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2001

Online at <http://mpra.ub.uni-muenchen.de/24427/>
MPRA Paper No. 24427, posted 14. August 2010 / 13:58

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ISSUES IN INFRASTRUCTURE DEVELOPMENT TODAY: THE INTERLINKAGES

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INTRODUCTION

Infrastructure development is at a crucial juncture in India today. Tentative steps have been taken towards a more pluralistic provisioning, especially by the private sector, and as a result infrastructure as a whole has reached a point of irreversibility. It is no longer possible to go back to the old mode wherein the state, both central and provincial, actively provided the bulk of physical infrastructure. The reason is not that 'the state has no funds', as many believe, but the enormous waste, including the dead-weight losses of the old mode, that stands exposed.

In a broader sense, what has failed is not state ownership per se, but the assumption that in a large market economy many infrastructural sectors could indefinitely be run non-commercially. Yet the steps taken in the 1990s do not necessarily add up to a change in the right direction. Indeed, as I will argue, some of the important changes brought about ostensibly to further commercialization may actually have damaged its long-term prospects. These dysfunctional changes will soon have to be corrected.

No Longer a Question of Signalling

Even if change necessarily involves signalling, to both the concerned 'public' and the world at large, that India is credibly moving away from its closed door controlled economy, enough time has already passed. Many more pressing priorities beyond mere communication of the intent of change have emerged. The need for action and for demonstration of an ability to address the problems of change as they come along, through the framework of an overall stated strategy, is acute. Thus the viability of the infrastructure business of domestic financial

institutions, encouraged to lend to commercially oriented infrastructure, is itself at stake. The growth rates of infrastructural development in sectors like power, water, and roads have fallen well below the rates achieved in the 1980s.

The question no longer is whether or not to privatize, or, more generally, bring about incentive compatibility, but how to do so. That puts us at a crossroads where one path is a more thought through, sustainable, and socially beneficial privatization and commercial provisioning. The other, which can be tempting to decision makers and lenders alike, is essentially one of 'privatizing' without a proper fiscal and institutional basis which can only lead to a deeper mess and greater catastrophe. That policy makers will make mistakes is inevitable. But that the mistakes should have such major consequences, as has happened in India, is not acceptable. The effect of mistakes on the economy can be minimized, if a direction or a desired state (in the near future) is credibly indicated at the very beginning. Unfortunately, in a country where many policies typically originate from the desk of a harried bureaucrat in the form of a 'note' or paper, inevitably the immediate situation looms very large and ominous. The need for consistency and internal coherence with the change taking place in the rest of the economy is often sacrificed and the long-term value of a contemplated measure could then become a casualty. Added to that, there is the tendency towards 'tokenism' (to show that change is taking place) rather than change which is more difficult to bring about: its design requires the services of experts and many minds and involves many more departments and institutions. This results, often enough, in policies and actions that could be quite dysfunctional to the overall progress of reform. Such ad hocism would not reveal credibly the

end state or the direction that is intended. As a result, mistakes in policy even when they are reversed have a much greater negative impact on the economy than they should have.

In many areas of infrastructure, such as telecommunications, power, road transport, and airlines, it is possible and necessary to make long-term commitment, at least to the extent that the government spells out in some manner the state in which it wants the industry to be. In other words, there is then scope for a transparent and risk-reducing change.

There is increased acceptance by workers that change is inevitable and that their collective role should not generally go beyond issues of income and working conditions into questioning or insisting upon particular forms of organizations and particular prices for the services of their organizations. Hence the absence of an announced strategy is disturbing. Surely the argument that the announcements would only have given workers the scope to protest is less convincing today. Even when there are outright statements of commitment to privatization of central public sector undertakings (PSUs), the avoidance of a legislated process of privatization does not augur well. The need to distance the privatization process from the government and its day-to-day exigencies is obvious. In a democracy where the government itself is involved in the details of privatization of particular enterprises, it is inevitable that questions will arise about particular actions and pricing decisions in the privatization process and these will be hotly contested and opposed. The process may then be delayed indefinitely or altogether scrapped. With a credible commitment to fair and corruption free privatization, and by pursuing it through a constitutional or other distanced body, the chances of a successful privatization would, on the other hand, be bright in India today. Indeed, without that distancing and independence of the privatization process, real and quick privatization would not be possible even if the government were fair and worked in the best interests of society.

THE SITUATION TODAY

Infrastructure First and Later

The consensus of development economics of the 1950s and 1960s was around balanced growth of various types, including through plans. But very early, Hirschman pointed to the historical experience of unbalanced growth in industrial transformation and to the pressures for growth in other sectors to which the disequilibrium created by the process of unbalanced growth leads. Autonomous growth is hardly ever balanced or broad

based till the industrialization process is virtually complete. Outside the command economies, India has pursued a strategy of growth across the widest possible sectors and with much depth. It is now well known that huge costs were borne in pursuing the same in a closed economy framework. The costs were not only directly economic, but also administrative, resulting in the strengthening of bureaucratic controls and restrictions. The distortions that these unleashed created huge scope for rents. The year 1965, as is widely known, is a watershed in the development of the economy. The structural retrogression (Shetty 1978) that India entered into in 1965 was deep, and some of the major sectors of infrastructure, like the railways and irrigation, were its worst victims. The Indian Railways have never really recovered from the absolute decline in gross capital formation in the mid-1960s. Until 1965, the Mahalanobis Plan, with its emphasis on balance, also therefore attempted to provide infrastructure, prior to its need. The emphasis was on both physical and social infrastructure and the strategy *inter alia* was one of prioritizing infrastructure. That being so, the issue of its direction or allocation was crucial. Given the model which was based on the notion that production and physical allocation to particular sectors could be carried out in great detail, like in the Soviet Union, there could not have been a conceptual problem. This worked very well up to 1965.

The Redistribution Agenda Emerges

The period from 1965 right up to 1979 was one of very slow growth when much of East Asia overtook India. This long period of stagnation essentially changed the focus of policy and the state, from growth and distribution to redistribution. Many of the sop programmes, the major subsidies, and the very idea that poverty had to be alleviated *separately* from the development process arose in this period as a 'self-evident truth'. In many ways, even after the two decades of good growth in the 1980s and 1990s, the assumptions and world-views formed in this period still haunt policy makers and political parties. Notably the notion that the primary purpose of the state is to carry out redistribution through an ever-expanding bureaucratic apparatus and in a detailed and micro manner persists. It has no doubt come under attack, but it remains unshaken for several reasons.

The Problematic Growth of the 1980s and 1990s

The growth in the 1980s and 1990s, especially the latter, may not on the whole have been labour absorbing. The long period of nearly eleven years of growth, up to

1990–1 from 1979–80, without much labour absorption by the private corporate sector, was perhaps necessary to recover from the long stagnation period during which excess employment had been hoisted on the private sector through controls, dysfunctional labour movements, and hardly any competition in the market. In the 1990s the public sector showed, for the first time, a decline in employment growth. Employment till then had grown at a virtually autonomous and constant rate since 1965. The shedding of excess labour, though delayed by over ten years, was marked in sectors like textiles and other low value added activities, especially detailed manufacturing, where the public sector had to face competition, especially from smaller firms and the unorganized sector. The vast cost advantage which smaller firms have, due to the ‘schism’ in the labour market, is compounded by the higher growth rate in wages and lower work and productivity ‘norms’ in the public sector, even in comparison to the organized private sector.

Growth itself, in the 1990s, while rapid in relation to the stagnation period, was nowhere near the blazing 9–10 per cent per annum of the Chinese economy, now for well over two decades since 1978. The preceding Maoist period had itself witnessed growth at 6–7 per cent! At these growth rates, there is no need for special attention to poverty or subsidization. The poor’s interest is integral to the growth process itself and in less than a couple of decades per capita income doubles. The initial near equality of incomes, brought about through the Communist Revolution, which removed at one stroke any possible demand inadequacy, was the engine of growth. To this engine was added a second one in the form of manufactured exports, since the open door policy of 1979. Chinese growth has been thoroughly labour absorbing and, contrary to popular belief, less unequal between regions than that in India! In India the need to specifically provide for the poor (or more correctly to provide sops to neutralize any possible dissent from systematically gathering strength), is therefore a result of the very slowness of growth and its specific character, in that it has hardly been labour absorbing. The schism in the labour market is, of course, one determinant, and a result as well of this specific character of growth.

Advantages of Infrastructure Following Upon Growth

Clearly the resurgence of the 1980s led to infrastructural shortage which may have deepened in the 1990s. This transition from an infrastructure-led economy to one where infrastructure lags has its advantages! It is important to recognize that as infrastructure, especially that which has a direct bearing on production elsewhere

in the economy, is constrained, the benefits to be gained in relaxing these constraints can be large enough to improve appropriability and profitability in its provisioning. When infrastructure follows industrial development, the scope for its private provisioning increases. Indeed, if commercial orientation is not resisted by the state bureaucracy and vested interests of the earlier regime, then perhaps the most important gain in infrastructure following growth is that allocative efficiency need not suffer. This is particularly relevant for a society where systems of patronage continue, without signs of abatement, despite over forty years of the formation of the Plan and a state process of making investment decisions. Investment allocation need not be based on assumptions, models, and exigencies of the planner and the politician. The economy and the market could then determine investments and location choice in a transparent manner. Investments in urban infrastructure, in towns like Tiruppur or Moradabad, bursting with economic activity, and therefore in dire need of infrastructure, would result in stupendous social returns.

The State’s Continued Say in Investment Decisions

Similarly, it is no longer necessary to predict where roads, ports, and railways will be needed. The shortages, scarcities, overloading, etc. are evident. This is so not because economic developments were allowed to lead infrastructural investments per se, but because even after the evidence of shortages, planners and politicians continued to derive their priorities in the old way. Among the worst excesses of mislocation are a steel plant in Karnataka, when in Tacher in Orissa we have (and it was known as such) the world’s best site for ore, and paper mills atop hills in the North East. It must be remembered that as early as 1965, Plan-based allocations and decisions with regard to infrastructure were already being corrupted by political exigencies.¹ Indeed during the stagnation period, almost no central public enterprise, however powerful vis-à-vis the government, could have avoided suboptimal decisions, especially with regard to location but also technology and product markets, emerging out of the political process. The economics, in the form of the Plan, served to justify the decisions already taken on political and other considerations.

The tendency of the government to have a major say in infrastructure projects, even when there are shortages and congestion to lead infrastructural activity, is thus very strongly embedded. Even a very progressive BOT law of the Gujarat government has been translated by the state and politics into a set of ‘projects’ based on the planners’ and politicians’ sense of priority, rather

¹ For instance, see Das (1997); also Das (1999).

than on demand per se. To the extent that the basket of projects is large enough and there is a clear commitment to involve the private sector, and in the structural details of the project the private sector is not shielded from demand risks, there is scope for the allocation of resources to be driven by the economics. Nevertheless the allocative efficiency gains would be nowhere near what they could have been had visible shortages and constraints driven prioritization of projects.

The Large Costs of Denial

Infrastructure that comes later has another advantage. Shortages are capable of revealing willingness to pay. The true value of denial and therefore of the true cost of exclusion of the 'outsider' become known. Today the cost borne by the 'outsider' is not equal to the value of the resource consumed by an equivalently placed 'insider', but is closer to his willingness to pay. Water market prices in and around most cities not covered by public supply in India and sales of privately generated electricity by using locally made contraptions hitched to slow speed diesel engines (and increasingly by more standard diesel generator (DG) sets), in places like Patna city even to poor households, tell us a lot about the willingness to pay. At a fraction of these prices, the expansion of many services would hardly require any special measures like subsidies, only an orderly liberalization and removal of other legal hurdles to commercial provisioning and entry. Even suboptimal entry, at least till such time as most of the glaring shortages are overcome, would be better than continued denial.

Urban Road and Space 'Congestion' and Simulation Approaches

The only exception would obviously be urban road congestion and congestion on metro buses and trains as in Mumbai and Calcutta. This is because urban central space is constrained. There is only so much of it. Here there will have to be planning approaches that use simulation to examine the effects of alternative proposals such as denser packing of office and residential space by allowing a higher floor space index (FSI), or coordinated and asymmetric signals during peak hours. Contemplated bans on personal motorized transport in certain areas, shifting of transport-intensive activities to more 'appropriate' locations and freer land use rules and restrictions could also be examined by the simulation mode. The simulation mode has become increasingly relevant and appropriate not only because sophisticated computers and software are easily available, but also because the notion that the physical design, as also the design of rules, can and often does have consequences

not envisaged by designers is given its due weight. By assigning an 'autonomy' to users and agents (in a stylistic manner no doubt) in simulation models, serious users of such models have an orientation and philosophy quite different from central planners or from planners and architects with their unquestioned a priorities.

Infrastructure Developed Later But With the Willingness to Direct and Shepherd

Commercially oriented infrastructure would ensure that little or no infrastructure remains idle. Thus we would not have empty trains running from Ahmedabad to Rajkot or from Trivandrum to Kanyakumari, just to satisfy some perceived value in trains that 'span the length and breadth of the country', while elsewhere people have to travel packed like sardines.

Infrastructure Later Conserves Capital

Infrastructure that is created later conserves capital and results in fuller utilization. This can reduce the economy-wide capital-output ratio. It is most pertinent to note that much of East Asia, until recently, was in a situation of infrastructure created later (perhaps more because of the extremely rapid growth of manufacturing). In the 1990s, huge capital inflows allowed it to go in for infrastructure, anticipating (not necessarily correctly) future infrastructural needs. The high risk of lengthening payback periods, even as the tenure of finances was declining, because an increasing part of the funding was from foreign sources, was at the root of the East Asian crisis.

While there are severe shortages, a significant part of existing infrastructure in India is underused or even un-used, such as in cities with overprovisioning of roads but having absurd design, like Delhi, Chandigarh, and Gandhinagar, and roads which only politicians and bureaucrats need, such as those between Gandhinagar and Ahmedabad. Other examples of misdirected resource allocation are plush airports where there are only two flights a day, even as others are woefully short of passenger amenities, and Rajdhani and Shatabdi first classes that run with the occasional government passenger. Such misdirections are so pervasive that the enormity of the costs that they impose are hardly even realized. Due to delays and cost overruns which erode the productive value of savings, public enterprise may have imposed a penalty of as much as 1.5 to 2.0 per cent on the growth rate of the economy! If to that the costs of the underutilized and unutilized infrastructure are added, the growth penalty may have been even higher! Who has borne these costs? Obviously the poor, especially those who are still unemployed, since they, more than others, would have

gained through faster growth; and of course the ‘outsider’, as also perhaps the capitalists. Only the middle classes may not have suffered much, because of their fixed and rising incomes, which do not depend much on the growth in the economy. In fact they have the benefit of cheaper services, including those of domestic servants, in an economy that has little dynamism in creating factory jobs. Moreover they can always rely upon some kind of preferential access to infrastructural services in short supply.

Despite all the benefits of later infrastructure, they arise quite clearly from having fallen behind the theoretically optimum proportion of infrastructure. While this is true, what is being argued is that the informational, governance, and institutional costs of remaining close to or above optimum level can be too large for a transforming economy, with pressures on the state to spread thin the resources for infrastructural investment. Other than that it places a greater reliance on the planner and the politician rather than on the market. In the given situation of large-scale state failure in India, the late arrival of infrastructure has its obvious advantages.

MACROECONOMIC LINKAGES

Demand Owes Much to Infrastructural Investments

Not only in journalistic discussions, but surprisingly, even in academia, the demand aspect of infrastructure hardly ever finds mention. The sectors electricity, gas, and water (EGW) of the Central Statistical Organisation (CSO) and transport, storage and communication (TSC) while constituting barely 10 per cent of the GDP constitute 25 per cent of the gross domestic capital formation (GDCF). This is an aspect of the stage of development of the economy. With better incomes, the contribution of non-input infrastructure like housing and urban services will increase. Composition apart, until the industrialization process is completed and for some time after that, when other infrastructure like housing, shopping malls, and city formation functions improve, the gross domestic capital formation (GDCF) in infrastructure would be larger than its relative contribution to gross domestic product (GDP). Certainly at the stage of development the country is in, productive or input-type infrastructure—power, irrigation, basic water, and sewerage in urban areas, telecom, basic and technical education, roads for trucks and buses, ports and railways—will have to expand at a rate at least corresponding to the growth rate of the economy. In these areas, except possibly telecom, the longer life of assets than those in manufacturing, other services, and the primary sector obviously means that the investment

pressure from infrastructure is a major source of the investment demand in the economy.

Therefore, *ceteris paribus*, the investments actually made in infrastructure have a major impact on income level via the demand multiplier. Indeed, in barely open economies, like the Indian economy before 1984 and the Chinese economy before 1978, investments in infrastructure (largely in the public sector), along with agricultural output, were the principal drivers of the economy. Today, along with these, exports too have become principal exogenous categories of expenditures for both the economies.

The developments in the 1990s, following the stabilization of 1991–2 and the structural adjustment thereafter, are worth recalling. The tightening budgets of public enterprises, arising out of sharp expenditure reductions, hurt investments in infrastructure, bringing about a significant drop in the rate of capacity additions. Overall, the reduction in public expenditure has fallen in a large measure on investments in general and more particularly on infrastructural investments. As arising out of the liberal strategy of rolling back the state, even after the economy had been stabilized, this was to be expected, since the public sector had a predominant role in infrastructure and tightening its budgets would also affect infrastructure.

Rising Private Investments in Manufacturing Masked Decline in (Public) Investments in Infrastructure

Yet, once the economy stabilized by 1992–3, investments grew very rapidly, despite the relative slowdown in public (and infrastructural) investments. This was because investments as a whole were kept up at earlier rates of growth, or higher, by the very large rise in private investments, largely in manufacturing. While private investments seemed to rise in areas like power, they slowed down after a while and in any case their rise was too small to replace the large shortfall in public investments. At that time in 1996–7, I (Morris 1997) argued that the economy would slow down because exports had been affected by adverse exchange rate policy and the scope for private investment in the aggregate to continue at the earlier high rate was not really there. (Recovery from the recession took two years and even today the pointless defence of the currency and attendant inability to lower interest rates will continue to hold back the growth of the economy!)

The reason private investment could not have risen to fill the void created by the falling off of public investment after 1996–7 is because then (and even as yet) the policy, legal, and institutional clarity, besides the price reform necessary for private sector entry into infrastructure on a large scale had not come. It could not have come

quickly, certainly not in India, where change typically has been of the two-steps-forward-one-step-backward variety. The reforms needed for private capital to enter on a large scale will have to be deep and fundamental and involve major shifts away from the current paradigm. Privatization on 'escrow' or 'lease' basis could only have gone thus far. It will, in other words, require the second or constructive stage of reforms.

Even State Investments in Infrastructure are Better than No Investments

Here it is important to remember that uncertainty with regard to infrastructure (and ideological and financial restrictions on the public sector investing) creates a depressionary pressure. Thus the economy bears a cost and a risk in growing more slowly. In the 1980s, with the state investing (however inefficiently), this demand side factor was not adverse and did not slow down the economy.

Higher 'Target' Growth for Monetary Policy

Despite this, realized growth rates in the 1990s have not been low. Indeed, they have on the average been only marginally less for the industrial sector than those in the 1980s, and probably higher for the economy as a whole, owing to the faster growth of the services sector.² Rather than using this fact to justify conservative macro-economic policies, as the Reserve Bank of India (RBI) has all along been doing, it is necessary to recognize that the achievable growth rates are considerably higher than what is generally believed—possibly even as high as 9 per cent (Morris 1997). Monetary policy, including monetization of fiscal deficit, could have been much more ambitious and exchange rate pricing more aggressive than the general consensus would have it.

A revival of infrastructural investment could indeed force the government and the RBI to accept this higher growth potential of the economy and hence an alternative higher equilibrium, where a 5 per cent overall fiscal deficit is actually sustainable (and possibly necessary) for some years to come.³ Infrastructural investment will then be higher than that in the 1990s. With money

² Higher export growth at least till 1996–7 and an average agricultural growth of 3.2 per cent (from the 1980s' 3.0 per cent) and structural changes towards higher productivity industries may have been responsible.

³ Applying a suitable growth rate of exports of 15 per cent per annum instead of 10 per cent, a growth rate of the economy of 8 per cent instead of 6 per cent, and an inflation rate of 8 per cent instead of 5 per cent on a standard sustainable primary overall fiscal deficit formula, a figure much higher than the generally assumed 2.30 per cent is arrived at, viz. 4.56 per cent.

supply growth faster⁴ than in the 1990s and much lower exchange rates, the openness of the economy increases steadily through higher growth of the traded sector at between 50 and 100 per cent faster than the rest of the economy. Inflation may be marginally higher at 7–8 per cent⁵ rather than the present 6–7 per cent, but the real interest rate would be lower by at least three percentage points. In that situation, growth would be closer to 9 per cent.

Economic Revival Requires Infrastructural Investment

The leverage point for change would be both investments in infrastructure, and exports (through the exchange rate), to affect demand positively. Thus, not only from supply side considerations, but even more urgently on account of the demand side, infrastructural investments will have to revive. The matter may be so urgent that if private investments are going to be delayed for the reasons mentioned above and the corrections to relax the constraints are not forthcoming in the near future, a reversion to public investments will be necessary.

Large Potential for Private Investments

The potential for genuine private investment, with the right kind of reform, is large because of certain interrelated factors. The areas of infrastructure that have functionality at this point (from the supply side, or requirements) are power, telecom, roads, and urban water. All except roads are highly appropriable and much of telecom is possible even via competition modes! There is no problem of excludability in all of these except roads. Even here the build, operate, and transfer (BOT) route will be valid and provide substantial private investment, till such time as bottleneck situations are addressed and relaxed. Thus a crash restructuring of the

⁴ Targeting money supply growth may not be the right strategy in India. (For the first couple of years of stabilization, one could grant the validity of monetary targeting.) Even elsewhere, economies like the US—where the money multiplier has been far more stable than in India—have grown much faster by shedding their earlier monetarist conservatism and targeting interest rates.

⁵ The assumption that inflation is essentially a monetary phenomenon is not quite correct. At inflation above 9 per cent, money supply growth is no doubt the driving factor. At rates much below, up to about 8 per cent, it is the price of primary products whose supply and demand are both inelastic in the short run that has driven the inflation rate in India. Primary products, especially agricultural, have a volatility which is more than double that of manufactured goods, when we look at monthly data. Thus buffer stocking of food and an incomes policy that links spending to the investment demand will be the solution for the economy. Indeed, a well-thought-out incomes policy has *inter alia* been a facet of high speed growth in East Asia, including that of Japan in the 1950s and early 1960s.

power sector on the lines suggested in this report⁶ and opening up of the telecom sector on the lines of the Prime Minister's Office's Draft Bill will be necessary. Similarly, the opening up of the urban water sector, especially distribution, to BOT at least in areas not presently covered, or poorly covered by existing public enterprises or parastatals, will help the urban poor a great deal. The last would no doubt entail that urban bodies have the freedom to act and to initiate opening up the water and sewerage sectors with minimal regulation, limited to standards of safety and possibly a liberal price cap. In roads the decision to set up an autonomous road fund with substantial stakeholding by road users and citizens would make it feasible for the private sector to go beyond toll roads, to own and operate even urban roads. In all these, detailed analytical work to produce requisite legal and contractual documents, as also bills to be tabled in legislative bodies will take time. But the point really is to draft and declare a clear overall strategy that outlines the future course of action and the objective of reform. In a sense what we are saying is that there should be 'equifinality' in government actions to necessarily lead to the announced state of the industry.

THE APPROACH TO REFORM AND RESTRUCTURING

State Ownership Did Not Overcome Coordination Failure

It is relevant at this point to recall that one dimension of the state failure that brought about the crisis of the early 1990s was precisely its inability to coordinate across sectors. It may be emphasized that this need for coordination was perhaps the most important reason for state ownership in these sectors in the first place. Indeed, the whole idea of the intersectoral consistency plan that India pursued for over four decades essentially arose out of the recognition of such interrelationships. That the effort has failed is not because the need or the opportunity for coordination and interdependence is any less, but because it has not been adequately and appropriately pursued. Planners did not attempt to translate the desired goals and targets into prices, incentives, and consistent rules, but sought to direct agents through administrative fiat in what was even then essentially a market economy.

The Mode of State Direction is Important

The option of directives, controls, and administration through parastatals and public enterprises was an easy

one for the bureaucracy. It would have been intellectually demanding to translate the desired goals and targets into prices, taxes, and rules, in a manner that created appropriate incentives for agents and managers to act and move towards the very same goals. The intellectual environment of that period which did not question the state's ability or capacity (or even motivation) to carry out the task of directing and controlling the economy, has certainly been part of the problem. In a short time, certainly by the mid-1960s, the inconsistencies which created rents had backlash effects, resulting in a political and economic structure in which rents and profits were so closely intertwined, as to be impossible to disentangle. For the future, piecemeal approaches are no longer feasible. Thus, even while the decisions and legislations may be slow, the strategy for the change cannot be incomplete if it is to become a credible (and inevitable) guide to the future.

Commercialization of Investment Decisions is the Real Challenge

The objective of early planners to arrive at some understanding of the contours of a desirable future remains valid in a market economy. But now the attempt ought to be to steer the economy with fewer and less dysfunctional instruments, or even to allow the economy to find its own way. This is the challenge of reform in the Indian context.

It goes without saying that there will be situations where the future is only dimly discerned, where predictability is poor, or even where there are no obvious instruments to lead the economy. In such situations, simple rules that enhance the role of markets, not just in producing and selling but also in investments, i.e. to allow and create conditions for markets to play a bigger role in the allocative process, would be functional to the growth and development of the economy.

The challenge of reform and privatization is really to bring the market process into allocative decisions. Governments everywhere shy away from this role for markets with regard to infrastructure. The Indian state, which has the task of balancing various pressure groups and competing regions, would be most reluctant to concede any reduction in its own role in investment decisions. To bring the investment decisions in infrastructure into the market process remains a challenge in many sectors, especially in sectors where failure arises from lack of excludability. The problem is more important to transforming economies like India, where the task of building basic infrastructure lies ahead.

The shift to privatization of infrastructure from a state-dominated system cannot be easy or sudden. It may not even be necessary to start with. Allowing managers

⁶ See section 7.3 in this report.

the freedom to manage and organizations the basis to be commercially oriented is good enough. Yet in practical terms the Indian government, at both state and central levels, has not shown the capacity to allow managers of public enterprises to work without political interference. It has also not been able to refrain from setting prices that are unsustainable. Infrastructure with state-dominated provisioning poses the dual challenge of privatization (which it shares with all public enterprises in general) and of overcoming in some manner the 'market failure' that is a characteristic of it. Regulation, detailed or otherwise, and market creation through a clear definition of property rights are important means to overcome market failure. Similarly, creating incentive compatibility through appropriate choices and restrictions on ownership is also a significant means to curb market failure. The market-creating power of high speed and networked computers, when brought to the aid of these approaches, can considerably enhance the process of commercialization of infrastructure.

Mode of Redistribution is the Problem

The above tasks would be common to reforms anywhere. The Indian situation offers specific challenges which can hardly be understood completely with reference to experiences elsewhere. The context is very important. Often policy makers and analysts complain that change is politically difficult and eminently good measures such as tariff reform and removal of poorly directed subsidies are viewed as impossible without political will. Hence reform is slowed down or altogether stalled. The problem, while requiring a political solution today, may itself have been a creation of the past. For example the decision to subsidize or redistribute may not have been wrong per se, but its mode might be questionable. Thus the creation of the well-entrenched nexus in adulterating and short measuring petrol, diesel, cooking gas and other oil products. These vested interests are a creation of the original ham-handedness of the policy, and are today strong enough to slow down or even stall change.

Vested Interests Can Be Countered

From comparative studies of the Indian state and the strong East Asian states, we do know that the latter intervened as much, and perhaps even more strongly, than did India. But they showed an ability to be conscious of the 'unintended' and compositional consequences of government direction, unlike the Indian state. They have also tended to periodically correct such consequences. In India, slower state and bureaucratic processes, inadequate coordination across and within

vast bureaus, and perhaps even quicker response of agents to exploit the rent opportunities so created were responsible for the pervasiveness of distortions and rent-seeking behaviour. Eventually, vested interests have evolved. Yet one must not exaggerate the power of vested interests, since there are always others outside the current system of benefits and rent generation, that could be mobilized for change. Potentially, such 'outsiders' are larger in number and await the 'political entrepreneurship' that would mobilize and activate them to be the vanguards of change.

ILL-CONCEIVED REFORMS

Vested interests may not have been the principal reason for the slowness of reforms in the 1990s. Poor conception and design may be the chief culprits. Additionally, resistance from the bureaucracy and poor credibility of the reformers to carry out reforms in a fair and non-partisan manner have created doubts about their benefits among sections that could potentially have been the most important gainers. The tendency to make do with 'known' persons—retired bureaucrats and judges—rather than bringing in experts and special competencies has also contributed to the slowness and ineptness of certain reform initiatives. Analytically it is not certain that the same forces which pushed for the early reforms (the so-called first stage of the reforms), and gained substantially from them, will not oppose the next stage of the more challenging reforms. There is, therefore, no doubt about the need to find new allies, including those without voices. There may even be need to keep at a distance the elements that supported and pushed for reforms in the first stage. Thus, independent power producers (IPPs), early developers, foreign institutional investors (FIIs), and governments with changeable commitment to the economy could resist change if competition in the broadest sense were to emerge to challenge the profitability of their early investments.

The Challenge of Constructive Reforms

The early phase of the reform, where the constructive aspect was small, needs to be distinguished from reforms needed now that have to, *inter alia*, construct markets where none existed before. It has also to create new institutions with more appropriate incentive structures and codify simple rules that are conditional rather than absolute. Similarly there is need to clarify and refine property rights and bring about common property management approaches to overcome certain kinds of market failure. While the dismantling of licences, removal of import controls and restrictions, relaxation of

entry restrictions for foreign capital and the lifting of the ban on the private sector in certain product markets were all relatively uncomplicated, the changes required today are not so. The problem is not only more complex, but solutions will also depend on the specificities of society, economy, and state capacity. Thus learning from experience elsewhere in the world while important would be far more contingent. There are no simple substitutes for creative approaches. The possibility of being overwhelmed by the received wisdom is large.

Consumers' Interest as the A Priori Concern of Reforms

In bringing about infrastructural reform today, the emergent and the unanticipated aspects are large. I have already stated, therefore, that the scope and need for a strategy of reform are substantial. What can be the common contents of such a reform? Much of it would, understandably, depend upon the particular sector and the specific possibilities of liberalization, the nature of market and state failure that may exist, and other dimensions of the industrial structure. But certainly, the strategy can always reiterate that the purpose of reform lies in the interest of consumers and society as a whole. Thus reforms should have as their priority consumer and societal interests and not the means or intermediate goals such as privatization, or bringing about independent regulation. Many contradictions which regulators today face would not be existing had the consumer been given primacy.

External Pressures Alone are Inadequate

Infrastructure sectors such as roads, housing, water supply, and sanitation, which, in contrast to other sectors like telecom or power, use traded goods to a lesser extent in their construction and operation, are, therefore, less likely to be subject to external pressure for change. The pressures would have to come from within, or possibly from development financial institutions (DFIs) and multilateral agencies (MLAs). External private interests would tend to be limited to consulting firms and lenders and it is not always the case that the optimal and sustainable reform is necessary for their projects' success. Project success may well be better assured by certain suboptimal (from a societal point of view) contracts that protect the interest of the lender rather than true reform. The danger of a spate of such suboptimal contracts 'defining', through their practice, the nature of change is large. This is especially so when the change has been driven by the presumption that 'the state has no money'.

LEVERAGE POINTS FOR CHANGE

Deregulation and Commercialization to Correct State Failure

A valid issue that arises is: it was state failure that brought about the crisis of the economy and the short provisioning of infrastructure in the first place. And now if the state has an important role in creating appropriate strategies and institutions for regulation, is there any real hope for infrastructure unless state failure is overcome? Even privatization and orderly and correct deregulation would require state capacity. To get a handle on this important question, it is necessary to understand the nature of state failure in India. It is certainly not a failure arising out of incompetence, since even today many individuals within the bureaucracy and those outside, but on call, have all the skills to analyse and find solutions to most problems. Similarly, the average Indian politician is more educated than those in many other countries including the US. State failure is primarily one of incentive incompatibility and the distortions that have followed therefrom. As a result, there is a major mismatch between responsibility and authority. Existing structures, reporting relationships, and processes more generally have resulted in the displacement or dilution of responsibility. Even when organizations of the state have started with concern for the primary task, deterioration along these lines has been common. Corruption in high places is also an important dimension of state failure, but as earlier stated, corruption feeds on the inappropriate design of organizations and on 'policies that create rents'. Despite all that has happened thus far, the Indian state machinery cannot be called 'kleptocratic'.⁷

Reform Does Not Need 'Ideal' Bureaucracies

Perhaps the most important reason for commercialization and privatization is that commercialized or privatized enterprises demand good and competent processes and structures only within a small part of the overall governmental machinery, possibly not even all the time. Thus, even if the bulk of the public works department (PWD) is corrupt or caught in a quagmire of impotence, a small group, well shielded for a while from dysfunctional bureaucratic and political processes and possibly having the support of the top politician, can push through, for example, a worthy BOT law. Once a few projects go through in a fair fashion and a process is established, the potential of substantial sections of the state machinery to delay and hold back

⁷ Many in Africa are indeed so [Leys (1975) & Shivji (1976)].

change is reduced. Indeed, as a result, the pressures on these organizations to change may well increase. Even if they do not change, instead of stalling projects and infrastructure businesses, their activities may then merely add some costs (rent) to them.

It is because of this ability to do with less than uniformly good state systems that commercialization and the private sector's role become vital. If indeed pluralistic delivery takes place, the backlash effects of the same could generally clean up the rest of the machinery, since the returns to corruption fall dramatically as competition emerges and the returns of technology and better management improve. This has already taken place in manufacturing industries in India in the 1990s and it is now beginning to show where independent regulators are fighting to do their jobs.

All or None Kind of Change is Very Difficult

Even in the most dismal of state systems, there are people who are not corrupt and make honest efforts to pursue the primary task. A wholesale replacement of state administration, even a thoroughly corrupt one, has been rare. A quick change for the better via reform of governance that includes the state machinery has also been rare and is almost impossible without revolutionary political change. The Indian state system is, all said and done, 'fair' in politics, at least to those who have voices (and most do). To 'insiders', that is those with some endowments, it is fair even in an economic sense. Thus the state has a legitimacy which goes beyond the credibility of particular governments and their policies. Moreover, those actively involved in corruption are basically few. Many within the administrative system are in a state of impotence because of the cumulative impact of past mistakes that have brought about incentive incompatibilities and reduced the scope for action. There are many honest civil servants, who even within the current system, are able to take risks pursuing change. Would such groups reach the critical minimum size for large-scale change?

'Leverage' Points for Change

Change that starts small but attacks key leverage points of the system has great potential and may even have begun to occur. Ushering in markets and commercialization in infrastructure can build upon such changes to unleash the potential of the economy and its positive feedback effects on the state system. True reform would have such effects. With the economy growing at much higher rates than at present, 'outsiders' could soon become 'insiders' and the returns to corruption could dwindle considerably and the stakes (and capacities) of

those who are victims could become high enough to ensure high costs to corruption. For example, the US was a very corrupt economy in the 1920s, but the economic dynamism of the 1920s gave rise to large-scale improvements in governance. Similar pressures are now at work in China, where 'campaigns', the patent response of the Chinese society to problems, have made examples out of corruption in high places. Corruption can then decline suddenly. That day may not be too far off in India, if it can shake off its current constraints to high speed 'inclusive' growth.

PUBLIC ENTERPRISE IN INFRASTRUCTURE

'Hardening' Versus Performance Budgets

One essential aspect of the reform thus far has been the very significant hardening of the budgets of public enterprises. The central PSUs almost immediately after 1991–2 felt the pinch of cutbacks in budgetary contributions. With a lag, state-level PSUs and local bodies which have a big role in the provision of physical infrastructure also felt the heat. 'Hardening' of budgets can create conditions for task orientation and for tariff reform in the organizations which then have to cope with falling contributions from the state. But thus far to rely on that aspect alone has been quite short-sighted. It has meant that the potential to use related and complementary instruments like variability in the hardening of budgets, performance linking of budgets and resources, discretionary and incentive pay for employees of public enterprises has been missed. Simple hardening of budgets for a parastatal, while salaries of workers and managers alike as employees of the state are protected, is hardly a situation likely to improve efficiency. If a small portion (even additional) of employees' wages and salaries could be linked to performance improvement and to the surpluses or losses reduced, then hardening budgets could work to improve systemic efficiency. There is much variation in the degree of public enterprise performance even when adjusted for differing opportunities. Linking of earnings of employees with performance is then possible. No doubt, these cannot lead to optimal investment decisions per se, till such time as the entity in question itself generates a substantial part of its investment requirements. Similarly, when the enterprises in question do not have their own specific and separate budgets, or when change in one set of enterprises is desired, across the board hardening could result in perverse behaviour. Thus, in many states, state-level PSUs continue to exist and new ones are set up, even as those employing semi-skilled and unskilled workers are closed. This is being done so that

bureaucrats and politicians do not lose those 'expense accounts'. The key to the successful working of hardened budgets is stakeholding—of employees and managers—in the future of the enterprise in question. This may help in changing the behaviour of managers; those who are part of a cadre and whose career paths and salaries are almost entirely independent of the performance of the enterprise they manage would be little affected by hardening budgets.

The Bogey of Social Considerations

Unfortunately, so-called social considerations have loomed large, thwarting and resisting commercial provisioning. One must recognize that, despite over forty years of state-directed and -controlled provisioning with low prices, in the name of the poor, neither regional nor income inequality is in any way less than in many other countries. The spread of modern infrastructure like electricity, piped drinking water, and telephones is well below that in countries like China. More than this fact, the reasons for failure to cover, via publicly provided infrastructure, as much of the population as was desired and expected to be covered remain to be systematically addressed. Low, even very low, prices can only go so far in improving consumption among the poor. The very poor can hardly be expected to consume urban sanitary services or electricity beyond the single bulb and fan, only because these services are cheap. In the long run, income is the determinant of demand and prices only an indication of costs. Thus the problem of access goes beyond infrastructure to development. Very briefly, countries in East Asia which carried out 'one-shot' land reforms, rather than using the state continually to redistribute (as India has been attempting to do), and whose industrializations were labour absorbing have had high rates of income growth and, necessarily therefore, of infrastructure development. Export orientation was an important aspect of their labour absorption. When prices are systematically kept separate from costs for long, then that effect can be recognized as equivalent to a small rise in income, usually smaller than the subsidy value of the subsidized good consumed. It is obvious that there are severe fiscal limits to raising incomes through subsidizes in an economy that has yet to make its industrial transformation.

Problems of Indian Public Enterprise

The ritualization of processes and institutions meant to bring about functional modes of working, has been most potent in ensuring that no real or substantive change takes place even as the 'form' and symbols of change become ends in themselves. Thus the MoUs

between public enterprises (CEOs) and administrative ministries, meant to free top managers from interference by government, have, in India, been almost completely ritualized. Similar arrangements have worked well in other countries, notably France. In India MoUs are paper exercises and ministries are hardly constrained by them. Enterprises show 'good to excellent' performance by soft targeting, and the ritual continues every year with more paper work and an added bureau. Similarly, holding companies which have worked well in Italy to distance management from dysfunctional interference by government have not been successful in India.

Project Implementation

Typically benefits are overestimated and costs underestimated to show high internal rates of return (IRRs) and benefit-cost ratios. After sanction the true costs slowly emerge and delays in approval of the revised (higher) estimates recoil/turn on the project already under construction, increasing costs beyond what they could otherwise have been. Spreading the funds with the government over a larger number of projects than are feasible without delays results in additional delays and cost overruns. Other organizational inadequacies, especially when the projects are implemented by departments or departmental enterprises, with their poor or inappropriate organizational processes and lack of skills in project implementation, compound the problem. The result is very poor project implementation, with cost overruns in excess of 60 per cent. So project cost estimates are usually underestimates of the true costs, but the realized costs are equivalent to overestimates. If problems of inaccurate estimation of costs have become entrenched and inefficient practices the norm, then the public enterprise cost figures are worse than useless. This again underlines the need for benchmark studies and independent, engineering-based estimates to, if nothing else, circumscribe true costs. Otherwise private parties will be tempted to use the situation to their advantage.

The Danger of Empty 'Solutions'

The problem of the Indian public enterprises goes far beyond the usual 'agency problem' that state-owned enterprises worldwide suffer from to some degree. There is over-manning, governmental interference at all levels, tolerance of enormous leakage and waste, highly constraining rules, and corruption.⁸ In such a situation and when the pressure for reform and improved economic performance (real or token) is strong,

⁸ Nevertheless there are remarkable cases that are free of these evils: the National Thermal Power Corporation (NTPC) and Bharat Heavy Electricals Limited (BHEL) would be cases in point.

there is a premium upon the 'clever' civil servant or consultant who can offer seeming 'solutions' that are such in appearance but not in content, allowing the rents in the status quo to continue.

The Potential for Well-managed Public Enterprises

In a vast ocean of state failure, there are some examples of success of public enterprise and state provisioning: The NTPC as a player in wholesale electricity, the Maharashtra State Road Development Corporation (MSRDC) in highway planning and construction, the Tamil Nadu State Electricity Board (TNSEB) and Metro-water Chennai are reasonably efficient. The one common feature is that their managers have had a greater degree of operational autonomy. Dysfunctional government interference has been kept out in such organizations. This has happened either because the government itself made this 'one exception' as in the case of the MSRDC, or because the organizations' top managers 'fought hard' to negotiate the boundary. And the strength emanating from good performance (itself influenced by the functionality of the interface) would have given more power to top managers than in most other public enterprises. That would have allowed them to thwart repeated attempts by politicians and civil servants to interfere in operational decisions and sometimes even to resist pressures against the commercial interests of the enterprise. Thus, while the model of 'well-performing' public enterprise has largely failed in India, the few exceptions and the reasons for their success allow a more optimistic assessment of public enterprise, suitably restricted. The reasons for the same are many, but perhaps the most important is urgency. State and central governments when confronted with challenging and important tasks have, at least occasionally, been able to bring out the good aspects of state provisioning and ownership, by leaving them to the managers to do the job. Therefore the potential to avoid interference is certainly there.⁹

Ownership and Commercial Provisioning are Not the Same

A related point is that commercial provisioning of infrastructure is neither synonymous with private provisioning, nor does public ownership necessarily have to be non-commercial in approach. Vast allocative and operational efficiency gains await reformers who can

push systems and sectors into this commercial orientation, without being orthodox about ownership. In specific situations, ownership, including a certain degree of private participation, is important because certain kinds of commercialization are easy with private participation. Even if the tendency towards dysfunctional interference can be overcome (this is not a problem in France, Italy, China, or South Korea, with much state ownership), the aspect of commercial orientation remains. Hence the crucial task of reformers concerned with restructuring is, in creating the right industry structure, and rules of behaviour both operational and investment that are in keeping with efficiency in situations of imperfect markets or even near market failure. Yet with entrenched vested interests, as in the case of state electricity boards (SEBs), reform may have to start with a change in ownership, or at least with internal incentive mechanisms within 'the existing', or their inheritor, organizations.

Improvement in Public Enterprise Performance is Crucial to Infrastructure

Prospects for commercialization increase dramatically if improvements in the interface and attenuation of 'agency failure' can take place, because a very large part of infrastructure is in the public sector. More importantly, in crucial areas like public health, education, and perhaps even roads, the private sector would be a difficult option. This is because despite the developments in unbundling arising out of fundamental developments in contracting, technology, and market creation processes that have led to the relative decline of the classical public enterprise and of traditional detailed regulation, these areas have severe appropriability problems.

With pressures for privatization increasing by the day, the case for 'giving managers and workers a fair chance to perform by untying their hands' can also be strongly put. If indeed that happens, then part ownership by employees can be effective in bringing about incentive compatibility within existing organizations. As part of the process of liberalization, controls, fiat and case by case direction gave way to price-based instruments like tariffs and prices were brought closer to international and domestic values. In the second stage of reforms, ownership changes, the removal of distortions created by (past) policies and practices, and the removal of the many 'objectives' and constraints placed upon public enterprises can bring huge rewards. There are immediate opportunities for reformers in setting right dysfunctional interface between public organizations, and in relaxing the commercially restrictive policies on public enterprise. The ownership aspect, or

⁹ Indeed, the case for privatization in India rests on the experience that governments have continued to dysfunctionally interfere. Thus the more general solution to public enterprise performance in today's context remains disinvestments below 50 per cent.

disinvestment, could be considered subsequently and correcting the above distortions lays the grounds for successful privatization. Such a strategy would imply an institutional and managerial approach backed by political commitment. If that seems difficult, despite the obvious opportunity, then the only option is to wait for privatization from above.

The Need to Eliminate Conflicting Tasks and Constraints

Public enterprises have been saddled with conflicting tasks that go beyond their primary purpose—to provide above market benefits to employees, especially at the lower levels; yet they have no freedom to pay differentially for performance and skills, subsidize and cross-subsidize—sometimes with no limits—encourage small vendors, industrialists, and local enterprise, buy from other public enterprises. They have also to maintain three parallel accounting systems, be subject to government clearance and involvement in the details of investment decisions, be amenable to advice from Parliament, and subject to operational ‘guidance’ from the government. If these conflicting tasks and constraints are removed, even without major ownership changes some enterprises would be able to commercially orient themselves.

A Commercialized Public Sector is Not a Contradiction

When it is proposed that public enterprises need not be non-commercial in their approach, it seems like an untenable position to both the old proponents of the socialist model and the neoclassically inclined who believe that public enterprise should be limited to certain sectors with a public goods character. In truth, the reasons for state enterprise could go far beyond the public goods market failure or the natural monopoly situation. Public enterprises in late industrialization have been used to lead developments in particular sectors, especially the ‘strategic’ sectors of the economy, and to create a domestic capitalist class with the ability to hold its own against foreign capital. In this understanding there is an emergent character to markets, and public enterprise may be seen as force-feeding the development of markets. Thus the market orientation of public enterprise is a crucial aspect of not just reform of infrastructure development but of carrying through a successful industrial transformation.

Levelling the Playing Field

What would help to bring in commercial orientation of public enterprise in infrastructure? Foremost would

be the separation of subsidization from the enterprise providing the service. With regard to electricity, it is argued here that this is the first and foremost issue that needs be addressed. This separation, through the mechanism of direct subsidy, can remove in one stroke the excuse for deviations from commercial orientation and performance. This aspect has already been discussed. Next in importance would be levelling the playing field between public and private enterprises. In reforming countries, across the board budget cuts and opening up of the sector to private capital can often be under special law or directive that does not include existing public enterprises. These may then continue to be burdened under the old constraints and impositions. Thus, until recently, even as the IPPs were allowed equity rates starting with 16 per cent and going up to 30 per cent, and that too with very little business risk being borne by the equity shareholders, the NTPC was forced to take only a 12 per cent return with huge risks and on allowable depreciation rates which were much lower! This kept the NTPC’s large debt and equity capacity from being brought to bear on adding to generation capacity, relatively much cheaper than what any of the new private players could offer! Had it been allowed even a 16 per cent return things would have been different. Even today the bias against the NTPC continues. There are similar examples of biases against reasonably well-performing state enterprises whose capacities and capabilities are vital to the development of infrastructure. A certain bias against an incumbent in a network industry like telecom may be desirable, but the bias often goes beyond that needed to change market structures to bring about greater commercial orientation, competition, and incentive regulation.

PRICING AND SUBSIDIES

The Tendency to Load an Intermediate Rather Than a Final Good: Inversion in Tariff Systems

In electricity, industry cross subsidises households in many states and agriculturalists in all states. In railways, freight cross subsidizes passengers and suburban traffic, in water, industry again cross-subsidizes households. In power and railways, we have reached a situation where the high tariffs for industrial consumers and for freight, respectively, in turn affect investment decisions! The organizations in question also continue to lose demand. The effects and the nature of these losses are discussed elsewhere. Here the focus is on the political basis for such distortionary tariffs. Price controls are an important aspect in a ‘mixed economy’ that sets itself a ‘socialist goals’. The long years of ‘redistribution as

the central effort and task of the state and policy', entrenched the tendency to use prices and controls to reward and punish consumers. Thus 'luxury' products like automobiles had a total tax that may have exceeded 120 per cent on manufacturing cost. Even today, total taxes on an automobile may be as high as 90 per cent while the prices for such things as water are abysmally low.

While this may seem consistent with the planned objective of curbing unnecessary consumption to mobilize all resources for investment, in reality during the 1970s and 1980s, high and rising administered prices for inputs of industry have acted as a regressive 'taxation'. Water, electricity, coal, freight charges, and heavy taxes on energy are examples. The inputs used by industry in general cannot on any account be final luxury consumption goods. Thus the tendency to avoid bringing subsidies to bear on the budget, but to allocate them regressively on the economy as a whole, via higher input prices, is similar to the regression in using indirect taxes for revenues. Unfortunately, despite the considerable scaling down and rationalization of indirect taxes, the implicit taxes (in the cross-subsidization) have not only continued, but have even grown. They are all intimately linked to infrastructural services. They have proved difficult to reduce despite the best intentions, because the policy thus far has not explored necessary stepping stone solutions. Such solutions have to delink subsidy from the reform process, and allow the reform of infrastructural sectors to continue. In almost all situations direct subsidization would allow the link to be broken. Subsidy could then be capped and with the gains of reform, it would become a smaller part of the overall economy.¹⁰

Subsidization of Access Rather than Use

Subsidization has some value when the external effects are large, as in vaccinations, primary health care, education, encouraging the shift from kerosene lamps to electric bulbs, use of safe drinking water, and such other merit goods. Interesting and relatively robust methods do exist for ensuring that merit goods subsidies can continue to be provided even under privatized or commercialized systems. Besides, subsidization of access rather than subsidization of goods or use of service would provide for greater social value and positive externalities.

Reform and Subsidies are Not Incompatible

The bogey of merit goods and subsidization has been unfairly used to stall reform by its detractors and

surprisingly even by those who genuinely represent the poor. Herein the problem, besides poor communication, could be one of the reformers and state lacking the credibility to ensure that the benefits of reform are equitably distributed. By insisting upon a roll back of subsidies (which is usually not necessary), reformers have unwittingly played into the hands of those who politicize subsidies to stall reforms. Many sectors of infrastructure, of which electricity is one glorious example, also including urban water, irrigation, hospital services, municipal waste collection, are very badly managed with enormous leakages and waste. The need of the hour is to emerge from the catch-22 situation of subsidies being used to justify existing inefficiencies and waste and these in turn contributing greatly to the 'need' for subsidies, by raising costs unnecessarily! It is rather disturbing that no clear strategy has thus far emerged from official circles on how reform can usefully be dissociated from subsidies and each addressed appropriately.

Subversion of the Independence of the Regulator

The idea that the regulatory function needs to be separated from the government as a player and provider in a situation of pluralistic supply is almost axiomatic. While the idea has most certainly taken root for the good of the reform process, it is still being hotly contested and subverted, or subtly displaced, as when a clever clause is inserted into the bills creating regulators, to retain unwarranted government control or influence.

Contracts and Their Appropriateness

The role of contracts in their most general sense increases dramatically with pluralistic provisioning of infrastructure. Earlier, the government, typically through internalization, could work around the imperfections in contracts with its parastatals and/or public enterprise, or even between them. They now become inevitable not only because of ownership changes, but also because wherever possible even state-owned entities need to have their independent (and separate) budgets. They are also essential if performance has to be meaningfully reflected in the accounting statements of enterprises. Tightening budgets also require budgetary coherence with the organization's power to spend and to be held accountable. With enhanced role of contracts, lawyers can be expected to gain, but their gain can be usefully minimized through appropriate, easier, and standard contracts. Very honest and dedicated government officials often take great pride in bargaining hard with vendors and construction contractors. Indeed, one-sided contracts have often been drawn up, whetted by the legal

¹⁰ See section 7.2 for the design of such a scheme for farmers.

departments of the state or its parastatals, and pushed on to 'helpless' private parties. No contract can ever be complete. So it is probable that such unfair contracts are accepted by private parties only because they have options to cheat or underperform, possibly even in ways that still meet the contract. The simple idea that in all contracts both parties should have some gain and hence a stake in the contract tends to get overlooked. A serious businessman would be concerned if the people with whom he dealt did not have the scope to make money. As the reform process creates the need for contracts and agreements among governments, public enterprises, and private parties of many hues, the issue of their appropriateness, in terms of fairness, match between control and responsibility, incentive compatibility, and specifically the adequacy of 'inside options', becomes urgent. More than legal skill, economic and managerial perspectives need to be incorporated in drawing up contracts.

Pricing Distortions are Likely to Run Deep

There is a tendency to keep prices artificially low when the service in question is perceived to be a necessity. However, the willingness to pay for necessities is higher, *ceteris paribus*, than for say 'luxuries'. This is true, for example, of drinking water. However, drinking water is priced lower in relation to water for electricity generation or for industrial use. This can result in perverse allocation and further distortions with investment decisions being based on such prices. Allocation of the resource then has to be made administratively, since market clearing prices are not possible and long-run marginal costs are not reflected in the prices. This set-up would typically result in underprovisioning of drinking water. The poor would have to compete with the rich and the well connected for water allocations, and it is almost a forgone conclusion that they will be the losers. This is the second order effect of price distortions, the first being the effect on consumption patterns and substitutes. It is quite likely that a significant part of public investment has taken place under distorted prices. Extricating the economy from the mess is an important task for the regulatory and restructuring strategy.

Reform is Also About Cost Discovery

Unfortunately, in infrastructure, there is no easy method like trade liberalization or duty simplification to reveal the true costs. In the case of tradables, cascading multiple and complex duty structures that have hidden the true comparative advantages of many activities are revealed when tariff simplification takes place. In infrastructure,

there will have to be a process of cost discovery as reform and deregulation progress and multiple suppliers emerge. The regulator will have to be sensitive to the possible backlash effects that would have taken the prices far from the correct costs. Thus the true costs when they are revealed could surprise developers, institutions, and the regulator.

Demand Itself May Have Been Distorted

It has already been discussed why the existing demand, and simple projections based on the same, will not do. As costs are discovered and prices are brought in line with true costs, there will be adjustments of consumption and use to these new prices. Equally important, certain structural developments taking place in the economy may bring about changes in what were earlier considered 'robust income elasticities'. For example, it is widely believed that the income elasticity of the demand for electricity is around 1.3–1.5, given the stage of development the country is in. The Chinese, South Korean, and Mexican experiences in this regard would lead one to believe that at current levels of real (purchasing-power-parity-based) income, India should have the same elasticity that China had in the 1980s (around 1.7). In fact, however, India has a much lower elasticity that is possibly even declining in the 1990s. This is because of the changing composition of the gross domestic product (GDP), which seems to be moving away from energy-using industries, and possibly also widening income inequalities, which reduce the demand for wage and basic good industries. Efficient use of energy by the private sector may also have contributed somewhat to this decline. Only if expansive labour-intensive growth were to take place would elasticity increase.

REGULATORY STANCES

The Natural Monopoly Revisited

It is important to understand the changing dimensions of market failure in the light of developments in contracting, technology, and property right clarifications, which give rise to more opportunities for deregulation. By now it is widely accepted that regulators and reformers should take the best possible advantage of the opportunities for market-based solutions.

It would be useful to briefly review the principal types of failure that require intervention by players other than market participants. In so doing, we will go beyond the textbook natural monopoly, since that is only one aspect of market failure. But first, a review of the textbook natural monopoly. The natural monopoly arises out of unit production costs falling rapidly with output and

continuing to fall even at the point of equilibrium with supply, so that costs of one player are much lower than those for any other conceivable set of players.¹¹ Cellular telecom, fixed line telecom, electricity distribution, gas and oil pipelines are typical cases. Profit-maximizing behaviour on the part of the private monopolist would result in dead-weight losses and transfers from consumers to the monopolist, so that the monopolist has to be regulated to result in allocatively efficient marginal cost pricing. At marginal cost prices the monopolist does not recover his cost, so the best solution is a subsidy to the monopolist at marginal cost prices, and the second best is full cost pricing. Ideally, if all costs are known and one can see far into the future, the practical regulator should simply fix prices at long-run marginal costs (LRMC) which would be lower than long-run average costs (LRAC). The charge would then have to be of a two-part type, with the charge for the use as above. And the charge for access or connection, would have to be equal to the difference between LRAC and LRMC. The access charge for consumers would have to be based on a rule such as the Ramsey rule of inverse proportionality to the demand elasticities for particular groups of consumers. But the information condition is always violated. More importantly, the motivation of the regulator to do good cannot be assumed, but needs to be crafted.

Capital Market Failures

Another condition of market failure arises from the nature of capital and bond markets in developing countries. When income streams, beyond say ten years, are ignored in discounting a project, then capital markets beyond that period do not exist. In such a situation, private parties would not be willing to price a service or a product that arises out of the use of capital assets with an economic life of say twenty-five years at the true social prices, even if there are no appropriability problems. Services of ships, aircraft, office, and rental spaces are typically subject to this 'failure'. But such sectors need not be regulated because when there is competition, it may be assumed that economic profits would be whittled down, even if the industry starts with such profits. In infrastructure, the privatization process, when not accompanied by major efforts to develop local capital markets, would necessarily result in regulators

having to award prices that are higher than the long-run incremental costs had such capital markets existed. The difference could be substantial in such activities as electricity generation, gas pipelines, and arterial highways. The BOT approach helps keep the overall transfers from the economy to the private player to a minimum, but this brings about intergenerational 'transfers' from the present generation of consumers to the next.

'Outsiders' and Higher than LRMC Prices

This inadequacy of capital may be seen in a positive light in a less developed economy, because the larger than normal surpluses of the service-providing entity, when invested in the same activity would expand the service at a faster rate than otherwise (with LRMC that assumes that long-term capital markets exist). Many potential users of the service are 'outsiders', not because they do not have the incomes to consume the service, but because there is not enough supply. The 'outsiders' would then be brought in more quickly than otherwise. Recognizing this higher growth aspect (provided the surpluses are invested to expand the service), this intergenerational distortion may actually be worthwhile till such time as there are no 'outsiders'. The 'better' solution would still be for the state, or taxes on the rich, to finance the fastest possible expansion of the service to encompass all current 'outsiders'. But such approaches have proved difficult in all but the most comprehensive state systems—the Soviet Union with regard to housing, China with regard to basic amenities.

High Growth, Technological Change, and 'Effective' Contestability

The natural monopoly situation warrants active regulation only when there is little or no contestability. Thus, despite passenger airlines with fixed schedules having a natural monopoly character, regulation is known to be an undesirable intervention, since contestability should ensure low enough prices. But many sectors are not contestable enough—water distribution, pipelines, electricity distribution, bulk water—either because the sunk costs are high or because of resource specificity.

'Effective contestability' can improve considerably with high growth. This insight is not usual in standard treatment of the natural monopoly and hence some discussion on the same is carried out in this report. A system of backbone cables or optical fibres providing bandwidth is a natural monopoly at any time, but high growth implies entry, since an entrant needs to use his capacity suboptimally only for a short period. Hence, as long as rapid growth takes place, the need for

¹¹ Strictly, sub-additivity of the cost function over the entire range of the output is necessary for a traditional natural monopoly to exist. Most such industries in the advanced capitalist countries (except those at the frontiers of technical change like computers, biotechnology, and telecom), are slow-growing industries, and as such the orthodox regulatory stance would be appropriate.

regulation is minimal—to lay down interconnection and other standards and possibly not even the access charges. Similarly, rapid technological progress gives rise to falling costs and hence an advantage to entrants, so effective contestability is high. For these reasons, an orthodox regulatory posture with regard to such industries may be misplaced.

Unfortunately regulatory theories are cast in a static framework, and hence are unable to formally comment upon the dynamic situation. In areas like water supply, electricity generation and distribution, and sewerage services, growth of more than 10 per cent per annum or so is not expected. And the expected technical change is modest and inferred a few years in advance. Here the orthodox regulatory stance of attempting to regulate is not inappropriate. Though even here the first attempt should be to overcome market failure through market-creating rules and institutions, or by internalizing externalities, if the source of the failure is externalities, through such measures as attribution, clarity, and markets in such newly created property. This aspect of market creation is dealt with later.

In a situation of costs falling with time, competition, duopoly, or even monopoly with small players actively nibbling at the market share of the incumbent, may well be tolerable, since consumers can look forward to falling real prices, even though these may remain above costs at any particular point in time. Thus if g_i is the growth rate in total factor productivity and p_i is the rate of growth in prices, so long as $g_i - p_i > \sum_i w_i \cdot (g_i - p_i)$, where $\sum_i w_i = 1$, the growth of the sector (under no regulation) is increasingly beneficial to consumers. Such a situation would probably also be the best strategy for the policy maker, as long as unregulated growth does not result in adverse effects on safety and on future consumer choice. Maybe the right time for the regulator to step in would be when growth has plateaued off and a few new consumers are being added and the industry has become 'normal'.

*'Catching Up' Could Result in 'Contestability'
For A While*

But then what about industries like pipeline networks or distribution systems, which could grow very rapidly in late industrializing economies, as the economies catch up with the advanced capitalist countries? It is not always true that these industries during such a high growth phase need regulation. The gas and oil pipelines business in the US came about over a period of intense and unregulated growth. Similarly, the rail networks in an earlier period. As long as they were growing, there was a 'contestability' of a certain kind. The question is really an empirical one with regard to gas and oil

pipelines in India today. If indeed much of the network has yet to come up (as it would seem in China which is unambiguously on the path of industrial transformation), then regulation should come only after much of the network is in place. The problem in the case of India is that it is not so certain that the economy is on the path of successful industrial transformation, neither can it be said that it is in the pre-take off stage.¹²

*Orthodox Regulation is Not Appropriate for
Telecom and Related Industries*

In the case of telecom on the other hand, without doubt, there is no space for detailed regulation in India. Telecom is as much at the frontier of technological change in India as it is in the advanced capitalist countries. Moreover, with falling costs and rising incomes, even though much more slowly than in China, the number of families that can afford telephones will rise very rapidly, though not at the stupendous pace of China. Even today, at least a third of all TV-owning households can use telephones. Several factors have prevented the realization of this potential. Under state provisioning the coverage was limited by high costs; the idea of a telephone as a luxury of the idle (when used at homes) stifled the market. Widespread use of telecom had little priority under planning. This itself may have been an effect of the small size of the network.¹³ The high cost was *inter alia* the result of inappropriate technology choice, virtually no R&D, and most importantly, massive overmanning in the erstwhile Department of Telegraphs and no competition at all in virtually all segments of the industry, from manufacturing of instruments upwards. With the liberalization of the 1990s and the subsequent rapid growth, the network has now reached a size and coverage where there is little or no pent-up demand at the current high prices. Supply-side relaxations have helped achieve the high rate of expansion (but it is still miniscule in comparison to what China has been able to achieve). Clearly, its further growth depends upon new subscribers whose basis for demand would have to be income growth. On account of income growth, the numbers above the income level where a telephone creates net consumer surplus to the user could grow at more than three times of 4 per cent (per capita income growth), that is at more than 12 per cent per annum

¹² China in contrast is the archetypical late industrializer, others being Japan, South Korea, and Taiwan possibly Thailand, Malaysia, and Vietnam.

¹³ Planners realized the value of telephones in business. The preferential allotment of telephones to offices, businesses, shops, nurses, and doctors is a case in point. What they did not realize was that the value of telephones, even to businesses, is a function of the numbers connected, including of general citizens.

(Morris 1999). The major growth would have to come from both a significant price fall and consumer-side network economies. The consumer-side network economies could in turn interact with falling costs.

Consumer Side Network Economies are the Key to Network Expansion

Thus far, discussions on scale economies in telecom have focused on production-side network economies, that is the aspect of the natural monopoly showing falling costs with the increased size of the network. More importantly, the user side benefits (true consumer-side network effects), begin to operate as more people connect to the network. Thus at today's low penetration levels, those with telephones cannot assume that all shopkeepers or services they deal with have telephones. The lower middle classes, today, do not have a strong need for telephones, especially for local use, because few others in their social groups have telephones. The point is once telephone density among today's lower middle classes reaches about 30 per cent, it will increase by leaps and bounds to quickly reach near full coverage among them. Affordability is not the question here. The middle middle classes were already covered to the extent of 25–40 per cent when the reform began. As such, in a few years of very high growth, possibly as high as 50 per cent in this segment, telephone density may have come closer to being complete among the middle middle classes.

Bidding would have Prevented Costs and Prices from Falling

Such large network effects arising out of consumer-side economies can result in strategic behaviour, on the part of telecom companies. Unfortunately, in India the bid-based licence fee meant that the monopolist/duopolists in the industry were pushed to the low-level equilibrium of the (short-run) profit maximizing natural monopoly. No regulation at all would most surely have led to very different behaviour early enough. Today, with the licence-fee-based system having gone and the Prime Minister's recent announcements of significant opening up of the sector to entry and competition, and assuming that the announcements are a precursor to full competition¹⁴ in the future, strategic behaviour will almost inevitably be in the direction of low access prices. This will allow the network to expand rapidly, so that the company doing so is in a better position than its rivals. Differential discriminating price behaviour, but

with a positive end results, will then be almost certain. In other words, there will be strong incentives for serious telecom companies to expand the network even to 'uneconomic' areas, for the purpose of reach and completeness, since these have much value for the high use consumer.

USO becomes a Bogey Against Competition

The concern of the regulator to ensure Universal Service Obligation (USO) may be unnecessary. Confusion will be created by incumbent state players who are bound to lose market share at least in the next few years to come and by players who came in with the assumption that there would be little or no competition. The competition that is likely even from the incumbent will seem to be predatory once it really begins! But as long as the competing networks adhere to uniform standards, takeovers of weaker firms will ultimately ensure correct duopoly or regional monopoly industry structure, at least for the first leg, that is local loop in wireless or with wires. Those who can drop prices at the right time to suddenly expand the network will win the telecom war in India. In a few years from now, say five, the bulk of the lower middle class will have reached that level of income whereby a phone at home is affordable. Then those who had dropped their prices will become dominant.

Further Cost Reductions are Possible

There are of course technological developments that could result in an even higher than expected drop in prices: non-proprietary exchanges which can be put together, like personal computers (PCs) with interoperable cards, would be an important development. If the world agrees to have voice over IP, with priority to voice packets, then long-distance costs could drop dramatically. Similarly, convergence could drive telecom, along with other broadband uses, in ways that are seemingly difficult to predict at this point. But as long as the local loop costs remain significant, the picture of beggars with telephones will remain mythical. It is almost certain that all costs other than local loop costs will fall; the question is when will the fall start? Even in the local loop, the potential of intermediate solutions like the one proposed by Ashok Jhunjhunwala in this report, can actually take the telecom revolution further and possibly even very close to that myth; but only if adopted at least at circle level!

Through a convergence of voice, broadcasting, and Internet use over cable and wireless, through the IP mode, which would also make possible direct-to-home (DTH) broadcasting, the joint effects of one class of

¹⁴ The fine print would hopefully bring the much needed competition in all segments.

users, viz. cable TV users, on Internet computer penetration can be high. Among middle to upper middle class households in India, penetration of the Internet via cable modems would most certainly be very high. Internet would then ride on the costs being borne by the base of cable TV users. As cable modems reach the 20 to 30 per cent of cable subscribers, internet users can in turn drive cable networks to higher quality and star topology. This in turn could drive higher quality cable TV and most importantly downloadable films and entertainment material including conventional broadcasts, but with a flexibility over viewing times and of course material. All this means that the bandwidth is for quite some time to come going to be short, despite some expectations to the contrary, and therefore huge investments in bandwidth are likely.

Do ceiling prices as the regulator currently rules, have a role? Indeed they do, as long as the dominance of the Department of Telecommunications (DoT) is not whittled away and strategies of firms do not inevitably shift to network expansion. When that happens, most of the effective prices will be significantly lower than past cost based-prices!

Appropriate Regulatory Stances

The discussions in the preceding pages leads to some general propositions: (1) When growth and technological change is rapid, as it is in the case of telecom (defined broadly), there is little role for the traditional regulatory stance. More than price regulation, what is important is to keep entry costs low and not frown upon consolidations that are cost reducing. Such consolidations typically occur after bouts of competition and fast growth of the network. (2) In other sectors with slower growth but with the potential for much faster growth than the rest of the economy, it may still be possible to hold back regulation, to allow players to grow and dominate portions of the industry. The bulk gas pipeline networks and retail distribution networks in cities, could be cases in point. More detailed empirical investigations are called for to be able to take a position on such industries confidently. (3) In less developed countries (LDCs) with as yet little coverage of people, the focus should shift from prices to growth of the service. There is an automatic 'hedge' here for the policy-maker concerned with welfare. If coverage is growing rapidly, then surely the prices cannot be wrong. They may still have deviated from the optimal (in the sense of a static optimum), but no regulator can possibly have all the information to do the tight-rope walking that the traditional regulatory stance demands. (4) In sectors with massive undercoverage and a large number of 'outsiders' who would typically pay very high prices

in alternative high cost provision—private water markets for instance—or who do without the same—for example electricity in villages and towns of Bihar—rapid expansion could take place with deregulation. Allowing many kinds of players with little or no territorial or ownership restrictions, including public enterprises relatively free of governmental control in operational decisions, municipal corporations and others, has a functionality that arises out of increased coverage. If higher rates than costs are allowed to be charged and most importantly, the surpluses above allowed rates are constrained to be invested in the service,¹⁵ then rapid expansions can take place. Of course once near complete coverage or coverage of all who can afford¹⁶ has been reached, prices would have to be regulated more traditionally.

Cross-sectoral Dimensions Need Recognition

Therefore the resolution of problems of infrastructural sectors, while seemingly amenable to a sector by sector treatment, because the peculiarities of each sector are quite significant, may not in reality be so. Thus, transport modes need to be seen together when the emphasis shifts from the developer, the provider, the regulator or the administrator with his need for administrative convenience, to the customer, as it should in any meaningful commercial orientation. Similarly, the services and goods of the oil, gas, electricity, pipelines, and tankers sectors need to be seen together. Telecom, value-added services, wireless and internet services, and even broadcast sectors, 'converge' from a technological and consumer use standpoint. It is not only because of technological convergence but also due to the more mundane and usual dependence of sectors on each other in terms of inputs, outputs, substitutes, and complements that the need for coordinated treatment can be ignored only at a great cost to the economy.

Opportunities for 'Leapfrogging'

Reform of infrastructure creates opportunities for 'leapfrogging' and for innovations in technology and design when the space for multiple providers, including private players, is created. But realization of such opportunities is not automatic. There may well be pressures to the contrary. A reform, overly influenced by transnational equipment and technology suppliers in interlocking arrangements with private funds (and home country

¹⁵ Such investments need not necessarily be in the same region.

¹⁶ Those who cannot afford, if their number is too small, as is the case in the advanced countries, can be subsidized. In slowly growing LDCs, their number is too large for subsidization to be a solution. Income growth, and therefore high speed growth of the economy, is the only solution.

banks), does not augur well for innovative, intermediate, and possibly more appropriate solutions. This is especially so in situations where technology changes rapidly—telecom, for instance—or where the use of the service has a great deal of local specificity—road and water systems, for example. Unfortunately, the potential of Indian technology and creativity to find solutions to the typical problems of infrastructure, like measurement systems for vehicular traffic, lane separation in multiple lane highways, design of the local loop, standardized and non-proprietary architecture to drive down telephone exchange costs, and innovative designs for duplicable and self-sustaining private schools, is only beginning to be considered with the seriousness that it deserves.

Innovation in Institutional Design

Innovations which take advantage of certain behavioural patterns, unique to the society are also possible in the design of institutions and contracts. Thus the existence of successful cooperatives in many areas of economic activity and a vast number of industry associations, including those specific to the location and estates, gives rise to the potential for cooperative financing and management of certain services like power and water. At a time when regulatory clarity and policy are evolving, such arrangements could have much value. Such approaches and innovation could have played a wider role, had reformers started with the objective of solving problems and in a consultative manner.

THE CONSTRAINT OF LAND AND ENVIRONMENT

Land and Infrastructure in India

Land and environment, especially the displacement of people affected by projects, have been at the forefront of the media, popular consciousness, and in public interest litigation, including in the apex court.

Despite all that has been said, it is important to discuss the environmental context for infrastructure development. It was in the early 1980s that the Ministry of Environment and Forests came into the limelight, as it became the one single ministry 'responsible' for the bulk of the delays in public sector projects, which had to necessarily obtain environmental clearance. Delays in obtaining clearances from this ministry were as large as five to seven years. Coal, rail, transmission, and hydel power projects were most severely affected. The notion that 'no forests be lost', resulted in the ministry insisting upon the transfer of equivalent amount of land to the Forest Department, whenever use of forest land under

the Department was involved in a project. Thus land under the Forest Department was by definition 'forest land' whatever its actual state may have been. Many infrastructural projects were held up for proposing to use even highly degraded 'forest land'! This formal legalistic approach when strictly adopted, resulted in vast delays and cost overruns, without in any way protecting forests, since the reasons for the loss of good forests lay elsewhere. The principal reason was illegal felling by organized groups, more often than not with the connivance of the department officials! Other factors were poor and archaic forest management practices of the Department and the interruption of the 'natural' process of ecological succession and regrowth due to pressure from people for grazing and marginal cultivation.

The Forest Bill and Reactions

The late 1980s saw the New Forest Bill, which attempted to protect forests by circumscribing the rights of forest dwellers and other poor people dependent upon forests, rather than by attempting to address illegal felling and poor management practices squarely. However, the government could not have its way, since opposition to the Draft Forest Bill was strong. Alternatives revolving around the involvement of local people, joint management of forests, complete ban on felling in certain regions, and the need for biosphere reserves were forced upon the government by agitations and protests. Also, with earlier movements like the Chipko and Apiko entering the public idiom, the pressures on the government to change were large. Consciousness of the need to protect forests is now widespread among the intelligentsia and the media. This positive development took place over a remarkably short period of time and its effects began to be seen in the (possible) slowdown in the rate of loss of forest cover in the 1990s.

Movements Against Dams

Simultaneously, with this ideological development, championing the rights of project affected peoples (PAPs) began in many parts of the country, the Narmada Bachao 'Andolan' and the movement against the Tehri Dam in the Himalayas being examples of the more forceful of these. Such movements succeeded in good measure in focusing attention on the (external) costs borne by those affected and displaced from their dwellings and habitat and served to considerably improve the rehabilitation package for those displaced. However, the movement has most certainly gone beyond the interests of people affected by the dams and the environment (in the sense of non-wasteful and

conscientious use of natural resources) to a virtual dissent on development. Indeed, the agenda to help the displaced people may not have been the principal one, even to start with, in the private perspective of some of its leaders. Logic and fact no longer have a place in the 'debate' on the Narmada, as governments and 'pro-Narmada' groups have begun to realize. The issue has most certainly gone on to the emotional and ideological plane. Undoubtedly, the hold of the anti-dam protagonists and their nebulous 'alternative development' idea is strongly emotive. Significant numbers of the intelligentsia share their understanding and approach, however alien it is to the people who are actually affected.

Post-modernist Roots

It is this ideology that is at the root of the environmental risk linked to all land using infrastructure. And even if particular projects and firms are able to avoid or bypass its worst excesses, the country as a whole has borne huge costs. The power of this ideology stems from its post-modernist character and origins. It has important support among many. Today, possibly the majority of the intelligentsia are post-modernist in Western societies. They can indulge in the luxury of aggressive environmentalism now that the good life is assured in the West. That prior generations in the West had carried out their own industrialization at stupendous and often unnecessary environmental cost, in the light of which the environmental damage in countries like China with high speed industrial growth pales into insignificance, is conveniently forgotten. The slowness (yet not stagnation) of the Indian economy has meant that ideas (from the West), including post-modernist areas, have a tendency to take root among sections of the intelligentsia ahead of their time, in terms of the stage of development of the economy! Thus labour movements with demands for labour standards not inferior to those in the West, took root with barely 15 per cent of the labour force having been absorbed in modern industry.

Middle Classes May Be Ambivalent to Expansive Growth

Similarly, for sections of the elite, especially for the middle and upper middle classes with fixed incomes unrelated to the level of economic activity, growth is not critical to lifestyles or even incomes. Most opinion makers fall into this group. High speed growth is important for competitive and capable capitalists and for the poor who are still 'outsiders'. The appeal to the value of indigenous lifestyles and 'protection of local or tribal culture' is functionally (to the transformation process) no different from sugar-coating the continued exclusion of the 'outsider'. When post-modernists from

the West, with their vast resources, work together with the local intelligentsia and in alliance with people like the tribals and the very poor who thus far have not had a chance to be part of the developmental process, a powerful force is forged. Against this force, the resources of governments, businesses, and developers are meagre.

Governments are Handicapped

Indeed, governments, especially state governments, have a particularly severe handicap emanating from corruption—the standard 5–15 per cent cut in all capital forming public expenditure—which makes them shirk from making available information for 'modernists' and others to defend the case of development more forcefully. The tainted image of the state and its obvious failure in not being able to internalize the negative externalities of development projects that displace people from their land, or degrade the environment, makes it an interested party. Therefore, it has hardly any credibility when it attempts to influence public opinion, even when its facts are right!

MLAs and NGOs are Already 'Green'

So infectious has been this post-modernist ideology that much of the Left, since the fall of the Soviet Union, has turned 'green'. The majority of the non-governmental organizations (NGOs) are anti-development in orientation and even the World Bank has turned green at one end and become orthodox at the other end. It is not at all accidental that countries with higher growth rates and egalitarian initial conditions (East Asian and China) do not have any significant post-modernist opinions and not many NGOs with an anti-development disposition. Not only that, they also have had better record of protecting the environment.

Need for an 'Economic Approach' to Land and People

The solution, therefore, is in higher employment-generating growth and in policies, rules, and institutions that internalize the environmental costs of growth, more particularly those of people displaced and affected by projects. The land acquisition process and the process of rehabilitation of project affected people, as they exist today, even when carried out by the state in accordance with the rules, are generally problematic exercises. Neither the stance of the NGOs as elaborated in the Draft Policy on Rehabilitation and Resettlement (DNPR&R), nor its antithesis, viz. the Draft Bill on Land Acquisition (brought about with the intention of speeding up land acquisition for infrastructural development) is in the right direction. The problem with the latter is not, as one critic stated that the Draft Bill is

economic in approach, but that it is not sufficiently so. It retains all the elements of the colonial 1884 Act, which is almost entirely a political statement of the overriding powers of the state with respect to land. The Draft Policy on the other hand though with many good features is far too ambitious. To do justice to it in its entirety would be tantamount to arresting development.

Current Problems in Land Acquisition

Major critiques of land acquisition, now that 'market rates' or better are being paid, are as follows: (1) Public purpose has been so broadly interpreted in actual practice as to include nearly all commercial activity, not just activities such as building of roads which may not have other significant land use options, defence and security projects, or projects of great social benefit like dams and irrigation projects. Even industrial projects which have wide flexibility in the land they could use are interpreted as 'public purpose'. Indeed, in the competition for attracting investments, states like Gujarat have acquired land for all kinds of commercial activities, to be handed over to the investor. (2) Excess land is acquired. (3) The processes are such that cornering of the land takes place especially in land-abundant areas, where therefore the benefits of appreciation are denied to the original (often poor) owners of the land. (4) The focus on land means precluding from compensation those who do not own land as such but are dependent for their livelihood upon the local economy, working as daily labourers, petty service providers, and traders, who are rendered jobless with the destruction of the local economy. (5) Making rather too much rest on the wisdom of the collector has the potential to backfire in the face of organized opposition from those whose lands are acquired, especially in areas where land is dear and intensively used. (6) All these claims are generally true and the current refinements speed up acquisition by short-circuiting the process of announcement, declaration, and hearing for compensation and award. (7) Even when market prices are paid, the authorities go by record books. These are typically understated and reduce the burden of a very onerous stamp duty!

Market Prices are Distorted

While the awarding of market rates has been accepted by even the detractors of the Bill as a positive development, there are problems here which may help explain why acquisitions have still been problematic. Land acquisition remains a protracted process in most areas except in places like coastal Gujarat and Kutch with very little agricultural productivity and low population density. The problem may well lie in two related factors.

A market price for land, as much as for assets, assumes tradability of land. Agricultural land is typically not tradable for non-agricultural use except through costly processes of application for grant of government permission. As such, the market price is one that takes into account the restrictions in use. The benefits of higher values to industrial use (given higher productivity of land in industrial use) does not spill over to all land currently in agricultural use. As such, land prices (of agricultural land) do not include the probability of industrial or non-agricultural use at much higher prices. All the benefit of the higher price accrues to the land designated (or 'released') by the government for non-agricultural use from time to time. In land acquisition, therefore, the true prices would have been substantially higher than the prior prices. But given the acquisition process that goes by past prices, owners are not able to benefit from the same. Hence there is a 'loss' to the landowner, resulting in his opposition to the acquisition process. In case the government chooses to go by the prices prevailing, say, two years after the announcement, then for such prices to exist trade in land after the announcement of acquisition has to take place. That would mean opening the door wide to speculative cornering of land by those in the know, even before the decision is formally announced.

Clearly, to minimize understatement of land values in transaction records, low duties are a must. This would actually help develop the market for land, which would work to the interest of all landowners including small landholders.

Similarly many states restrict agricultural landownership to 'farmers'. Thereby, the only beneficiaries of prior (to official announcement) information in land acquisition are politicians, who in their status as 'farmers' do not have to compete with other 'speculators'. More importantly, not only is the market for land constrained by land use as outlined earlier, but by restrictions on the 'identity' of the buyer.

Typically, in areas with poor productivity in alternative use, especially agriculture, but with much industrial dynamism, the problem is usually one of excess acquisition and cornering of lands by those connected to the government and in the know. In areas with high productivity and high density of population, as in Goa or Kerala, the problem tends to be of opposition to land acquisition.

Need for Direct Negotiations

A more open negotiation process of land acquisition, with 'all or none' deals offered by developers and others requiring land, would be appropriate. Most commercial projects which have flexibility in the land they can use

ought not to go through the state for land acquisition. Instead, private purchase based on a bargaining approach would be right. The acquirer does not face monopoly and the owners of the land always have the option of alternative use. Private acquisition would have to be brought under a policy whose principal dimensions could be as follows:

(a) The acquirer necessarily makes a uniform base price offer for the land. Otherwise he could get land cheap by offering differential rates, or even create negative externalities for most owners, by first acquiring a small amount of land at high prices.

(b) Similarly, farmers and the village as a whole should have to *collectively* deal and negotiate with the potential acquirer within the framework of a policy that is fair to the landowner and ensures him some gain out of the enhanced value of the land. Typically, when land is so acquired, the details of the subsequent pollution mitigation and safeguards, buffer zone, charges payable in case of occasional pollution, other arrangements such as jobs, and coverage of non-owners who are dependent upon the local economy should go into a contract between the acquirer and the 'village' or collective body. The government should bear the onus and cost of ensuring implementation, as it does in the case of any business contract. This will no doubt increase the cost of land, but will thereby result in its optimal use. The risks will then truly come down. Fighting existing high risks by creating an 'anti-people' law is certainly not the solution. Public acquisition with the social purpose clause should be used only in such cases where the land required is specific.

India, with one of the highest population densities, has to be particularly careful about the externalities in industrial use of land. The high cost of land that such a process would reveal, would mean that polluting industries would go to such places where costs are low.

Displacement and Environmental Impact Need to be Conceptually Separated

Interestingly most activists and commentators on land acquisition have tended to see environmental damage and the hardships and displacement of PAPs together, to weave a thesis of 'development being anti-poor'. In reality, the environmental costs of development by way of pollution, degradation of forests, and loss of species have to be conceptually separated from the costs to the people displaced. It is the colonial, almost anti-people land acquisition practice that hurts people most and invite major protest. With better land acquisition—one wherein the displaced gain most—the 'dissent on development' of post-modernists would find less takers.

THE RIGHT TO INFORMATION AND PRESSURES FROM BELOW

Right to Information and Responsible Local Governance

Beyond the rights of the displaced, the constructive contribution of environmental and people's movements has been to draw attention to the need for information to be publicly available. Information is currently monopolized by the state and is occasionally and selectively available to groups and journalists, but not generally to the common man. Particularly difficult to come by are data on government spending at local level, especially pertaining to infrastructure and subsidies.

The MKSS's (Mazdoor Kisan Sanghathan Sangh's) long years of struggle for the poor showed to the people, the politician, and the bureaucrat the power of information in the right hands (people) as regards government activities. This was long before it had become popular in academic and journalistic circles to ask for the 'freedom of information bill'. Organizations now realize that in the Internet world driven by information, information access can be a potent way to empower people and embed responsibility. Similarly, there has been a slower realization that the value of data is a non-linear function of its size and coverage, increasing rapidly with the number of attributes and the population, in commercial settings. In Rajasthan, under the initiative of the Tilonia group, the MKSS, with the active involvement of the people in general, forced the government to concede to making available information on such records as local expenditure on schools, wages, wells, buildings, etc. incurred by local and state governments.

In the 'jan sunwai', in which publicly under video official records were read, some officials even publicly admitted to widespread corruption and fraudulent practices. The specific details, the prima facie evidence, and the public aspect of this 'jan sunwai', had the effect of creating a people's movement for information. The movement, by its very nature and objective and entirely democratic and legal tools, was powerful enough to include wide sections of society, even officials in their individual capacity. The Tilonia Group led by Aruna Roy and others had discovered a most potent leverage point for change in governance and in society as a whole in the form of the 'jan sunwai' and the focus on relevant information per se. With the Internet and an Appropriate Right to Information act on the lines suggested recently (see Godbole, 1999 and section 5.8), the same strategy has the potential to reduce corruption considerably. Why so? Very briefly, given democracy and the need to balance the interests of

many competing groups, the Indian state has a strong need to appear to be fair, even when it is not. While the democratic and people's constitution charges the state machinery with the responsibility for certain social and publicly beneficial tasks, it also makes it accountable to the people. In actual practice, the fact that the economy has excluded many and archaic and despotic rules and laws have continued—the Official Secrets Act and the Land Acquisition Act, for example—means that 'form of fairness' in administration can be exposed rather simply by opening up government papers.

Thereby the hiatus between the form and the content becomes tense and either one has to give way. So a 'right to information bill' is most likely. Yet the initial processes are likely to be tortuous, and the government in power, however sincere it may be, will find itself

under severe pressure from the bureaucracy and the average politician to give the bill the form of a freedom or right to information bill, while in reality loading it with so many constraints and special situations considerations for denial as to render it impotent. There is therefore, the real danger that a bill which nobody but officialdom and the corrupt want gets pushed. From the viewpoint of infrastructural development, information regarding state and local bodies when regularly and routinely available to the people, should do much to reform governments, especially in their enterprise and regulatory dimension. Nothing could be better for commercial provisioning and for good governance which engenders local (and general) development. Given the democratic fabric of our society, this right to information becomes a necessity for real change that brings in the 'outsider'.