CHAPTER- II

CHANGING SCENERIO IN INFRASTRUCTURE: NEW ISSUES
Public sector monopoly in the ownership control and management of infrastructure is programmed to give way to private financing of infrastructure projects to leverage the private sector’s resources and productive efficiency for the benefit of all stakeholders – the service user, the service provider and the Government.

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2.1 Introduction:

In developing countries, governments own, operate, and finance nearly all infrastructures primarily because of its production characteristics and the public interest involved were thought to require monopoly. Thus, the record of success and failure in infrastructure is largely a story of government’s performance.

Infrastructure’s past growth has in some respects been spectacular. The percentage of households and business served has increased dramatically, especially in telephones and power. In other important respects, however, the performance has been disappointing. Infrastructure investments have often been misallocated—too much to new investment, not enough to maintenance; too much to low-priority projects, not enough to essential services.¹ Very often the delivery of services has been hampered by technical inefficiency and outright waste. Inadequate maintenance has been an almost universal and costly failure of infrastructure providers in developing countries. For example, a well-maintained paved road surface should last for ten to fifteen years before needing resurfacing, but lack of maintenance can lead to severe deterioration in half of
that time. Timely maintenance expenditures of $12 billion would have saved road reconstruction costs of $45 billion in Africa in the past decade. Due to inadequate maintenance the power systems in developing countries have only 60 per cent of their generating capacity available at a given time, whereas best practice would achieve levels over 80 per cent. Failing in maintenance is often compounded by ill-advised spending cuts. Also, inadequate maintenance shortens the useful life of infrastructure facilities and reduces the capacity, available to provide services. Inadequate maintenance later has to be compensated by much larger expenditures on rehabilitation or replacement.

Project investments misallocated by many countries have created inappropriate infrastructure or provided services at the wrong standard. Demands of users for services of varying quality and affordability go unmet even when users are willing and able to pay for them. Low-income communities are not offered suitable transport and sanitation options that provide services they value and can afford. Premature investments in capacity—especially in water supply, railways, power, ports and irrigation—have often absorbed resources that could otherwise have been devoted to maintenance, modernization, or improvements in service quality. Because many infrastructure investments are immobile and serve local markets, excess capacity cannot serve other markets and it remains underused. In some cases, large public projects have been over ambitious, placing a costly burden on the economy.

These failings in investment and operating efficiency are not compensated for by success in addressing poverty or environmental concerns for here too the infrastructure record is weak, badly designed and managed. Infrastructure is a major source of environmental degradation in both urban and rural areas. The poor often consume fewer infrastructure services and pay higher prices than the rich. For example, households obtaining water from vendors pay
much more than those households connected to water systems. In most counties, rural areas receive fewer infrastructure services than do urban areas (with the obvious exception of irrigation) even in such essential services as drinking water. But countries that have made concerted efforts to provide infrastructure in rural areas for example, Indonesia and Malaysia have succeeded in reducing poverty dramatically. Given this mixed performance, improvements in investment and operation are required as a matter of urgency. In addition, the demands on infrastructure are growing. More competitive global trade requires more reliable and sophisticated transport, power, and telecommunications. Governments facing increased fiscal stringency can no longer sustain. The problems of insufficient maintenance, misallocated investment, unresponsiveness to users, and technical inefficiencies present daunting challenges for future reforms-challenges compounded by new demands and constrained resources.

There is great variation both within and across countries in the efficiency of providing infrastructure services. Moreover, good performance by a country in one infrastructure sector is not necessarily associated with good performance in other sectors. In railways, the availability of locomotives is high where maintenance is good: at any given time, India has 90 per cent of its locomotives available. Availability is low where maintenance is neglected: 50 per cent in Romania and 35 per cent in Colombia. For telephones, call completion rates are 99 per cent in the best-performing countries, 70 per cent in the average developing country, and far lower in some. These findings indicate that the performance of infrastructure derives not from general conditions of economic growth and development but from the institutional environment, which often varies across sectors within individual countries.
2.2 Causes Of Poor Performance:

World Bank in its report on causes of failure of infrastructure services states, "A survey of forty four countries with world bank financed projects designed to improve infrastructure performance revealed the most common problem in six Infrastructure sectors. Unclear goals, lack of managerial autonomy and accountability, financial difficulties and wage and labour problem are recurrent problem for the public sector entities." Therefore, to understand what accounts for good performance requires understanding the institutional arrangements for providing infrastructure services and the incentives governing their delivery. The following are the main reasons for poor performance.

First, the delivery of infrastructure services usually takes place in a market structure with one dominating characteristic: the absence of competition. Centrally managed monopolistic public enterprises or government departments provide most infrastructure services in the developing countries. Almost all irrigation, water supply, sanitation, and transport infrastructure is provided in this manner. Until a few years ago, telephone services in most countries were the responsibility of a state owned post, telephone, and telegraph enterprise. The bulk of power has also been provided by a public monopoly. As a result, the pressure that competition can exert on all parties to perform at maximum efficiency has been lacking.

Second, those charged with responsibility for delivering infrastructure services are rarely given the managerial and financial autonomy they need to do their work properly. Public entities are required to serve as employer of last resort or to provide patronage. They are compelled to deliver services below cost-often by not being allowed to adjust prices. The other side of the coin is that public providers are held accountable for others actions. The
inefficiency is all too often compensated for by budgetary transfers rather than met with disapproval.

Third, the users of infrastructure both actual and potential are not well positioned to make their demands felt. When prices reflect costs, the strength of consumer demand is a clear signal of what should be supplied. Through the rice mechanism, consumers can influence investment and production decisions in line with their preference. But prices of infrastructure services typically do not reflect costs, and this valuable source of information about consumer needs is lost.

Users can express preferences in other ways, such as local participation in planning and implementing new infrastructure investments. But they seldom are asked, and investment decisions are all too often based on extrapolations of past consumption rather than on true assessments of effective demand and affordability.

2.3 New Opportunities And Initiatives:

The driving force behind privatization has been the high level demand for infrastructure services at a time when governments agencies have not been able to keep pace with and derive the benefits from techno official development. Creating institutional and organizational conditions that oblige suppliers of infrastructure services to be more efficient and more responsive to the needs of users is clearly the real challenge. There converging forces are opening a window of opportunity for fundamental changes in the way business is done. First, important innovations have occurred in technology and in the regulatory management of markets. Second, a consensus is emerging on a large role for the private sector in infrastructure provision, based on recent experience
with new initiatives. Third, greater concern now exists for environmental sustainability and for poverty reduction.

New technology and changes in the regulatory management of markets create new scope for introducing competition into many infrastructure sectors. In telecommunications, satellite and microwave systems are replacing long distance cable networks, and cellular systems are an emerging alternative to local distribution networks. These changes erode the network-based monopoly in telecommunications and make competition possible. In power generation, too, combined-cycle gas turbine generators operate efficiently at lower output levels, while other innovations are reducing costs. New technology makes competition among supplier in competitive entry in activities such as cellular phone service or power generation. Technical and regulatory change in other infrastructure sectors ranging from transportation to water supply and drainage and irrigation also make them more suitable in to new forms of ownership and provision.

Alongside such changes are new perceptions of the role of government in infrastructure. Awareness is growing in many countries that government provision has been inadequate. Intermittent water supplies from municipal systems, long waiting periods for telephone service connection, and increasing traffic congestion provoke strong reactions. Reforms in some industrial countries have increased the competition in telecommunications, in road freight and airline transport, and in power generation needing a reassessment of state’s role in economic activity. Recently in India also competition has been directly introduced in telecom sector.

2.4 Options For The Future:

To reform the provision of infrastructure services, we advocate three measures: the wider application of commercial principal to service
providers, the broader use of competition, and the increased involvement of users where commercial and competitive behavior is encouraged.

Applying commercial principles of operation involves giving service providers focused and explicit performance objectives, well-defined budgets based on revenues from users, and managerial and financial autonomy – while also holding them accountable for their performance. It implies that governments should refrain from ad-hoc interventions in management but should provide explicit transfers, wherever it is needed.

Involving users more in project design and operation of infrastructure activities where commercial and competitive behavior is constrained provides the information needed to make suppliers more accountable to their customers. Users and other stake-holders can be involved in consultation during project planning, direct participation in operation, maintenance, monitoring and development of programmes are more successful when service users or the affected community has been involved in project formulation. User participation creates the appropriate incentives to ensure that maintenance is carried out in community-based projects.

These elements apply whether infrastructure services are provided by the public sector, the private sector, or a public-private partnership. To this extent, they are indifferent to ownership. However, numerous examples of past failures in public provision, combined with growing evidence of more efficient and user-responsive private provision, argue for a significant increase in private involvement in financing, operation, and in many cases ownership.

All countries will not be able to increase private involvement at the same rate as much depends on the strength of the private sector, the administrative
capacity of the government to regulate private suppliers, the performance of public sector providers, and the political consensus for private provision. With this in mind the following four main options for ownership and provision are available.

Option A: Public ownership and operation by enterprise or department.
Option B: Public ownership with operation contracted to the private sector.
Option C: Private ownership and operation, often with regulation.
Option D: Community and user provision.

**Option A: [Public ownership and public operation].** Public provision by a government department or public enterprise is the most common form of infrastructure ownership and operation. Successful public entities run on commercial principles and give managers control over operations and freedom from political interference, but they also hold managers accountable, often through performance agreements or management contracts. And they follow sound business practice and are subject to the same regulatory, labour law, accounting, and compensation standards and practice as private firms. Tariffs are set to cover costs, and any subsidies to the enterprise are given for specific services and in fixed amounts. Water authorities in Botswana and Togo and national power companies in Barbados and Thailand perform well. The highway authority in Ghana and Sierra Leone and the restructured road agency in Tanzania are promising examples of this approach. But few successful examples of Option A persist because they are vulnerable to changes in governmental support. Many public entities perform well for a time and then fall victim to public entities like political interference.

**Option B: [Public ownership with private operation.]** This option is typically implemented through lease contracts for full operation and maintenance of publicly owned infrastructure facilities, or through concessions, which include
responsibility for construction and financing of new capacity. Arrangements between the owner (government) and the operator (firm) are set out in a contract that includes any regulatory provisions. The private operator typically assumes all commercial risk of operation and shares in investment risk under concessions. Leases and concessions are working well for railways in Argentina; for water supply in Buenos Aires and Guinea; and for port facilities in Colombia, Ghana, and the Philippines. Concessions also include contracts to build and operate new facilities under BOT arrangement and its variants. Proliferating in recent years, concessions to build and operate facilities include toll roads in China, Malaysia, and South Africa; power plants in Colombia, Guatemala, and Sri Lanka; water in Thailand. Each has brought private financing to support new investments.

Option C: [Private ownership and private operation]. The private ownership and operation of infrastructure facilities is increasing both through new entries by private firms in infrastructure markets and through divestiture of public ownership of entire systems. If private ownership is straightforward then services can be provided competitively and in many infrastructure sectors, it is possible to identify such activities and to allow private provision. For example, twenty-seven developing countries allow cellular telephone service to be competitively provided and many others allow private firms to construct electricity-generating plants and sell power to the national power grid. Where competition among suppliers is possible, private ownership and operation require little or no economic regulation beyond that applied to all private firms. The necessary competition can also occur across sectors – between road and rail, or between electricity and gas. For example, because it competes with suppliers of other energy sources, the private gas company in Hong Kong has no special economic regulation.
Where systems are being fully or partly privatized and there is no cross-sectoral competition, regulation of both private and public providers may be required to prevent the abuse of monopoly power. Experience with regulation and with system-wide privatization in developing countries is still very new. The Chilean form of regulation, which involves regular, automatic price adjustments and a well-specified arbitration system, appears to be working well. And systems that have been privatized have been very successful at expanding service. Venezuela’s telephone company expanded its network by 35 per cent in the first two years after its privatization; Chile’s by 25 per cent a year, and Mexico’s by 12 per cent a year.  

Option D: [Community and user provision]. Community and user provision is most common for local, small-scale infrastructure—such as rural feeder roads, community water supply and sanitation, distribution canals for irrigation, and maintenance of local drainage systems—and it often complements central or provincial services. Successful community provision requires user involvement in decision-making, especially to set priorities for expenditures and to ensure an equitable and agreed sharing of the benefits and costs of service provision. Technical assistance, training, and compensation of service operators are also very important. When these elements are present, community self-help programmes can succeed over long periods. A community organization in Ethiopia devoted mainly to maintaining roads (the Gurage Roads Construction Organization) has worked well since 1962 because it sets its own priorities and allocates its own financial and in-kind resources.

Financing: [Essential for all options]. Implementing the foregoing institutional options and mobilising funds to expand and improve services require carefully designed financing strategies. Foreign and domestic sources of finance will need to be tapped, but there are limits to the capacity of any economy to obtain funds
from abroad, especially debt finance. Balance of payments constraints, and the limited tradability of infrastructure services, mean that for most countries and ongoing infrastructure programmer has to be sustained by a strategy for mobilising domestic funds.

In future, governments will often need to be partners with private entrepreneurs. The task for both the public the private sectors is to find ways to route private savings directly to those private risk bearers that are making long-term investments in infrastructure projects – projects that have varying characteristics and for which no single financing vehicle is appropriate. Official sources of finance, such as multilateral lending institutions, can facilitate the process by supporting the policy and institutional reforms are needed to mobilise private financing and use to more efficiently.

Concessions or leasing arrangements are proven ways for a low-income country to draw on foreign expertise, as are the various BOT options that can be used to increase the capacity or systems. Concessions and leases have been widely used in water supply, ports, and transport sectors. BOT schemes have been extensively used in middle-income countries, and their application is now spreading to low-income countries. These arrangements help develop local expertise and foster the transfer of new technology, but they do not require the establishment of independent regulatory bodies because regulatory procedures are specified in the underlying contract.

Community approaches with technical and financial support, can be efficient and sustainable in supplying services using intermediate technologies in rural areas and in the low-income settlements that often develop outside existing urban service areas. Competition is possible in many activities but may be impeded by unnecessary regulations. Trucking and many types of urban
passenger transport can be provided privately, under regulations that deal only with safety and service standards.

2.5 India's Changing Scenario:

The Tenth five-years Plan (2002-2007) is being prepared in the backdrop of many strong points of economic performance. GDP growth in the post reforms period has improved from an average of 5.7% in the 1980s to an average of about 6.5% in the Eighth and Ninth Plan periods, making India one of the ten fastest growing developing countries. It is proposed to have an indicative growth target of 8% during 2002-07. The growth has to be induced substantially by increase in efficiency of resource utilization in addition to increased investment. The scope for realising this efficiency is very large both in the public sector and the private sector. Particularly in the backdrop of precarious financial condition of the States, the investment by private sector has become very important. The outstanding debt of all States together more than doubled from Rs.243000 crore in March1997 to about 500000 crore in March 2001. The interest liability of all States, together increased more than six fold during the last decade from less than Rs 9000 crore to more than Rs. 54000 crore.7

It is clear that electricity Boards are no longer able to carry out the functions they were designed for. State governments are unable to either provide them the subsidies or to allow them the freedom to fix tariff or to carry on business on commercial principles. The arms length relation between the government and public sector, which was envisaged in the early fifties, is no more possible. Most government departments treat public sector as their private field and the electricity Boards are no exception. Most government servants come on deputation for short period to these public sector units, virtually without any commitment. Promises of autonomy remained only in pen and paper. In the early days of Margaret Thatcher's government when Electricity privatisation was
under consideration, there was a strong feeling in UK that autonomy was still possible for public utility. But the Minister for Energy was frank enough to say, "As long as we own you, we will meddle with you". Government's attitudes to the public sector whether in UK or India could not have been put more clearly. Hence restructuring of the Electricity Boards and public utility is in the agenda of the government. Thus, the huge investment requirement in infrastructure and to manage it on commercial principle has made the reform than an option.

The industrial sector will have to grow at over 10% to achieve 8% GDP growth. This will place heavy demand on the infrastructure, especially generation and distribution of electric power. Not only availability of electricity but also its quality and reliability will be critical for the competitiveness of the Indian industry in the increasingly integrated international economy. The performance of the NTPC and other state utilities in implementing the various reform initiatives will, in turn, be critical to effective performance of the power sector. Thus a reformed power sector is the key to our country's economical progress.

Commenting on the need for reform in infrastructure sector in order to provide world class infrastructure to India O.P. Sharma of Planning Commission said, 'The state of country's infrastructure is far from adequate. Public sector monopoly in the ownership control and management of infrastructure is programmed to give way to private financing of infrastructure projects to leverage the private sector's resources and productive efficiency for the benefit of all stakeholders-the service user, the service provider and the government.8

The changing trend in government's policy towards infrastructure has also been reflected in this year's GOI budget (2003-04). The Economic Times on March 2003, reported under the heading, "Government plan puts
infrastructure on the freeway”. The government’s Rs.60, 000-crore infrastructure initiative presents lending opportunities as well as risk to the financial system. While lenders like insurance companies are on the look out for debt instruments that will provide long term guaranteed returns, they feel these investments will require huge government guarantees to attract investors to the road projects. Lenders who are used to government guarantees for state-sponsored projects will now have to evaluate the commercial viability of each project. Besides lenders have new opportunities in health and tourism sectors, where new investments have been provided tax breaks under section 10(23)G of Income Tax Act.

2.6. Conclusion:
The essence of the new funding mechanism is to mobilise the private sector to finance the infrastructure projects. The private sector along with supply of capital also brings professional management to the infrastructure sector. The new funding mechanism is to leverage public money through private sector partnership wherever possible. The efficient management of infrastructure is only possible by bringing more professionalism in its management through private sector involvement.
References:


