transfer of the land, sometimes more than 10% of the value of the property. This leads to understating of transaction values on paper to avoid taxes and the use of unaccounted (black) money for the balance amount. This has contributed to the lack of organised development in the property markets. The Central Government, through the Town and Country Planning Organisation, brought out model acts pertaining to land use and zoning in 1970 and 1975. Most states are yet to take simplify their state laws based on these model acts.

⁵² Source: India Property Review, The Millennium Edition, Knight Frank India

11.2 Sector Performance

The total urban housing stock in India was 39.3 mn units (out of a total of 148 mn) in 1991 as compared to 28 mn units (out of total of 116.7 mn) in 1981. The housing shortage in 1991 was estimated to be between 1.4 mn and 8.2 mn units (depending on inclusion of congestion, replacement and upgradation demand). The future urban housing need is estimated at 7.4 mn, 21.8 mn and 45.8 mn units during the period 1997-2001, 2001-11 and 2011-21, respectively. The corresponding figures for investment are as follows:

Table 11. Housing Investment Requirements between 1997-2021

Rs. Bn	1997-2001	2001-2011	2011-21	Total
New Housing	621.30	1,44,0.80	3,027.10	5,089.20
Inadequate Housing	62.10			62.10
Upgradation Housing	110.40			110.40
Total	793.80	1,440.80	3,021.70	5,261.70

Source: National Urban Sector Profile, NIUA

The total Plan outlay by the Central Government upto the Seventh Five Year Plan on housing has been Rs. 104 bn. An additional amount of Rs. 358 bn was made available through the State sector and Rs. 134 bn in the Central sector in the Eight Plan.⁵³ It was further estimated that Rs.2,500 bn would be required for allied urban infrastructure during the Ninth Plan, but not more than 10% would be available from Government sources.⁵⁴ The private sector has always been the dominant source of finance, providing 70-90% of the total investment in this sector.⁵⁵

An estimated investment of UD\$ 11.2 billion is required in housing between 1995 and 2005.⁵⁶ The situation is especially critical when it comes to housing the urban poor. The World Bank estimates that between 40% and 60% of the urban poor live in slums or squatter settlements, the balance live on pavements, overcrowded tenements or commute long-distances daily from peri-urban areas.⁵⁷ The situation of housing in urban areas in India is undoubtedly critical and needs urgent remedial action.

In 2000-01, NHB made disbursements of just over Rs. 10 bn through its refinance schemes and outstanding disbursements were Rs. 43 bn. LIC as well as GIC support housing activities both directly and indirectly. LIC and GIC are statutorily required to invest 25% and 35%, respectively of their net annual accretion in socially oriented schemes including housing. Many commercial banks have also entered the field of housing finance through subsidiary companies. It is estimated that around 800 companies are active in this area and the amount of finance provided by them has increased rapidly in the past 5 years (*following table*).

⁵³ Corresponding figures for the Ninth Plan are not available.

⁵⁴ National Housing and Habitat Policy 1998

⁵⁵ According to National Trends in Housing- Production Process, UNCHS (1993), only 25% of housing finance comes from formal sources, the remaining through informal channels.

⁵⁶ Source: Confederation of Indian Industry website-www.ciionline.org

⁵⁷ Source: Urban Water Supply and Sanitation Report, World Bank, 1998.

Table 12. Housing Finance by Various Agencies

Rs. Mn	1994-95	1995-96	1996-97	1997-98	1998-99
Commercial Banks	7,486	7,992	18,056	10,767	14,972
HFCs	25,243	39,035	46,277	57,834	74,134
ACHFs ⁵⁸	5,303	3,430	3,147	5,196	
ARDBs ⁵⁹	264	385	387	730	1,127

Source: *Indian Housing Finance System, PP Vora, Chairman & Managing Director, NHB, 1999-2000.*

A key limitation that has been experienced in the development of a retail market for housing finance is that the poor and the informal sector have very limited access to financial institutions. The efforts of finance companies and banks tend to focus more around the formal employee class. The informal sector comprising small businessmen, self-employed persons, traders, etc. have been largely left out. This has been because of reasons such as eligibility requirements, lack of well established guarantors and financial asset holdings that qualify as acceptable collateral, inability of these persons to provide financial information in the form required by lenders and evidence of regular income. Consequently, the development of this segment has been lagging. Recently some initiatives have been taken to bring such segments into the fold of the formal financial sector. These initiatives have involved community based financial institutions (CFIs), self-help groups, NGOs and micro-credit institutions.

Securitisation of housing finance assets is in its nascent stages in India. Though the uncertainty over stamp duty has been resolved, other constraints in the areas of taxation and isolation of the asset from the risk of bankruptcy of the originator need to be addressed. The potential of securitisation can be gauged by considering that the US places \$1 trillion worth of mortgages in securitised deals every year and a much smaller economy like Malaysia does \$6 billion in deals annually.

Hundred percent FDI in housing has been permitted recently. According to the Government, the minimum threshold size for FDI investment should be 100 acres and 2,000 dwellings units. This qualification is said to be high enough to deter all but the largest of realty investors. Foreign investors would like to start their activities in India with more modest schemes to minimise risk and maximise the learning process. Thus, these FDI guidelines may not encourage much investment in India.

Loan recovery by the public housing agencies and HUDCO from the Low Income Group (LIG) and Economically Weaker Section (EWS) categories is less than 50%. Coupled with decreasing equity contribution from the government, this has forced these agencies to concentrate more on Middle and High Income Group (MIG and HIG) housing schemes.⁶⁰ It has also been difficult for agencies like HUDCO etc. to monitor the end-use of funds (in terms of section of society/beneficiaries) in a rigorous manner.

Early policy towards slums in India treated them as transient phenomenon and improvement was considered a temporary measure till residents were re-housed. However, in the 1970s it was realised that affordable public housing was still a long-way off. In 1972, the central government launched the Environmental Improvement of Urban Slums (EIUS) scheme involving site and service

⁵⁸ Apex Cooperative Housing Federations.

⁵⁹ Agricultural and Rural Housing Banks.

⁶⁰ source: UNCHS

improvements. By 1996, about 40 million people had been covered by this scheme.⁶¹ Government policy and action in the 1980s and 90s have focussed a lot more on the issue of tenure for slum dwellers and squatters. The draft National Slum Policy (1999) embodies the core principle that all urban informal households should have access to certain basic minimum services irrespective of land tenure or occupancy status. However, all these efforts and schemes have failed to make a perceptible dent in India's slum problem. The private sector on the other hand is hesitant to enter this area due to the lack of adequate returns on investment. Community Based Organisations (CBOs) and Non-Government Organisations (NGOs) on the other hand have been quite active in this field in India, especially for the last two decades.

11.3 Issues in Development of PSP

The key issues in further development of PSP and the sector as a whole are as follows:

1. Availability of land and developed sites- Though housing has traditionally been an area where the private sector has been responsible for more than three-fourths of housing development, the lack of sites with adequate infrastructure linkages simply holds up further development, inflates land and housing costs and forces people into slums and squatter settlements. Though the ULCRA has been repealed in some states, other states continue with it. Where ULCRA is repealed, availability of roads, water supply and sewage would become the determining factor in easing housing constraints. Inadequate urban planning and its implementation are also responsible for this state of affairs.
2. Provision of funds- Given the huge investments required in this area, the scarcity of funds would continue to be a constraining factor. All but the largest housing construction companies still predominantly rely on informal sources of finance. Government financing of NHB and HUDCO also needs to be enhanced further if the housing shortage is to be tackled effectively and quickly.
3. Increasing the access of the poor to finance- Though the retail housing finance has grown immensely in the last five years, the economically weaker sections of society who live in slum or squatter settlements still don't have access to formal sources of finance. This has been because of reasons such as eligibility requirements, lack of well established guarantors and financial asset holdings that qualify as acceptable collateral and the inability of these persons to provide financial information in the form required by lenders and evidence of regular income. Micro-finance schemes have made some progress and their coverage needs to be widened.
4. Slum redevelopment projects- Slum improvement projects on scale large enough to make a perceptible improvement in housing conditions in cities like Mumbai have been a failure. New models for redeveloping and improving slums, which also suit regional conditions, need to be developed.
5. Removing other irritants like archaic rent control laws and torturous procedures for settling title disputes would also give a shot in the arm for the housing industry.

⁶¹ Source: GOI as quoted in *Holding their Ground*, Alain Durand-Lasserve and Lauren Royston

12.ANNEXURE 6 – HIGHWAYS

12.1 Sector Structure

In India, the development and maintenance of highways is the responsibility of the Central Government or the State Governments, depending upon the location and status of the roads. India has an existing road network of 2 million km, which is the third largest in the world. The road network in India can be divided in the following broad categories.

	% of Total Traffic	Coordinating Agency	Connectivity
National Highway	40%	MORTH, BRO	Union Capital, State Capitals, Major ports, Foreign Highways, Strategic locations
State Highway	40%	State PWDs	State Capital, District Centres, Important towns, National Highways, Other States
Other Roads	20%	State PWDs	

The Ministry of Road Transport and Highways (MORTH) is the coordinating agency for planning, technical standardization and budgeting for the National Highways, on behalf of the Central Government. The work is planned and carried out by the state Public Works Departments (PWDs) after getting MORTH's technical approval.

NHAI has been constituted under the provisions of the National Highways Authority of India Act, 1988, but was operationalised only in February 1995. After its constitution in February 1995, the National Highway Authority of India (NHAI) is functioning as the executing arm of the MORTH for the National Highway stretches allocated to it. Till 1997, NHAI's attention was focused almost solely on widening of existing national highways, few projects were being pursued (as compared to presently) and progress was quite slow. Since then, the pace of activity has increased substantially.

At the state level, the planning, development and maintenance is done by the state PWD. The state governments are empowered to enact legislation to facilitate the governance of the roads related aspects. The overall allocation of Central sector and State sector Plan funds for road development is done by the Planning Commission through the Five Year plans.

The capability of state PWDs is an area of concern. The tender and contract documents as well as project formulation still leave a lot to be desired. There is also wide variation between the capability of different States. Decision-making is also inordinately slow. Many State Governments have formed specialised Road Development Corporations to develop projects, but a majority of them are financially bankrupt.

Till the early 1990s, the role of private sector in the highway sector was limited to executing the contracts given to the private contractors (through competitive bidding) by Government agencies for construction and the maintenance work. Since then, private participation in construction of roads has increased significantly. Initially, investors' reservations about traffic forecasts, land acquisition, etc. were quite high and consequently private funds flowed into only small projects such as bridges and bypasses. With the introduction of annuity-based projects in mid-late 2000, the flow of investment increased rapidly.

The historical preference for expanding the network of roads into rural and remote corners of the country resulted in small project sizes and preference to

local contractors. As a result the technical capability of the Indian construction industry was never put to the test and it remained out-dated. Even today, the road construction industry lacks in sufficient depth and technical capability as compared to international standards.

To finance the NHDP, the Central Government has constituted a dedicated, non-lapsable Central Road Fund (CRF) through the Central Road Fund Act, 2000. The CRF would be funded through a cess on excise duty and customs duty on production and import of petrol, high-speed diesel and oil at the rate of Re. 1 per litre. It is estimated that around Rs. 20 bn per annum would accrue through this cess. The CRF has been set aside solely for road development purposes. 50% of the cess on HSD is to be allocated for the development of rural roads. Of the balance, 7.5% shall be set aside for the development and maintenance of national highways, 12.5% for the construction of under- or over-bridges, 27% on the development and maintenance of state roads and 3% on Central Government approved State road projects. However, as per the Central Road Fund Act 2000, it is not mandatory for the government to establish a Road Fund Board to manage the fund.

12.2 Sector Performance

Roads are the most widely used medium of transportation in India. In the period 1954 to 1994, passenger and freight traffic in India increased 65 times to 400 Billion-Ton Kilometre and 1,500 Billion-Passenger Kilometre respectively. The number of vehicles in India increased by about 90 times. In the same period, however, the road network has increased by only about 5 times and the National Highways network by less than 2 times.

Table 13. Growth of Roads in India

In '000 km	1950-51		1980-81		1991-92		1996-97	
	km	%	km	%	km	%	km	%
National Highways	20	5%	32	2.1%	32	1.7%	34.8	1.4%
State Highways	NA	NA	94	6.3%	129	6.3%	137	5.6%
All Roads	400	100%	1491	100%	2041	100%	2466	100%
% Surfaced		39%		46%		53%		57%

Source: CMIE

According to the Road Development Plan (1981-2001) prepared by Indian Road Congress, the National Highways and the State Highways would need to be expanded to 66,000 km and 145,000 km in length. An ADB funded study conducted in 1990 established a need of 10,000 km long expressway network by 2015. The estimates prepared by MoST⁶² indicate that Rs. 1,500 bn is required for upgrading and expanding the National Highways and an additional Rs. 500 bn is required to upgrade the State highways.

In 1998, NHAI was given the task of implementing a challenging Rs. 280 bn, 7,300 km north-south and east-west highway corridor project. Shortly thereafter, it was also entrusted with the execution of the 5,952 km, Rs.210 bn Golden Quadrilateral project linking the four metropolitan cities of India. These have since been christened as the NHDP. In addition to the projects under NHDP, NHAI

⁶² Ministry of Surface Transport, later rechristened as MORTH.

is also currently responsible for about 1,000 km of National Highways connecting Major Ports.

The NHDP will be financed by: Rs 200 bn from the fuel cess (Re 1 each levied on petrol and diesel since 1998), Rs 200 bn from multilateral assistance from the World Bank, ADB and JBIC, Rs 100 bn from market borrowings and Rs 40 bn from private sector participation.

12.3 Reform and PSP Initiatives

In the recent past, attention has been focused on developments in National Highways because of the rapid pace of development that they have witnessed. State governments have not been able to match the initiatives of the NHAI to drum up investor interest.

The National Highway Act, 1956 was amended in 1995 to allow private participation in projects for National Highway development and to enable toll levy on selected sections of National Highways. It also offered various incentives to encourage private sector participation including permission for upto 74% direct FDI, income tax exemption to the project company for 5 years, reduction of import duties and tax concessions to the financial institutions. These incentives have since been increased and now stand as follows:

- 100% FDI
- Government to carry out all preparatory work including land acquisition
- Government to provide land at no cost and free of all encumbrances
- NHAI/Government to provide capital grants up to 40% of the project cost on a case-to-case basis
- A 10 year tax holiday for road bridge and highway projects that can be availed of during the initial 20 years of operation
- A concession period of upto 30 years
- Housing and real estate development, which is an integral part of the highway project, to be treated as infrastructure projects and to be entitled to the same tax benefits
- Duty-free import of specified hi-tech and high capacity construction equipment
- To further facilitate speedy clearances, projects that involve widening of existing NHs within existing RoW will not have to seek an environment clearance.

The land acquisition for highway development has also been made non-justiciable (can not be challenged in the court). Only the compensation for the land so acquired is justiciable.

In the first phase of the golden quadrilateral, which is currently in progress, cess and market borrowings are expected to yield Rs 168.46 bn and external assistance, Rs 78.62 bn. Private sector role has been significant in this phase: Rs 16.90 bn worth of projects on pure BOT basis, Rs 20 bn through the annuity route, while Rs 19.02 bn will be invested through special purpose vehicles.⁶³

⁶³ Source: Economic Time, 21 July 2002.

The various State Governments have also amended the Motor Vehicles Act (Gujarat, Maharashtra, Rajasthan and Karnataka), or the Indian Tolls Act (Madhya Pradesh and Andhra Pradesh), or enacted new legislation such as Haryana to allow for private sector participation in highway development. Additionally, Maharashtra government has offered sales tax and octroi duty concessions and the Gujarat government has proposed subsidy for loss of revenue due to less traffic than projected and extension of the concession period to achieve the pre-specified return.

12.4 Issues in Development of PSP

The key issues in further development of PSP and the sector as a whole are as follows:

1. Increasing role for PSP- Even in the current round of hectic highway modernization, the role of the private sector is quite modest at around 15% of the total investment. While this is due to reasons such as those given in the following two points, and other similar reasons, greater pace of privatisation is needed to ensure that the highway network is quickly brought upto international standards. Another opportunity for PSP is in the operation and maintenance, which is just being opened upto the private sector.
2. Strengthening the institution of the Central Road Fund and constituting a Road Board for its management- Currently, as per the Central Road Fund Act 2000, it is not mandatory for the government to establish a Road Fund Board to manage the fund. Also, there are no built in safeguards to ensure that revenue obtained from the cess on petroleum products is transferred to the fund in a timebound manner. So far these have not been constraining factors. But in the long run, for continued expansion of private sector role in highways, it is necessary to strengthen these mechanisms.
3. Availability of capital and long-term debt- the current set of private sector players are operating on an extremely small capital base since most of them they have evolved from being simple contractors. In India, most equity for projects is brought in form of strategic equity. Slow progress has dampened the interest of many large industrial groups and international investors. Equity markets are also in a slump. Lastly, there has not been an active market in direct private and institutional equity in infrastructure projects. Long-term debt of more than 10-12 years maturity is also hard to come by. This results in a mis-match in the cash-flows of projects and places immense strain on them in their initial years. Availability of longer maturity debt would definitely boost investor and business interest in this sector.
4. Capacity of State Road Agencies to contract private participation: A majority of the road development corporations set up by State Governments like Maharashtra Road Development Corporation are in a loss and unviable. In such a situation, the annuity-based projects, which have been the mainstay of PSP in the NH sector, will be non-starters. Because of traffic and tariff risks, most State Highways would not be suitable for development on a BOT formula. The capabilities of State PWDs show a wide variation with respect to tender procedures, concession terms, etc. and finalisation of contracts usually takes an inordinately long time.

13.ANNEXURE 7 - URBAN WATER SUPPLY AND SEWAGE

13.1 Sector Structure

In India, provision of water supply, sewerage and other urban services is a State subject. After the enactment of the 74th Constitutional Amendment Act, these functions have been or are in the process of being further delegated to the local bodies. There is no specific legislation for provision of water supply and sewerage services. The sector is usually governed by the State-level legislations for municipal bodies and different states have made different provisions.

Though the Central Government does not undertake any water supply or sewerage works directly, it plays an important role in the sector by guiding state level policies and programmes through its various technical assistance and lending activities such as the Accelerated Urban Water Supply Program.

In many big cities, it is the responsibility of the municipal corporation or its undertakings to make the capital investment as well as operate and maintain the water and sewerage utilities. In medium and small cities, a State-level utility board usually plans and implements the capital works while the local body operates and maintains the facilities. In some states like Rajasthan, the State Public Health Engineering Department is responsible for both provision of infrastructure and its operation and maintenance. Though many of the municipal corporations are responsible for investment and operation and maintenance, the projects need to be technically approved by the State Governments and in effect many of the projects are conceptualised and designed by the State Governments.

Finance for the sector is provided by a multitude of entities. In the past, the predominant source of finance was State and Central Government loans and grants. In recent years, this source of finance has slowly been decreasing in importance given the financial difficulties of the State and Central Governments. Their place is being taken by State-level infrastructure development or finance corporations. From a peak of around 2.3% of total plan expenditure in the third Plan, the share of water supply and sanitation has fallen to around 1.33%. Lastly, local bodies depend on their own sources of revenue like taxes and charges. Some local bodies have also accessed the bond markets to raise finance.

Multi-lateral agencies have also been providing funds to this sector and have contributed more than US\$2.3 bn since independence.⁶⁴ Currently, 19 multi-lateral funded projects are in different stages of implementation.

13.2 Sector Performance

The technical capability of the municipal bodies is an area of concern. On one hand, many of the senior managers of utilities come from sectors other than WSS and do not have the technical skills required. On the other hand, these utilities are overstaffed with 40-60 staff per 1000 connections as against the international best practice of 2-3 staff per 1000 connections.⁶⁵

The lack of adequate water supply and sewerage infrastructure in urban India is well documented. As per the Census of India, about 20% of urban households didn't have access to safe drinking water in 1991. No city can boast of a 24-hour water supply and average per capita water supply varies from 165 lpcd in Class I

⁶⁴ Source: MoUD&PA.

⁶⁵ Source: Urban Water Supply and Sanitation Report, World Bank, 1998.

cities to 54 lpcd in Class IV towns as against the norm of 140 lpcd. Another survey found 61% of water supply to be contaminated in cities with a population of 100,000 or more and only 23% had access to toilet facilities. Coverage of organised sewerage facilities ranged from 35% in Class IV towns to 75% in Class I towns. Of India's 3,700 towns and cities, only 300 have sewerage systems and only 70 have sewerage treatment facilities. In short, the situation is not only critical, but it is also a serious health hazard and a drag on the economy. Nationally, it is estimated that 30.5 million disability adjusted life years (DALYs) are lost each year due to poor water quality, sanitation and hygiene.⁶⁶ Lack of sewerage and wastewater treatment facilities leads to pollution of water bodies and further pushes up the cost of water treatment.

The 8th Five Year Plan made an allocation of only Rs. 57.57 bn to the urban sector for the period 1992-97. The total Central (including international aid) and State outlay for the urban sector (water supply, sanitation and roads) was Rs. 189 bn. Even after adding institutional finance from sources such as HUDCO and IL&FS the annual outlay for the urban sector is not expected to be more than Rs. 50 bn. The contribution to investment by ULBs is almost negligible given that a majority of ULBs are not even able to cover their establishment and operating costs, let alone make substantial capital improvements. In addition to this, ULBs would need funds for the operation and maintenance of these facilities. NIUA has estimated that in 2001, the resource gap facing ULBs was around Rs. 30 bn per annum.

As opposed to this, the total investment required in urban infrastructure (including roads and O&M) as worked out by the Rakesh Mohan Committee Report upto 2006 is in the range of Rs. 277 bn per annum (outlay for roads in this is around 15%). Thus, one can see a huge difference of around 300% between the quantum of funds available versus that which is required.

13.2.1 Tariff and pricing

Inadequate cost recovery has been one of the most important constraints in providing better water supply and sewage systems in India. This not only results in poor maintenance of existing assets but also precludes any further investment in expansion of the network. Even in progressive states such as Gujarat and Maharashtra, the recovery level (amount of charges collected as a percentage of what is billed) is not more than 60-70%.⁶⁷ The amount that is billed to consumers, and the cost which is sought to be recovered, is also much less than the actual cost incurred in water supply, i.e. cost recovery is not possible even with 100% collection efficiency. This is because water has been traditionally viewed as a social good that should be subsidised so as to ensure access to all segments of society. There is also a hesitation among governments to revise water tariffs from time to time to keep pace with changes in costs. Ironically, due to the uneven coverage of the network and poor service levels, those in the weaker segments (often living in slums and squatter settlements) often have to pay a price that is much higher than that paid by those serviced by the public utilities. Hence, there is also a need to review pricing policies in the water sector. Metering of water connections (especially domestic connections) is quite uncommon due to problems like low pressure, high supervision costs and tampering.

⁶⁶ Source: Brandon and Hommann, 1995 as quoted in India Water Resources Management Sector Review, World Bank, 1998.

⁶⁷ Source: India Infrastructure Report, 2001, *3-i Network*

Many cities also levy a water tax as part of property tax. However, its link to the cost of water supply is vague and it usually goes towards meeting the general expenditure of the local body. Collection of these taxes suffers from the problems of poor coverage, assessment, billing and enforcement of property tax. In addition to this, a variety of connection, development and betterment charges are levied. In most cases, their relation to cost is also difficult to ascertain.

13.2.2 Operation and Maintenance of Facilities

Water supply projects in India are characterised by extremely high levels of unaccounted for water (UFW). Physical UFW or losses are generally in the range of 25-50%⁶⁸. This is primarily because of the weak state of municipal finances and consequent neglect of routine maintenance. It is also because of poor quality of materials used during construction and poor monitoring of construction.

13.3 Reform and PSP Initiatives

The primary drivers of more comprehensive forms of PSP so far have been attracting private capital and curtailing the growth of public sector employment. In India undue emphasis has been laid on projects involving new source development and system expansion rather than on distribution and operational systems (Meera Mehta, DFID 1999).

A number of PSP initiatives in the sector have been launched over the last 4-5 years. However, only a small fraction of them have borne fruit or have reached the implementation stage. Of these the important projects are:

- Tirupur (water supply on BOOT)
- Alandur (sewerage)
- Bangalore (tertiary water treatment plant)
- Chennai (O&M of pumping stations)
- Delhi (O&M of water treatment plant)
- Sangli (management contract for water and sewerage)
- Ajmer (O&M of water supply system)

The majority of projects have been confined to the more progressive southern and western states of India. A lot many other projects did not progress beyond the drawing board stage for a variety of reasons ranging from insufficient preparation and studies, deficiencies in the procurement process, inadequate information about existing networks, lack of political stability, weak municipal finances, tariff risk, etc.

This is a pointer for the need to improve the technical capacity of the local bodies so that they can better conceptualise and prepare projects for private sector participation and then see them through the selection and negotiation process till the implementation stage. Projects also failed because the weak financial position of the public bodies raised questions about their ability to undertake their obligations during the life of the contract and necessitated guarantees, which were not forthcoming.

State Governments and some progressive local bodies have initiated various reforms in accounting and tariffs (increases in tariffs).

⁶⁸ Source: Urban Water Supply and Sanitation Report, World Bank, 1998.

13.4 Issues in Development of PSP

The key issues in further development of PSP and the sector as a whole are as follows:

1. Poor O&M of existing facilities- Poor operation and maintenance of existing water assets lead to high physical losses in the system. Along with weak supporting activities such as billing and collection, it means that an average local body won't recover more than 50% of the cost of water supply. Poor O&M is partly due to poor financial health (due to poor cost recovery) and partly due to weak technical and management practices. Little information is available on the condition of assets. Few private operators would want to take over a distribution system under these conditions. Thus, there is an urgent need to upgrade skills related to technical maintenance and billing and collection.
2. Institutional capability and financial credibility of local bodies- As already pointed out, technical and commercial skills of local bodies, which are the main implementers of water supply schemes, need to be enhanced. In addition, all-round weakness in the municipal finance system (especially related to property tax, the main revenue source for local bodies) needs to be tackled urgently. Unless this happens projects (especially bulk water supply projects) would continue to languish because of high credit risk of the local utility. The capability to appropriately structure and design projects, manage the procurement process for PSP and monitor the role of the private sector also need to be improved.
3. Tariff and regulatory reforms- Water tariffs in the majority of cities of India are too low to enable cost recovery even with zero physical and commercial losses. Revision of tariffs is infrequent and subject to tremendous public opposition. Since, consumers have become used to paying unrealistically low tariffs, PSP projects become extremely prone to risks related to the issue of affordability.
4. Shortage of funds- The estimated requirement for funds is far greater than what the Central and State Governments can provide for through plan allocations. Private sector funds have so far been scarce given the kinds of problems that the water and sewage sector faces. Thus, credit enhancement mechanisms for local bodies would help them raise resources and engage the private sector.

14. ANNEXURE 8 - HEALTH

14.1 Sector Structure

Health is a joint responsibility of the Central and State Governments as per the provisions of the Indian Constitution. Both the Central and State governments provide funding for health services whereas delivery of health related services is largely the responsibility of State governments. The overall structure of funding and delivery of health services is extremely complex and provides scope for leakages and dilution in the scope of programs as well as difficulties in coordinating the implementation and monitoring the effects of a program.

The Ministry of Health & Family Welfare is the central policy making ministry. The ministry is responsible for formulating the various health related policy measures. In addition, the ministry is also expected to co-ordinate the activities of the various State ministries of health as well as those of NGOs that are active in the field.

Following the formulation of the National Health Policy 1983, there has been a conscious move to involve NGOs in the tertiary health care sector in India, with NGOs being delegated the role of creating awareness on preventive medication.

India has a large network of public health providers. However, the overall public spending on health remains extremely low, even by developing country standards⁶⁹. Conversely, private health spending in India is extremely high and accounts for around 80% of overall health spending. However, the private sector is highly fragmented and disorganized. Regulation of the industry is weak and presents a significant challenge for policy planners.

Recognizing the need for a public health policy, India adopted its first national health policy in 1983, which recognized the need for developing public-private partnerships for the effective development of public health services financing and delivery and set specific demographic and health targets to be achieved by the year 2000. In retrospect, it has been understood that the financial resources and public health administrative capacity of India was far short of the requirements for achieving the goals of NHP 1983.⁷⁰

Taking into account the huge shortfalls in target achievements for the NHP-1983, the NHP 2002 was formulated with the intention of taking a more realistic view at improving public health indicators in India. The key emphasis of the policy is to increasing public health investments in India with a substantially higher role for the Government of India. In addition, the NHP 2002 also envisages a significantly enhanced role for private sector health service providers, *particularly for those segments of society that can afford to pay for it*. It also mentions time bound eradication goals for Polio, Leprosy, Yaws, and Lymphatic Filariasis.

In addition, it also targets increasing the levels of public health expenditure from the prevailing levels to around 2.0% of GDP by 2010, with central government spending to constitute atleast 25% of the total.

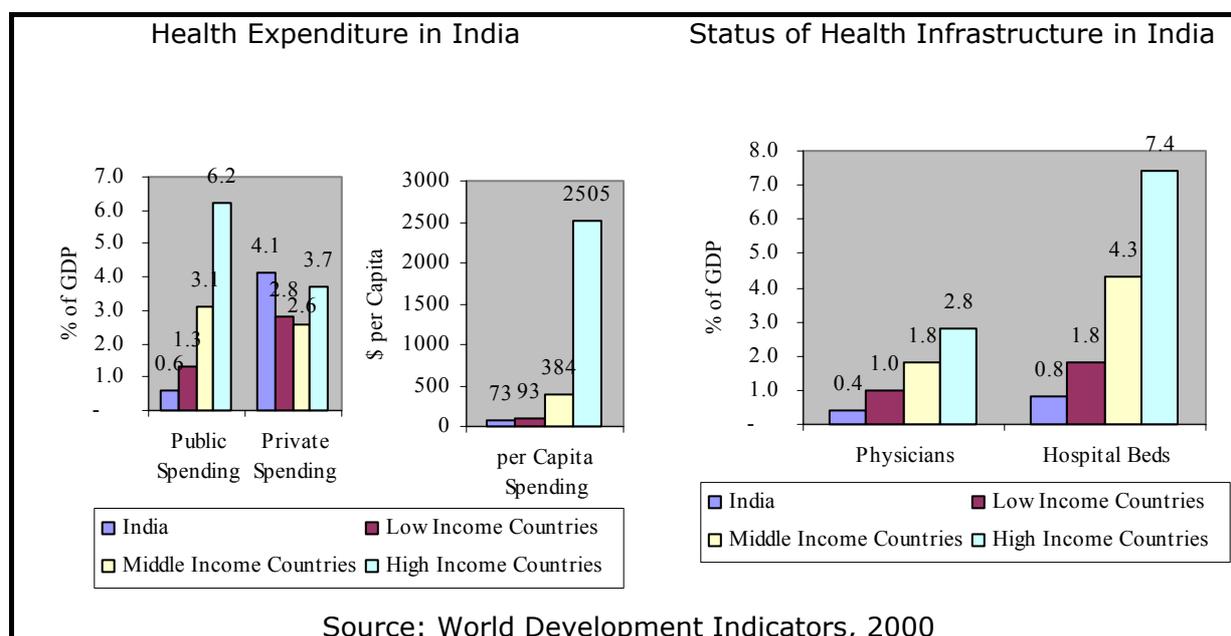
⁶⁹ As per the World Development Indicators, India's average public spending on health at around 1% of GDP, is around the average levels of low-income countries.

⁷⁰ National Health Policy 2002

NHP 2002 also lays greater emphasis on decentralisation of service delivery and administration with an increasing role for local self-government institutions. It prescribes the need for immediate implementation of statutory norms for deployment of health personnel. It also targets developing statutory guidelines for private sector health providers by the year 2003.

14.2 Sector Performance

Public spending on health in India is extremely low at around 0.6% of GDP over the period 1990-1998, which is lower than the average public spend of low-income countries. However, private health spending in India is high at around 4.1% of GDP over the period 1990-98, which is higher than the average of high-income countries. Thus, the overall health spending in India is only marginally lower than the health spending of middle-income countries. However, the health spending in India (in per-capita terms) is significantly lower than the spending levels of even low-income countries.



Doubts have been raised on the quality of data used for capturing health statistics since there is no standard National Health Accounting data which is reported regularly. Thus, even though it is widely accepted that health infrastructure availability and health indicators have improved, these improvements cannot be accurately measured / quantified in the absence of firm data.⁷¹

14.3 Issues in Development of PSP

14.3.1 Regulation of the Private Sector

Private sector health providers in India remain largely unregulated and the prices of treatment and quality of healthcare provided by the private sector tends to show a very wide degree of variability and accountability is largely lacking. Most of the private sector is dominated by profit motives, frequently leading to issues such as over-medication and over-charging of patients. The problem gets compounded for the poorer section on account of their relative lack of information

⁷¹ For instance, Total Fertility Rate in India as provided by the planning commission in its brochure "Population and Human & Social Development, April 2000 was around 3.4 children whereas the World Development Indicators for 2000 published by the World Bank states that the Total Fertility rate is 3.2.

on the price to pay and the quality of treatment to expect in return. Thus, one of the biggest challenges facing the health system in India is to ensure that there is effective regulation of the private sector health providers to ensure minimum quality standards and arrest rampant profit-making, while at the same time ensuring that regulation of the private sector does not lead in a decline in growth of health service provision in the country.

14.3.2 Reforming the Public Health Sector

Improving the performance of the public sector is critical to the overall goal of improvements in India's health indicators, not only in terms of the improved access to quality health services that they could provide but also in terms of the broader role that the public sector could play in overseeing and monitoring the performance of the private sector service providers. Immediate steps required in this direction would be primarily in the area of improving the funds-devolution chain, greater decentralization of resource collection and allocation and arresting leakages in the system, improving administration, management planning and budgeting for the public sector hospitals and clinics. It would require a relook at the roles to be played by various institutions and providing complementary institution-building training and support mechanisms for these institutions.

14.3.3 Financing of health care

Most of the expenditure on health-care in India comes in the form of out-of-the-pocket expenditure incurred at the time of treatment and risk pooling mechanisms are largely absent, especially amongst the poorer section of society that needs it most. Developing a comprehensive social security mechanism that reduces the costs associated with treatments of critical illnesses (which in most cases would signal the onset of the cycle of poverty) would be central to all efforts for future poverty alleviation measures.

14.3.4 National Health Care Accounting

The law for registration of private hospitals and nursing homes with the health department exists only in a few states. Even in the states that have such laws, there are no guidelines for the minimum standards requisite for establishing and running nursing homes. The ability of the State to target spending is severely undermined under the circumstances and the quality of data used for planning purposes is also under question. The development of the health insurance sector also suffers due to lack of comprehensive legislation, unorganised provider base and the lack of socio-economic health data, which can assist pricing. To trigger the growth of health insurance there is a need for an organized provider base, standardization across providers in treatment protocols or quality, an environment facilitating rapid networking and an effective mechanism of accreditation. Thus, establishing a National Health Care Accounting system that maintains an inventory of health indicators for the population would be a high priority area for enabling the overall development of the sector.

15.ANNEXURE 9 - EDUCATION

15.1 Sector Structure and Institutional Framework

Education is a joint responsibility of the Central and State Governments as per the Constitution of India, with funds for them provided by both levels of government and delivery of services largely a state responsibility. Of late, Panchayati Raj Institutions at district, sub-district and village levels are beginning to take on an increasing role in service delivery. The Central Government has also been taking several initiatives to supplement the efforts of State Governments by meeting some critical gaps in public provisioning for literacy improvement, particularly in the educationally backward States.

There are about 888,000 educational institutions in the country with an enrolment of about 179 mn. Elementary Education System in India is the second largest in the World with 149.4 millions children of 6-14 years enrolled and 2.9 million teachers. This is about 82% of the children in the age group.⁷² All States and Union Territories of India have adopted a uniform structure (the 10+2 system) of school education.

The Ministry of Human Resource Development is the central policy making ministry. The ministry is responsible for formulating various education related policies. In addition, the ministry is also expected to co-ordinate the activities of the various State ministries of Human Resource Development, Central Sector Organizations like the Central Board of Secondary education etc as well as those of NGOs that are active in the field.

Private sector participation in elementary education is expanding rapidly primarily because of the surging demand and the inability of the public system to deliver. Demand for private sector services are also increasing on account of the better quality associated with their services and increased parental ability to pay for such services. Private sector institutions are unlikely to emerge as significant direct contributors to the goal of universal education in the near future as their costs put them largely out of reach for the poor of India. They could however contribute significantly by reducing the pressures of the surging demand on the public system.

15.2 Sector Performance

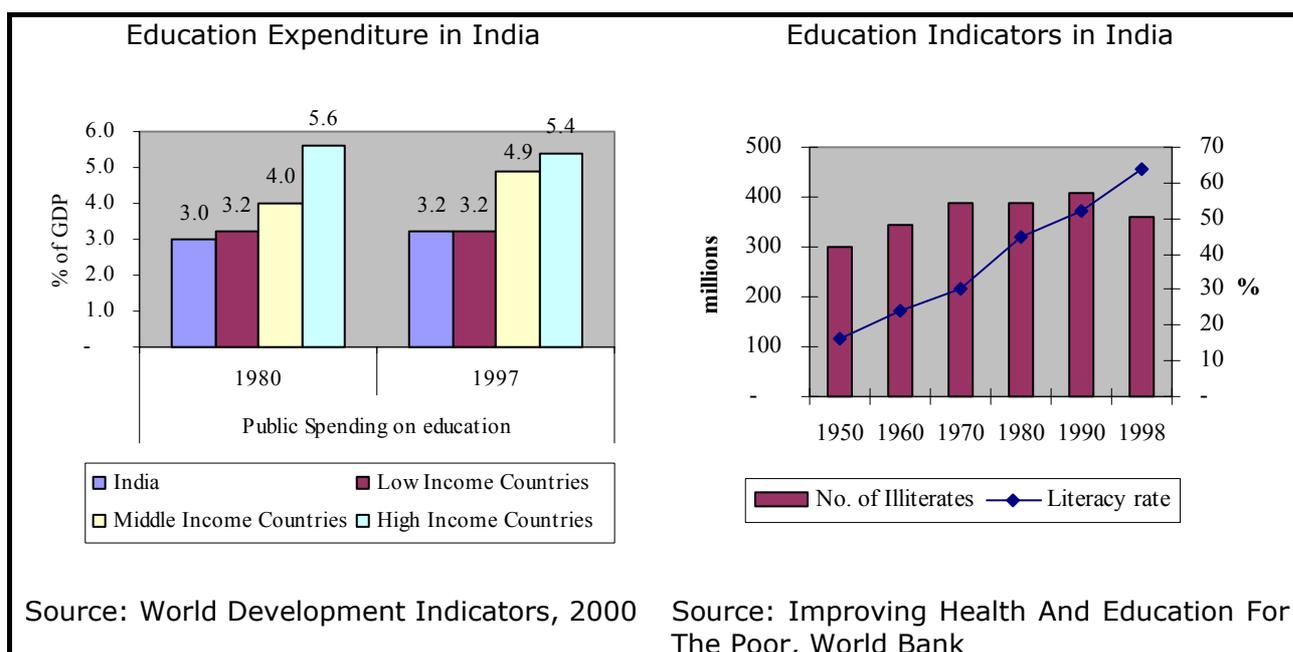
Article 45 of the Constitution enjoins that the State shall endeavour to provide, within a period of 10 years from the commencement of the Constitution, for free and compulsory education for all children until they complete the age of 14 years. This Constitutional obligation has been time and again deferred successively to 1970, 1980, 1990 and then to 2000. The Approach to the Tenth Five Year Plan (2002-07) has set the target of all children completing five years of schooling by 2007.

One of the Key recommendations of The National Education Policy – 1986, was to increase Government spending on education to atleast 6% of National Income.

Inspite of the declared goal of spending 6% of GDP on education, the actual public spending on education in India is extremely low at around 3.2% of GDP in 1997, which is comparable to the average public spend of low-income countries. Consequently, education indicators in India continue to remain low as compared

⁷² <http://www.education.nic.in/htmlweb/natpol.htm>

to other developing economies, even though significant progress has been made in the period since independence.



15.3 Areas for Reforms

15.3.1.1 Increased and more targeted public sector spending on primary education

Government spending levels on education need to be increased and brought in line with the targeted 6% spending as per the National education Policy. The systems for resource distribution and regulation of spending need to be revamped to avoid the problems of thinly dispersed funds, crowding-out of maintenance and operational expenditure by salaries and infrequent capital investments. In addition, spending needs to be targeted at poor and rural areas. A significant start can be made in this direction by reallocation of the government subsidies for secondary and tertiary education towards elementary education. This would ensure that the poor receive the maximum benefit from government spending on education.

15.3.1.2 Improving the efficiency of spending

A critical requirement is to ensure that the resources that are currently allocated towards primary education get spent efficiently. This implies the involvement of communities in the planning, monitoring, financing and oversight of education services. Carefully planned decentralization of the education system can facilitate this process. It also implies undertaking significant measures to improve the administration quality and accountability of public education facilities and undertaking a comprehensive review of the oversight process for public educational institutions.

16.ANNEXURE 10 PIPELINE OF INFRASTRUCTURE PROJECTS

The following list of upcoming projects has been drawn up from published and authoritative sources of information. The list of projects represents those projects that are an advanced stage of study/bidding or where developers are in place and in the process of financially closing the project.

16.1 Ports

Various estimates show that the sector would need an additional Rs. 150 to Rs. 200 bn to augment the sector's capacity to the desired level of 550 mmt. Some of the projects, which are under advanced stages of development and seeking private investment, are (these are the projects that have the highest chances of being implemented and of these, some will definitely be implemented):

Project	Sponsor	Capacity	Investment (approx)	Status
Conversion of the existing bulk terminal into container terminal	Jawaharlal Nehru Port Trust	4 berths	Rs. 3 bn	Feasibility studies are being carried out
Development Marine Chemical Terminal	Jawaharlal Nehru Port Trust	16 mmt	Rs. 8 bn	Feasibility studies are being carried out
Development of Container Terminal	Kandla Port Trust	1 Berth	Rs. 500 mn	Bidding stage (in the earlier bid process, P&O was selected as preferred bidder, but negotiations failed)
Development of 5A & 6A Berths for bulk cargo	Mormugao Port Trust	2 Berths	Rs. 2.5 bn	ABG Goa Port (Pvt.) Ltd. has been selected as BOT developer
Development of International Container Terminal at Vallarpadam	Cochin Port Trust	3-4 berths	Rs. 18.9 bn	Project was bid out (P&O was the single bidder). CoPT is expected to go for re-bidding
Coal, Marine Liquid and Iron ore terminals at Ennore	Ennore Port Limited	4-5 berths	-	Feasibility studies are being carried out
Development of container terminal at Mundra Port	Adani Port Ltd.	3 berths	Rs. 4 bn	Berths are under construction. The project may need additional investments for equipment and back up infrastructure
Deepening and widening of approach channel to Jawaharlal Nehru Port to accommodate 4 th generation vessels	Jawaharlal Nehru Port Trust		Rs. 8 bn	Technical studies are being carried out
Development of rail link from Surendranagar to Pipavav Port	Pipavav Rail Corporation	280 km		The project is being implemented by a JV of Gujarat Pipavav Port Ltd. and Indian Railways

16.2 Power

16.2.1 Transmission

Power Grid has tendered two projects - one each for Independent Private Transmission Company (ITPC) and joint Venture, (JV) route, namely,

- 1 For JV route - transmission lines under Tala Projects; and
- 2 For ITPC route - Bina-Nagda Dehgam 400 KV d.c.line.

The following projects are being proposed for investment by the private sector;

- 1 Transmission System associated with Rihand – II

- 2 Transmission System associated with Maithon R/B
- 3 Transmission System associated with Ennore
- 4 Transmission System associated with Karcham Wangtoo
- 5 Transmission System associated with Kahalgaon - II, Barh North Karanpura

(Source: CII)

16.2.2 Distribution

- 1 Support for privatized distribution companies in Orissa and Delhi
- 2 Support for distribution companies in Rajasthan and Andhra Pradesh, likely to be privatized in near future
- 3 Support for unbundled entities in Kerala and Gujarat

16.2.3 Generation

The following list is comprised of those power projects that had been identified by the Task Force as "Last Mile" and whose financial closure has not taken place till date. This status / date of the financial closure is based on CRIS-INFAC's latest April 2002 Industry update report.

Table 14. Pipeline of Power Projects upto 2008

Project	State	Company	Fuel	Capacity (MW)	Cost (Rs mn)	PPA	TEC	FSA	Financial closure	Commissioning date
Bakreswar Phase II	WB	Bakreswar Power	Coal	420	16,216	Signed	Jun 1998	-	Dec 2002	Sep 2006
Balagarh Phase I	WB	Balagarh Power	Coal	500	22,347	Signed	Dec 1994	-	Dec 2002	Mar 2006
Duburi	Ori	Kalinga Power	Coal	500	22,800	-	May 1999	-	-	-
North Chennai Phase II	TN	Videocon Power	Coal	1,050	51,800	Feb 1998	Apr 1996	Signed	-	-
North Chennai Phase III	TN	Tri-Shakti Energy	Coal	525	22,468	Jun 1999	Jul 1998	Signed	-	-
Tuticorin Phase IV	TN	SPIC Electric Power	Coal	525	28,140	Feb 1998	Jul 1997	Signed	-	-
Vishakapatnam	AP	Hinduja National Power	Coal	1,040	46,281	Apr 1998	Jul 1996	Signed	-	-
Jamnagar	Guj	Reliance Jamnagar Power	Coke	500	25,500	Oct 1997	May 1999	-	Mar 2003	Mar 2008
Dholpur	Raj	RPG Dholpur Power	Gas/naphtha	703	22,941	Sep 1996	Feb 1998	-	-	-
Patalganga	Mah	Reliance Patalganga Power	Gas	447	13,792	Mar 2000	Jan 1998	Signed	-	-
Vemagiri	AP	Vemagiri Power	Naphtha	542	17,110	Mar 1997	Received	Signed	Dec 2002	Mar 2006
Bina	MP	-	Residue	360	15,000	-	-	Signed	-	-

16.3 Telecom

Projects in telecom are equivalent to the number of licenses issued. Since conditions vary from State to State, it is extremely difficult to estimate the requirement of funds by each licensee. The recent licenses, which have been issued, are given below:

Table 15. Pipeline of Telecom Projects

Group	New Basic license	Fourth cellular license	NLD License	ILD License
Bharti	4 Licenses	8 Licenses	1 License	1 License
	Delhi, Karnataka, TN and Haryana.	Mumbai, Gujarat, Maharashtra, TN, Haryana, Kerala, MP and UP (West)		
Escorts		4 Licenses		
		Punjab, Rajasthan, UP (East) and HP.		
Hutchison		3 Licenses		
		Chennai, AP and Karnataka.		
Reliance	18 Licenses	1 Licenses	1 License	1 License
	AP, Delhi, Karnataka, Maharashtra, Haryana, Kerala, MP, Punjab, Rajasthan, TN, UP (East), UP (West), WB, Assam, Bihar, HP, NE and Orissa.	Kolkata		
Tata	4 Licenses	1 Licenses ¹	1 License ²	
	Delhi, Gujarat, Karnataka and TN.	Delhi		
Data Access				1 License
Total	26 Licenses	17 Licenses	3 Licenses	3 Licenses

The above projects do not include the following:

1. The licenses issued in the first round of telecom licensing for Basic & Cellular
2. VSNL's existing ILD license
3. MTNL's & BSNL's third operator cellular licenses
4. Letters of Intent issued but not converted

16.4 Highways

In the NHDP, approximately Rs. 60 bn is being sought by NHA from the private sector. So far, projects worth approximately Rs. 20 bn has already been tied up. Thus, there is a pending requirement for an additional Rs. 40 bn between now and 2007-08.

16.5 Housing

In the housing sector, given the extremely diffused nature of development, it is difficult to individually identify projects. However, investments of around Rs. 1,450 bn are required over the next ten years.