

**THE POLITICAL ECONOMY OF  
PUBLIC UTILITIES**  
**A Study of the Indian Power Sector**

**K. P. Kannan and N. Vijayamohanan Pillai**

**Working Paper No. 316**

June 2001

This paper is part of a larger study on the power sector in India, with special reference to Kerala, titled **Plight of the Power Sector in India: Inefficiency, Reform and Political Economy**.

This is the third working paper arising out of this research project. The details of the earlier working papers are as follows:

- i) Working Paper No. 308, *Plight of the Power Sector in India: SEBs and their Saga of Inefficiency* (November, 2000); and
- ii) Working Paper No.312, *Electricity Demand Analysis and Forecasting - The Tradition is Questioned!* (February, 2001).

**THE POLITICAL ECONOMY OF PUBLIC UTILITIES**  
**A Study of the Indian Power Sector**

**K. P. Kannan**

**N. Vijayamohanan Pillai**

Centre for Development Studies  
Thiruvananthapuram

June 2001

---

This paper is the outcome of a just-concluded larger study on the power sector in India with particular reference to Kerala. We are thankful to K. N. Raj for his support and to M. N. V. Nair, K. K. Subrahmanian, Achin Chakraborty and K. Ravi Raman for comments. An earlier version of this paper was presented by K. P. Kannan at a workshop on 'An Asian Dilemma: Modernising the Electricity Sector in China and India in the Context of Rapid Economic Growth and the Concern for Climate Change', held in The Hague (the Netherlands) on May 17, 2001 by the Institute of Environmental Studies, Free University, Amsterdam. The

## ABSTRACT

In this paper, we attempt at an analysis of the political economy of the Indian power sector with special reference to Kerala in the light of a generic model of the political economy of public utilities we develop in the first part of the paper. The model seeks to explain the political economy of the rent seeking drives in a non-Smithian imperfect regime of self-interest maximisation, with a regulatory structure of the public utility described in a framework of the principal-agent relationship. In contrast to the usual neo-classical monolithic representation of principal and agent, we characterise each entity in a Marxian-Kaleckian vein, as a composite set of conflicting sectional interests. This helps us develop a comprehensive perspective of the politico-economic implications of the relationship among the public, government and utility.

Based on this generic model, we seek to analyse, in the second part of the paper, the political economy of the power sector in India, with emphasis on Kerala. We also attempt, wherever possible, to estimate the costs of corruption involved in the administration of the power sector.

**JEL Classification:** E11, H10, H4, L94, N4, P16

**Key Words:** India, political economy, rent seeking, principal-agent, public utility, power sector

[The Jury acquitted Clodius of the charge of  
violating the rites of Bona Dea,  
wherein Cicero had given evidence against the alibi  
Clodius had set up.]  
*“The Jury” sneered Clodius, “did not give you credit on your oath.”*  
*“Yes,” retorted Cicero, “25 out of the 56 did;*  
*the remaining 31 refused credit, for they took the bribe in advance!”*  
 - quoted in Thakur (1979:166).

## **Introduction**

In most countries, intervention by governments in the economic sphere finds its justification on mainly two fronts: (i) to correct market failures in the provision of public goods and in the presence of externalities and natural monopoly, and (ii) to ensure the translation of the lofty ideal of a ‘welfare State’. Often a convergence of the two fronts is sought to be achieved, as in India, in the establishment of a public sector in a particular historical context. It is argued in a simple neo-classical framework that if the benefits of productive efficiency outweighs the costs of allocative inefficiency, then the society will have a welfare gain from maintaining the natural monopoly organisation of a public utility. Furthermore, if such monopoly power (price) can be brought down to a competitive level, say by means of its nationalisation, then there will be both an equity gain and an efficiency gain. This is the theory. However, the practice could be very different from the theory, as is often the case. For example, the vast scope for administering discretionary powers by the political and bureaucratic control processes involves

substantial costs of rent-seeking activities in a non-Smithian cultural regime of self-interest maximisation.<sup>1</sup> In the non-Marxian (more precisely neo-classical) representation of political process, the relationships among the public, government and utility may be aptly analysed in the light of a model of principal-agent problem. The problem consists in the default and breach of trust, likely on account of the conflicting objectives of self-interest maximisation of the concerned parties and the uncertainty or information asymmetry involved in the relationship. In contrast to the usual neo-classical monolithic characterisation of the principal and the agent(s), a kind of Marxian structuring of each of the entities (especially the principal, the ruling class) in terms of composite sets of sectional rent seeking interests in the functional domains (of agriculture, industry, trade, and labour) may yield more insights into the relationships. These different sub-sets in the principal set vie with each other in appropriating the benefits of the utility, through their representatives in political power. The very same agents of diverse interests, on the other hand, strive to stand as a cohesive group to ensure the long run end of both the continuity of their own regime and the survival of the system, while catering to the short-term contingencies of clashing sub-class interests. The long-term common agenda of capitalist survival in turn requires pacifying class strains, the general cause of crises. And this could be ensured in general by way of a captivating welfare State slogan, sought to be materialised in terms of State intervention and nationalisation. Such drives often went to the extent of equating nationalisation with socialism; and the political process was projected to be managed by 'representative governments'. Such 'intermediate regimes' (to use the Kaleckian term) were in fact an instrument for securing the class interests of capitalist empowerment, by ensuring both economic development and social security equations, true to the professed welfare State slogans.

The apparent fall of socialism and its emulations elsewhere has, however, opened up an impressive interpretation of the viability of economics: that there is no alternative to the capitalist mode of general welfare. Thus has started the new notion of liberalisation-based world welfare to sweep across the countries, replacing nationalisation by private sectorisation as a now seemingly viable stratagem in a historical necessity of capitalist survival. In the new dispensation of the on-going realignment of sub-class interests in India as elsewhere, the industrial and trade interests have risen to assert themselves. And in the political economy, corruption has scaled new heights in the implementation of privatisation drives, in addition to the old transactions in awarding concessions and contracts.

In what follows, we discuss these aspects in the context of the development of the Indian power sector. While the provocation for this paper arose out of our just concluded study of the power sector in Kerala, the discussion of its political economy here is firmly set in the national context. Though the reference to Kerala experience is largely illustrative, there is a significant dimension to it. In the development literature, Kerala is now well known for its remarkable achievements in human development despite low income, reflecting the continuing inability of the state to translate the social development into commensurate economic development. What the discussion in this paper points out is that the political economy of government intervention in Kerala in the economic sector (as opposed to such social sectors as school education and health care) is not very different from that in most other parts of India.

The following discussion is divided into three parts. In the first part, we present a generic analysis of the political economy of public utilities in a new synthetic methodological framework. The present stage in the development of history is interpreted in a Marxian perspective as

characterised by a series of seemingly feasible capitalist survival strategies. The class character of the State, on the other hand, is found more or less to obey the Kaleckian proposition of the ‘intermediate regime’, but largely dictated by the currently viable alignment of the sub-class interests in the common capitalist class. And in the superstructure of political economy of regulation, a neo-classical theorisation of rent seeking drives in an imperfectly co-ordinated domain of self-interest maximisation within a principal-agent relationship framework is adopted to obtain more insights. Such a synthetic analysis appears to provide a comprehensive and consistent explanation of the issues under study.

Leaning on this generic background, the second part discusses the plausible implications in the political economy of the Indian power sector, with special reference to Kerala. An attempt has also been made to estimate, wherever possible, the costs of corruption involved in the administration of this public utility in terms of the purely avoidable but allowed cost escalation. Finally, the third part gives our concluding remarks.

## I

### **A Generic Analysis**

The economic theory of public choice runs in the justification of market failure in the provision of public goods and in the presence of externalities and natural monopoly. Where market fails in the absence of preferences revelation, the political process steps in to obtain such revelation; ballot voting replaces rupee voting. Consumers as voters find it in their interest to vote such that the political outcome approximates their own preferences and choices. Such voting on collective tax and expenditure decisions reveals their choices in the determination of

provisions of goods and services that price system cannot supply. Tax functions as a price here.

### ***The natural monopoly problem***

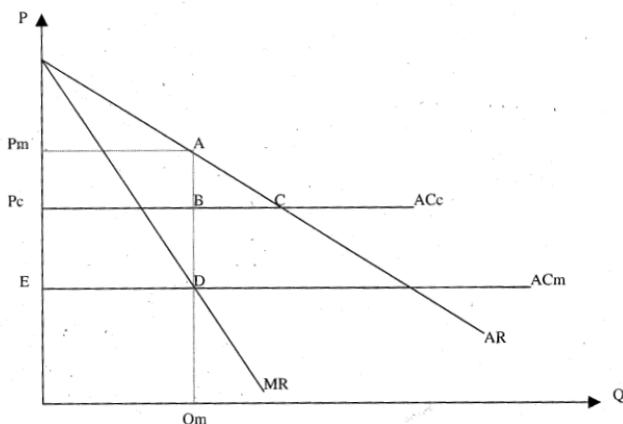
Our concern centres on the market failure (and the subsequent political intervention) from the existence of natural monopoly. Traditionally, public utilities (such as gas, electricity, telephone, water, cable TV and waste treatment facilities) are defined in terms of the technical features giving rise to natural monopoly position. A natural monopoly used to be interpreted as a single product, decreasing cost industry.<sup>2</sup> However, most utilities are multi-product: electric utilities distribute high and low voltage power as well as peak and off-peak power, telephone industries provide local as well as long-distance call facilities, etc. In this context, a natural monopoly is defined under the cost conditions when ‘the cost of a sum of any  $m$  output vectors is less than the sum of the costs of producing them separately’ (Baumol 1977: 809).<sup>3</sup> If this condition is satisfied, then the least cost method of producing the whole vectors of output is with a single firm. Hence the natural monopoly position.

Electric utility is unique in that its product is non-storable and must be generated and supplied the moment it is demanded. This technical characteristic in turn makes the industry essentially a vertically integrated monopoly with the co-ordination of all the three basic functional processes of generation (production), transmission (transportation to markets) and distribution (supply to final users) for reaping the full advantages of an integrated network system. This in turn gives rise to economies of scale and the resultant natural monopoly status.

The natural monopoly justification (in terms of productive efficiency) has however the danger of violating allocative efficiency

criterion, as prices are set above marginal cost (MC). Ensuring allocative efficiency requires competition in the market that drives price down to MC. But too many firms flooding the market leads to productive inefficiency. This in turn opens up the fundamental problem of public utility economics, as to the choice of an appropriate institutional arrangement of governance structure that can manage to make use of these economies, but without the excesses of monopoly power, creating dead weight loss. The practical solutions to this problem were originally addressed in terms of two kinds of government intervention: (i) outright nationalisation (state monopoly) as in most of the developing countries, France and the UK till the end of the eighties; and (ii) regulation of the private monopoly as in most of the USA, where the former is considered an anathema.

The significance of nationalisation appears obviously overwhelming, once we recognise the scale economies associated with a public utility and accept the consequent natural monopoly position of it. This is easy to show, following Williamson (1968), in terms of a simple neo-classical analysis of a trade off between market power and scale economies. In Fig. 1, a natural monopoly, enjoying scale economies, is shown to be able to supply at a lower average cost  $AC_m$  than a competitive, or more realistically, an oligopoly, utility at an average cost of  $AC_c$ . If, under such conditions, the cost savings, given by the rectangle  $PcBDE$ , exceed the dead weight loss in consumer surplus due to the monopoly price ( $P_m$ ), given by the triangle  $ABC$ , there will be a welfare gain from accepting the monopoly organisation of the utility. If, by nationalising the public utility, the monopoly power can be eliminated and the price reduced to the competitive (or oligopolistic) level of  $P_c$ , then there would be both an equity gain and an efficiency gain, in addition to profit. Nationalisation still involves possibilities of further price reductions and increased gains. As we will see below, the significance



**Figure 1.** Benefits of the monopoly organisation of electric utility and its nationalisation

of such public sectorisation is further fulfilled in materialising a welfare State.

### *Private interest theories*

Market economic theory of political intervention presupposes a demand for and a supply of it (Stigler 1971); a collective demand for government intervention to reduce the abuse of monopoly power leads to an appropriately chosen institutional structure for governance of monopoly. Broadly, two strains of themes have permeated the theoretical discourses of political economists in this regard: ‘public interest’ and ‘private interest’ theories. In the public interest framework, the social choice manifests itself in a political process that seeks to protect public interest or, more precisely, to maximise social welfare through an appropriate regulatory mechanism.

On the other extreme is a large spectrum of private interest theories of manifold hues and shades. Here the mechanism of political process

presents itself as the manifestation of the combined effect of rent seeking activities of various interest groups. Paralleling *homo economicus*, we have here *homo civicus* – the agents are assumed to be rational in their choices in utility maximisation. The interest groups seek to improve their own wellbeing by capturing and manipulating the administrative channels of the State's resources of coercive power. The behaviour of legislators is determined by their desire to stay on in power and hence legislation is designed to maximise their political support. Since legislation involves redistribution of wealth among the subjects, interest groups compete to capture government by offering political support in exchange for favourable legislation<sup>4</sup> (Stigler 1971; Peltzman 1976).

Bureaucracy, the administrative agency of the government to implement its policies, as an interest group to capture the government also is considered. It is assumed that this organisation's production is not sold in the market place (Downs 1967) or equivalently, not sold at per unit prices, such that the compensation of the bureaucrats does not depend upon the success of the organisation, defined in terms of surplus of revenue over cost (Niskanen 1971; 1973). Hence it is in the interests of the bureaucrats to seek to maximise their own utility. They are capable, because of the one-sided advantage of better information they possess, of capturing their superiors (the politicians in power) to obtain budgets larger than those normally granted by the politicians in government if they were properly informed.

In another viewpoint, government itself is assumed to be a monopoly, treated as a leviathan maximising its own surplus (Buchanan 1975: Ch. 9). This involves a systematic bias in the fiscal system resulting in an over-expansion in the budget, born of the self-interested bureaucrats (Niskanen 1971) and politicians in power (Mackay and Weaver 1978), seeking to maximise their budgets so as to gain in income, influence or

power, and to have larger staffs and perquisites. On the other end of this theoretical band is a view that takes governments as ‘inhabited by self-interested individuals’, i.e., as composite structures, instead of a monolithic one: ‘...these centres compete with one another in the production and supply of the goods and services demanded by citizens’ (Breton 1996: 13-17).

The very *raison d’être* of self-interest prompted pressure groups is warranted by the fact that government intervention causes income redistribution through legislation, and that public policies in general are just the response to the rent seeking activities<sup>5</sup> of private interest groups trying to change income redistribution in their favour. Rent seeking appears in the context of a contrived monopoly rent – a monopoly artificially created by imposing restrictions on potential competitors. Competition for the contrived monopoly rents in effect transfer them to the politicians in power who manage to create the monopoly by restricting potential competition through legislation. The lure of this power involving a rent from monopoly *a la* government in turn is the source of competition among politicians, i.e., rent seeking activities by them. Similarly, bureaucracy, the executive agency of the government, also enjoys monopoly rents; hence rent seeking among prospective candidates to reach and secure powerful positions in the hierarchy (for example, excessive expenditures on (special) education to prepare and on other arrangements for civil service examinations: Tullock 1980).

### ***The principal-agent problem***

An important contribution to the study of regulatory behaviour comes from the focus on the significance of information especially in a principal-agent relationship framework. In its simplest form of a vertical relationship, government, representing the public, is seen as the principal and the utility as the agent in its employ or under its authority. In an

extended form, (e.g., of a three-tier hierarchy) the public stand as principal and government (regulator) as agent (i.e., supervisor) who contracts with a further agent, the public utility, to supply the vector of services. In its barest terms it is assumed that in a regulatory governance structure, the principal's objective is to maximise some measure of social welfare, while the agent (utility) aims to maximise profit. Information asymmetry against the principal explains the *raison d'être* of the agent who is better informed or better skilled. The divergence in objectives and the uncertainty or information asymmetry result in two effects<sup>6</sup>: moral hazard (principal being affected by 'hidden actions' by agent) and adverse selection (principal being affected by 'hidden information' agent has at his command) (Arrow 1985). Hence the principal should structure his contract (compensation scheme) with such incentive designs as to encourage the agent to expend the expected effort that will compensate the information asymmetry the principal faces in his maximisation objective.<sup>7</sup>

### ***A new look into the principal-agent problem***

These neo-classical teleological representations of the political process underscores the positions of the players (people and government including politicians and bureaucracy) in distinct, disjoint, sets, 'external' to each other. Such 'externalisation' of the government from the people becomes sharper in a Marxist framework of the functional role of State. Where the society is divided into classes and sub-classes, clashes of self-interests inevitably lead to demoralisation and alienation. Feelings of alienation permeate the whole texture of consciousness, individual and social, and this in fact explains all the cases of indiscipline in functionings and insincerity in responsibility and the consequent stress out of the mistrust that underlie the principal-agent problem. Neo-classical analysis, as is its wont, never turns its microscopic eye-piece to these

fundamental strains. This is equally capable of explaining the much bitter experiences of alienation under the very 'socialist' regimes, where the agent, entrusted with the task of ensuring the 'dictatorship of the proletariat' remained entirely 'external' to and above the principal, the proletariat. A lack of a sense of oneness led to a principal - agent problem, much sharper in the void of a civic platform of checks and balances, that would have avoided problems arising from moral hazards and adverse selection. This should point towards the significance of an all-embracing cultural revolution *preceding* the political take over of the State.

A critical examination and exposition of the principal-agent model in this light in the context of an Indian-type public utility is in order now. In contrast to the usual monolithic characterisation of principal and agent(s), we find these entities as composite sets of sectional interests. The State being the objectification of the common capitalist class interests, this ruling class, at this particular historical juncture, stands as the principal. In actual realisation, however, the common interests have only long-run significance, if at all possible, in the face of the short-run contingencies of intense conflicts of intra-class interests (competition being a widely used euphemism) in the capture of the benefits of the efforts of its agent, the utility, through the supervisor, the government. The sub-sets in the common capitalist class represent the industrial, agricultural and commercial interests, aided by their own peripheral allies in the organised labour. It is not easy for the supervisor to wade through the chaos of such inter-/intra-class interests clashes. The politicians, who wield the State power *qua* government, have their own primary objectives of interests also, viz., their own survival and continuity in power, overcoming all the ruses of the rivals, to secure the long-run accumulation of the attendant benefits. This very objective in turn relies heavily on indulging the interests of the influential vote banks. In a predominantly rural economy, such as in India, large vote premiums are easily cornered

by being in league with the farming capitalists, who can herd at their beck and call vast ballot blocks. This then explains the much pampered practice of holding the umbrella of subsidy policy over the agriculture sector in these countries; for example, the free or near free supply of power. This then becomes an easy option as compared with what we would like to call a developmental option through a policy of capital formation in the rural sector by way of an effective investment strategy (e.g., development of land and water resources), leading to structural transformation and growth of the rural economy.

Such milking of a public utility by a section of the composite set of the principal is at the cost of the others in the set. Cross-subsidisation constitutes a source of tension among the sub-classes of the principal and the consequent feelings of alienation. The supervisor i.e. the government, however, is able to buy peace by appeasing, through subsidised power sales, all these sections together, including the allies in the organised labour, in their capacity as domestic customers. Cross subsidisation in this respect is extended at the cost of some sections of the population; the net losers in this game, however, are the poor (non-electrified households). And the role of the State as a coercive instrument for exploitation is fully fulfilled here. This conclusion still holds even if we enlarge the major set of principal to encompass 'the whole public', in contrast to the above Marxist proposition. In this case the supervisor colludes with the beneficiary section of the principal and milks the public utility for them at the cost of the remaining poor, who are seldom in a position to exercise their choice of ballot use independently. The supervisor requires such conditions only. Such actions of the supervisor are often given a veil of legitimacy through a notional subsidy offered to the weaker sections such as small farmers and rural households.

### *Nationalisation to fulfil the welfare State*

Both the early experience of the erstwhile Soviet Union as well as the influence of Keynesian economics gave nationalisation pride of place in State policy such that it soon came to be equated with socialism. The whole of Western Europe was swept over by a wave of nationalisation immediately after World War II, that set a precedent to a large number of countries elsewhere. Politically, such a 'socialism through legislation', in contrast to socialisation, was in fact a response and a counter to the socialistic (more precisely, quasi socialistic) conversion of Eastern Europe under the extended military umbrella of the then Soviet Union, though temporarily. It should be noted that these East European countries economically at best represented a symbiosis of plan and market, as envisaged by the European liberal socialists such as Oskar Lange and Maurice Dobb and this lent nationalisation in other countries an equal footing with socialism to the satisfaction of their elite proletariat and intelligentsia.<sup>8</sup>

The neo-classical theorisation of political process, while overlooking these undercurrents, was, however, confined to analysing their reflections on the surface. Thus the public sectorisation and the welfare State practices were explained (e.g., Mishra 1984) in terms of a number of forces that cumulated to exert an upward 'ratchet' effect on welfare programmes and expenditures such as political competition for votes, lack of cost constraints on voters' behaviour due to the low salience of taxes, pressure of interest groups outside the State, notably trade unions and professionals, and the operation of budget maximising [politicians and] bureaucracies within the State.

In this background it was then natural for the developing countries, most of them rising from the colonial subjugation, to mould their independent economic life in the same fold of a welfare State. There

was an added factor covertly accepted that too necessitated State control of economics in these countries – the lack of a developed capital market and the supply of entrepreneurs in the domestic private sector. Implied in this official recognition was a hidden agenda of treating the public sector as a temporary midwife for the development of private sector, and history has proved this later on. India has been one of the pioneers along this U-path.

### ***The ‘intermediate regimes’***

What is the specific class character of the State that works behind this U-path development strategy?

The class that rose to power in many underdeveloped countries upon Independence after the World War II was identified by Kalecki (1967) as the ‘intermediate class; (that is between the capitalists and the workers), or more specifically, the lower-middle class and rich peasantry’. A few specific conditions facilitated such an ‘intermediate dictatorship’, in contrast to the dictatorship of bourgeoisie and of proletariat. For one thing, the lower-middle class was ‘very numerous’, and the ‘big business’, comparatively weak and ‘predominantly foreign controlled’ (ibid.). This ensured the rise to power of the representatives of the intermediate class without being captured by the big business as was usual. For their survival in power, they sought to eliminate the ‘comprodor’ elements (i.e., to ‘gain a measure of independence from foreign capital’), as well as the ‘remnants of the feudal system’ (the latter by carrying out land reforms, meant to weaken the alliance of the big business with the landlords). This in turn necessitated ‘continuous economic growth’. Since ‘the native upper middle class’ was too weak ‘to perform the role of ‘dynamic entrepreneurs’ on a large scale’, the State came forward with the basic investment for economic development, in line with the universally accepted principle of ‘State economic interventionism’ of that era.

Another favourable condition was the availability of credit finance for economic development. The intermediate regimes, taking advantage of the competition between the first (advanced capitalist) and second (socialist) worlds, behaved like 'the proverbial clever calves that suck two cows'.

In this context it was in the interest of the intermediate class to promote economic development through the commanding position of the public sector. Ideally, 'State capitalism concentrates investment on the expansion of the productive potential of the country', that provides a luxuriant atmosphere for the small firms (of the ruling class) to thrive, without fear of concentration and centralisation of capital, under the watchful patronage of the State. The consequent economic growth opens up more and more avenues of employment 'for ambitious young men of the numerous ruling class'. Such a sustainable growth dynamics in turn is logically to materialise a welfare State, put up as the end of the intermediate regime.

As interpreted by Raj (1973), the historical reality has however failed the Kaleckian ideal of dynamic State entrepreneurship, thanks solely to the conflicting self-interests of the numerous classes and their fringe allies in the ruling coalition. Political survival has entailed indulging the demands of some or other classes for subsidised supply of State sector outputs, resulting in accruing very little investible surplus or incurring losses. Moreover, the government also has been meant to support and cater to the pecuniary demands of 'a large and growing body of salary earners whose contribution to economic growth may be negligible' involving 'further drain on the investible surpluses available to the State'. Thus even though the intermediate regime was politically viable, its survival has been at the expense of the economic viability of its dynamic entrepreneurship.

The subsequent developments out of such fabricated dysfunctioning of the public sector in the intermediate regimes, leading in another conducive global environment to private sectorisation, offer a number of implications. Most basically, we find that the new order has facilitated the growth of the native upper-middle class (into independent big business), *and* the expansion of the small firms. Some of the lower-middle class and rich peasantry (the latter through diversification) also have been able to climb up to higher rungs of the capitalist echelon. It goes without saying that mergers and concentration have largely characterised the development of capital in these regimes, along with a peaceful coexistence by small capital too. Thus the intermediate regime had a hidden agenda in line with the rule of development of capital. This was so at least in the case of India, where, as Kalecki (1967) himself admits, big business, at the time of Independence, ‘was much stronger’, and could dictate its terms too. Simply put, intermediate regime was an explicit agreement among different, both small and big, strata of the capitalist class in alliance with organised labour for facilitating the survival and development of capitalism. Though the numerical strength of the intermediate class elevated its representatives to power, some live strings still attached them to both the extremes – big business and labour. Once the native capitalism has matured into imperialism (that exports capital in contrast to commodities), it along with the global capital in an environment of coexistence has now become able to capture the intermediate regime and to reinstate ‘classical capitalism’ (envisaged as possible by Kalecki 1967). This explains the U-turn strategy.

## II

### **The Indian Power Sector**

The welfare State concept had its fervent devotees in India too. If Gandhiji talked of ‘Ramarajya’, then Nehru talked of a ‘socialistic

society'. Both the Congress Party and the splinter groups of social democrats talked of nothing else. The coexistence of market and plan continued to be the official economic principle of Independent India under the Congress, along with an import substitution model of development for building a strong industrial base, both for basic and intermediate goods and for heavy machine building. And the famous 1955 (60<sup>th</sup>) Avadi session of the Congress party adopted a 'socialistic pattern of society' for India, through planning, 'where the principal means of production are under social ownership or control, production is progressively speeded up and there is equitable distribution of the national wealth' (from the Resolution, quoted in Zaidi and Zaidi 1981: 52). Following this guideline, the Industrial Policy Resolution of 1956 shifted the primary responsibility for development on the public sector and demarcated and reserved the core and strategic areas exclusively for the State.

In intermediate regimes the State machinery has had to indulge not only the sectional interests of very numerous classes, but also those of the very class representatives (as an external set) wielding power. Nationalisation, for example in India, was at times more a profitable political agenda (in addition to an additional outlet of rent seeking) than an economically viable requirement. As in the case of other infrastructure facilities with high capital intensity and long gestation period, that deterred large scale initiative of private enterprise, the responsibility of power development also was thus originally shouldered by the State in India. The sector, rightly expected to subserve the social, political and economic policies of the State, soon became in effect the translatory channel for the populist policies of the political party in power in the various provincial states in the pursuit of votes.

### *Welfare of the electric utility*

In such a context of composite interests, accumulation of dysfunctionings has been a natural outcome in the power sector. For one thing, subsidised power, in the name of swift industrialisation, has gone to turn the factory machines, at the behest of the capitalists, who could, say, finance election campaigns. The true price, however, of such industrialisation drive, for example, in Kerala, was very high, as most of the industries sprung up in the state under the subsidy umbrella were capital- and energy-intensive, with very limited prospects for creating employment opportunities, one of the professed objectives of the drive (Kannan and Pillai 2001).<sup>9</sup> Highly pampered by the subsidised power sale also are the domestic customers, the influential section among the electorate. By seventies the logic of power subsidy was also extended to the agricultural sector to placate the powerful lobby of rich farmers. As already noted, the fact that in general the non-electrified households and fragmented farms belong to the poorest of the society questions the justification of the welfare content of such across the board subsidy to the powerful groups.

The appeasement strategy on the part of the supervisor (government) in favour of the influential section of the principal (the public in general) has a downstream extension also towards the bureaucracy of the agent (the public utility). This is especially ensured by the powerful trade unions, the loyal affiliates of one or another of the supervisor, and hence the collusion is a given fact. The appeasement appears more prominently in overmanning, especially and unwarrantedly in establishment and administration (E & A), in a populist bid of employment generation. The consequent increase in E & A costs stands in turn to inflate the supply costs of electricity and penalises directly the customers and further indirectly the poor tax payers. In Kerala, such

collusion has had increased effect, as we already noted in an earlier paper (ibid.), not only on the extent of overmanning, but also on the average annual earning per employee, which was Rs. 1.44 lakhs in 1997-98, about 1.8 times the state-sector average in India. That is, the cost of such collusion was about 80 per cent higher in the power sector of Kerala with a highly militant labour.

### *Alignments of sectional interests*

We have enlarged much upon the effects of the various sectional interests in the composite set of principal *vis-à-vis* a monolithic supervisor. That electricity supply is included in the concurrent list of the Constitution in India renders the supervisor also a major set of sectional interests, those of the Central as well as of the regional state. Such a regional distinction of the interests of the supervisor has assumed greater significance only recently, in the context of the accelerated Central drives for power sector restructuring in India, as there was little scope for conflict of interests till the end of 1980s. The power sector reform programmes in the version of the Central government are not at all acceptable to many of the state governments, at least for the populist slogans against any restructuring of the sacrosanct public sector. In fact, it is in view of such conflict of regional interests in the functionings of the supervisor, that proposals are floated now for transferring electricity supply to the Central list in the Constitution.<sup>10</sup> The Electricity Bill – 2000 may be taken as a first big leap towards that direction.

It is not surprising to find, in the present phase of the capitalist survival strategy, that what underlies the Central government prescription of power sector restructuring is a realignment of sectional self-interests. The vociferous demand and stringent stipulation by the Central government for phasing out the subsidy regime altogether is a clear indication of this. The domestic industrial capital in league with the global

capital is in the process of capturing the supervisory organ of the State. In the power sector, the proposed restructuring absolutely favours the industrial capital – besides the benefits from the removal of the burden of cross-subsidisation, it can also reap cheap power upon marginal cost pricing practice, as supply to high voltage industries involves much less T & D network costs and loss factor costs than that to low voltage domestic and rural sectors. Putting an end to the costly subsidised power sale might appear as an attractive proposition of reason and justice on the surface, as it breaks the unfair nexus between the supervisor and the rich rural lobby. Though it seems desirable from that viewpoint, the process, however, would have long-run detrimental distributional effects as far as the public development issues are concerned, as we will see later on. Moreover, the new configuration of collusion must also arouse a natural doubt as to the rationality of the supervisor relinquishing his sure rural vote base. But the much impressive TINA (There Is No Alternative) factor involved in the reform proposals, coupled with the diverse vote purchase mechanisms is expected to safely take care of this problem.

### ***The corruption channels: energy theft***

Along with the force of vote-premium aligns high-powered corruption. As the bureaucracy (of the public utility) enters, the scene gets complicated with implications of collusion of different configurations. One major combination is among the Board officials and erring customers, enjoying political patronage, for uninterrupted theft of power flagrantly practised, for example, in the very capital city of the country. Corruption greases a smooth relationship here, so long as its cost (bribery, in-kind transfer, favouritism) remains less than the value of power drawn behind the meter. The effect of collusion transcends the direct end of transfer and spreads in the whole functional veins of the

Board; it credits, without verifying the authenticity of its own procedures, the power thus lost, to the farm sector, where consumption is mostly unmetered. As we have already found (*ibid.*), about 30 to 40 per cent of what is usually reported as agricultural power consumption in fact represents power lost in such illegal 'sale'. Then assuming, quite reasonably, that the actual agricultural consumption is only 65 per cent of the reported one, we have already estimated that in 1997-98, the energy thieved away in connivance with all the State Electricity Boards (SEBs) amounted at least to 31073 MU, equivalent to Rs. 5733 crores, at a sales rate of Rs. 1.85 per unit! This, though an underestimate, gives in effect an *annual* cost of corruption at only one (i.e., sale) end in the Indian power sector.

A further heroic assumption here is that the reported T&D loss is the actual one, a good part of which in fact is 'theft and dacoity loss'. Thus the actual value of corruption at the sales end must be much higher than our rough estimate. For example, with the assumption of an actual 15 per cent T&D loss in 1997-98 (including technical and inefficiency loss due to inadequate transmission capacity), the total cost of corruption at the sales end in the Indian power sector comes out to be a staggering Rs. 10705 crores!<sup>11</sup> In the case of Kerala power sector, where agricultural power consumption is mostly metered and accounts for only about 4 per cent, such illegal 'sale' of power is included directly in the T&D loss. Assuming an actual 15 per cent T&D loss in 1997-98 in Kerala against the reported 17.9 per cent, we find that the cost of such corruption amounts to Rs. 33.7 crores.<sup>12</sup>

A more sophisticated way of 'theft' is to get the officials to allow huge energy bills to mount up and then to write them off as 'bad debts'.<sup>13</sup> In our study mentioned earlier we have seen that the revenue arrears outstanding against different consumers for all SEBs in 1996-97 was

Rs. 11,535 crores, accounting for over four months' sales revenue, against the maximum allowable norm of two months' sales revenue. The excess of outstandings over the admissible norm may then be taken as an approximate measure of the cost of corruption involved at this end of energy 'theft' in the form of deliberate non-payment by customers of electricity charges in connivance with the officials. This amounted in 1996-97 to Rs. 4220 crores, equivalent, as we have estimated earlier, to the additional revenue at hand if all the SEBs could limit their revenue arrears to two months' sales norm, and in 1995-96, to Rs. 7364 crores! In Kerala, corruption on this front cost Rs. 175 crores in 1995-96, and Rs. 198 crores and Rs. 252 crores in the next two years! The 'bad debts' written off during these three years by the KSEB were Rs. 11.8 crores, Rs. 12.5 crores, and Rs. 14.8 crores respectively.

### ***Corruption at the high up***

The government (i.e., the political party in power) also falls within the collusion circle to the extent that it condones such theft without striking its coercive authority properly, lest that ruin the other 'side contracts' it has with the erring Board and customers. The government seeks not only to maximise its vote base to secure its survivability through populist administration in the best interests of the capitalist State, but also to gain income for its individual coalition partners. Ministry formation is in fact a 'rent-sharing' side contract in proportion to the bargaining strength expressed at the time of reaching the coalition contract. Every ministry or department has its own illegal inlet of income or 'sale counter' for the concerned minister and his coterie; thus industrial concessions are sold at a price; so is a new college or liquor shop licence. In the power and irrigation sectors, construction contracts and purchase orders are conferred at a price.<sup>14</sup> By the 'side contract' of collusion, the Board bureaucracy may share in the price along with its supervisor, the

particular ministry in the government, or gain other favours of larger budgets.

There have come up a number of allegations of corruption involving ministers<sup>15</sup> and bureaucracy in the Kerala power sector. Some of them have recently been convicted also. For example, a former Minister along with his power secretary and some top officials of the KSEB were convicted in a case involving award of construction contract.<sup>16</sup> There have been allegations of corruption against other power minister(s) in recent times too; for example, on the contract with the Bharat Heavy Electricals Ltd. (BHEL) in the case of Kozhikode and Kasargode diesel power plants, and with a Canadian firm in the case of an extension scheme (Kuttiady hydro-power project). The infamous Kannur-Ennore episode is another apt case in point here.<sup>17</sup>

Purchase of materials and machinery, especially power generating equipment, involves large scale corruption, the scope of which has widened since 1992 (post liberalisation period) with the stipulation for bilateral credit options that necessarily involves purchases from foreign equipment suppliers, as bilateral credit is inevitably tied.<sup>18</sup> An Enquiry Commission in Kerala has indicted another former power minister and his officials in the case relating to financial irregularities, involving a loss to the KSEB of Rs. 75 crores in the award of contracts in the case of the Brahmapuram diesel power plant; a vigilance probe is in progress into this case.<sup>19</sup> At national level, the infamous Jain hawala revelations have indicted a large number of Central government officials, about half of them being from the power sector – the NHPC (Dulhasti project) and the NTPC (many bilaterally funded projects) actively involved.<sup>20</sup>

### ***Wide-spectrum corruption***

As 'rents' increase, the bandwidth of collusion also widens to include the contractors and the trade unions, in addition to the government

and its agent. An apt example of such ‘wide spectrum collusion’ is the large corruption involved in allowing for time overruns of projects and sanctioning the associated cost escalations. Recurring unrestricted labour militancy is recognised in general as the single factor that puts the heaviest burden on the pace of the construction works of power projects in Kerala, largely dictated by party-political rivalry rather than genuine labour demands, as for example, in the construction of Idukki hydro-electric project, to begin with. The time overruns out of the striking militancy upon one or another pecuniary pretext essentially go into the contractors’ demand for cost escalation, that is soon endorsed by the Board and sanctioned by the government.<sup>21</sup> Such rent (extortion)-sharing is a widely recognised official practice in the power-irrigation sectors. The glaring laxity on the part of the government in fulfilling its committed responsibility for enforcing its authority on the contractors and workers to bind them within the contractual terms they agreed to take up to honour is a clear indication of its corrupt collusion. In Kerala, the time and cost overruns have afflicted only the state power projects; the public sector NTPC thermal and the private sector hydro projects in the state having been completed well within their scheduled times. In this light, then, the cost escalation sanctioned for each late-run project may rightly be taken to represent the cost of corruption involved in construction contract sales in the power sector of the state. Accounting for the general price inflation during the normal construction period, this amounts to Rs. 6374 crores or Rs. 354 crores per project!<sup>22</sup> Unbelievably, it represents on an average about 60 per cent of the actual project cost! In some cases it is well above 75 per cent. This is all shared among the four parties involved, at the cost of the helpless majority in the ‘principal’ set of tax payers.

At the top of these ‘milky’ projects is an extension project (Kuttiady hydropower project phase 1, works on which started in 1994),<sup>23</sup> with a corruption cost of nearly 80 per cent of the actual project cost. In this

case, it should be noted that so much capital cost inflation was allowed by the government not for a *new* project, but on an *extension* project for 50 MW only! A new hydropower project as per current estimates is expected to cost around Rs. 2.5 crores per MW, whereas this extension project has cost Rs. 3.96 crores per MW! (Government of Kerala 2000). The contractor for the project, SNC Lavalin International Inc., a Canadian firm, has been involved in a number of controversies and a corruption case against them is under vigilance probe at present. It is worth mentioning that even while being under the clouds of a corruption case, the very same foreign contractor was awarded the modernisation works of 3 old hydropower plants, viz., Pallivasal, Panniar and Sengulam, and that too through a MoU only, without calling for international tenders as per guidelines! Current estimates put the costs of such modernisation works at Rs. 1.25 crores per MW, whereas the contract to SNC was given at a cost of Rs. 2.42 crores a MW (Rs. 280.5 crores for 115.5 MW of the three plants) (*Malayala Manorama daily* 7 February 2001). Assuming the validity of these estimates, a new hydro-plant of more than 110 MW could be constructed at this cost!

### ***Corruption-inflated capital costs***

Corruption lodged in inflated costs of power projects<sup>24</sup> is not an India-specific phenomenon, though allegedly materialised since the entry of Enron. The Dabhol power project of Enron has cost about US\$ 2830 million (US\$ 1.4 million per MW) as compared with a cost of US\$ 1200 million (US\$ 0.64 million per MW) for a similar plant, the 1875 MW Teesside project of Enron in England, (Mehta 2000: 98) i.e., more than twice! This works out to be Rs. 4.48 crores per MW, much higher than the NTPC's 645 MW gas-based Kawas project (implemented in November 1993 at Rs. 2.32 crores a MW), which comes in effect to Rs. 3.56 crores per MW only at an assumed inflation rate of 10 per cent by

March 1997 (Morris 1996: fn.2). The National Working Group on Power Sector (1994: 14, table 5.3), a motley organisation of left economists, trade unionists and former heads of SEBs, has shown in a detailed study that an Indian alternative combined cycle gas turbine (CCGT) plant will cost only Rs. 3.05 crores per MW and a coal-based one, much costlier than a gas-based plant, Rs. 3.13 crores per MW only. The calculations of the Central Electricity Authority (CEA) have put the total capital costs of an Enron-type plant at Rs. 1.91 crores a MW (December 1997 completed costs). However, the Ministry of Power (MoP) has, since the Enron entry, been justifying higher capital costs of power projects in India; for instance, while the CEA has estimated the cost of the Bakreshwar thermal plant at Rs. 2.91 crores per MW, the MoP has put it at Rs. 4.36 crores per MW.<sup>25</sup> The ministry has, moreover, put out a list of projects with final costs of Rs. 4 crores to Rs. 5 crores per MW, and has thus sought to justify clearing private sector projects costing Rs. 3.28 crores to Rs. 5.09 crores a MW (*The Economic Times* (editorial) 22 March 1994).

The projects in Kerala too have become heavily loaded with inflated capital costs, as shown above. The very high capital costs allowed to SNC Lavalin by the government through a MoU only in the case of both Kuttiady extension (phase 1) and the Pallivasal-Panniar-Sengulam modernisation schemes should now be compared with the capital costs quoted in an international tender bidding for Kuttiady extension phase 2 project. Among the four companies left in the fray, the lowest bid has come from a consortium of two Indian companies (L&T – BHEL) at Rs. 164 crores, while the highest from the SNC Lavalin at Rs. 324.4 crores! (*Malayala Manorama daily* 7 February 2001). It should be noted that the Board's own estimated capital cost for the project, recognised by the government itself, is Rs. 220.5 crores, i.e., Rs. 2.21 crores per MW! The 1991 project report of the KSEB has estimated the cost of

machinery at Rs. 170 crores, while BHEL has promised, in its letter to the chief engineer on 2 February 1998, to supply the items at Rs. 51.5 crores! In terms of machinery cost itself thus there is a gain of Rs. 118.5 crores, more than worth another two sets of machinery, in addition to the obvious benefits of encouraging indigenous production and supply.

### ***Corruption bursting***

Corruption remains untraceable if the bond of collusion is sticky and stable. The probability of its disclosure or detection is a function of the 'incentive' a participant has to confess or to report. Though it may look unlikely, the benefit of being approver inviting less penalties or a vindictive tactics, both possible in a prisoners' dilemma framework, may induce a party.<sup>26</sup> But the more potent tool rests with a government itself for digging out, if it wills, evidences of corruption engaged in by the previous rival government – the old files and records with the ministry and the Board would speak volumes for the dubious circumstances<sup>27</sup> the then authorities created for possible corruption. It was in this manner, as already explained, the active roles of two former power ministers in Kerala in large scale corruption could be brought into light by judicial enquiry commissions. Though characterised as an unscrupulous vindictive move to 'finish the rival', such competitive exhumation, set in eruption in Indian politics recently, in place of the earlier tacit collusive condonation, is in fact a welcome sign. Such much needed competition between governments, in line with competition in the economic sphere induced by liberalisation that is assumed to do away with unfair practices, can act as a powerful deterrent to corruption, by filling the rivals with a fear that exhumation might lead to political extinction, though it can also lead to ingenious ways to whet efficiency in corruption practices. At the same time, this involves dangers of a deliberate kill, as a government, through its coercive power, can 'create' evidences of corruption against a rival for its short-term gains.

It should, however, be added here that the too-slow pacing of the Indian judiciary along with its multi-tiered appeal-provision hierarchy<sup>28</sup> sets the convicts free in effect and leaves the system, more often than not, farcically ineffective as a deterrent to corruption as well as crime.

Moreover, corruption bursting *a la* exhumation will not work, if the new government finds scope for rent-extraction from and further rent sharing with the briber-contractor of the previous regime; the need to protect the briber protects the previous bribee too. The active presence of SNC Lavalin in the Kerala power sector even now despite a vigilance case against it is a case in point. SNC came to Kerala on 2 April 1993 as consultant to a hydropower project (Lower Periyar) upon the instructions of the World Bank, the loaner to the project. Sickened at the prolonging time overrun of this project, the Bank stopped its assistance and quit the scene in December 1994, which should have in effect automatically terminated the contract with SNC. However, it was reported that the technical and finance members of the KSEB, without waiting for the full Board decision, extended the contract and paid SNC US\$ 43 lakhs against the World Bank recommended payment of US\$ 30 lakhs. A vigilance probe was ordered later on into this financial irregularity that had caused a loss of US\$ 13 lakhs to the Board. But the new government also was soon ‘captured’ by SNC, as evidenced by the later developments of fresh contracts ‘procurements’ by them – Kuttiady extension and Pallivasal-Panniar-Sengulam modernisation projects. And the vigilance probe moves at its legendary snail’s pace, now having covered more than four years of no result!

### ***Private Sectorisation***

It is common knowledge that the strong waves of liberalisation started to sweep across the world along with the fall of socialism. Public sectorisation had given capitalism a new lease of life in the face of

threats from a flourishing socialism. But the disintegration of the socialist bloc, the raging discontent that resulted in massive popular uprisings against the (quasi) socialist regimes in the Eastern Europe and the costly inefficiency of unaccountability that characterised the public sector in general were all detracting from the vitality of socialist slogans and had the makings of a new twist which the stagnant history badly needed. The capitalist survival now required a new strategy of global expansion, facilitated by a variant of *laissez faire*. The Thatcherite drives of private sectorisation in the UK, projected under a colourful TINA banner, and the deregulation bids in the US were powerful political over-fishing in the troubled water of a vacuum of reliable pro-people alternative. In this powerful sweep, the public sector in India, that was apparently qualified as having fallen from the 'commanding heights' to the 'demanding depths' of inefficiency, too was soon marked for market. Conveniently concealed in this hasty decision making were the obvious evidences of the socio-economic development India had been able to achieve through the 'commanding' distributive channel of a public sector.<sup>29</sup> The official machinery was only keen to magnify the dark specks of avoidable functional inefficiency of a number of public sector enterprises (PSEs) in a concerted bid to justify privatisation. Even an influential section of the informed atmosphere of India appeared alarmed over the apparent low productivity of the public sector (for example, Bhagwati 1993), without caring for locating its sources for possible cures, and the functional inefficiency, still avoidable or easily curable, was identified with structural/organisational deviations. This made it easier to reach a foregone conclusion in favour of restructuring. Thus, starting with the sixth Plan (in the early 1980s), private sectorisation in India got the full thrust at the cost of public sector with the eighth Plan in the era of liberalisation, privatisation and globalisation, the new form of the cyclical survival tactics of the capital.

### ***Corruption in privatisation***

In addition to major contracts and concessions, liberalisation has opened up another avenue of corruption, that is, privatisation. This has been the single largest route of payments that has pushed the transition economies (the countries of the former Soviet Union) to the highest level of corruption in the world.<sup>30</sup> China too is not an exception in this respect of its reform drives.<sup>31</sup> An explanation of corruption in transition views privatisation and liberalisation as market oriented reforms that allow rent seeking and corrupt practices to proliferate. Corruption in transition is the result in particular of the incipient nature of restraining legal and other regulatory institutions (see e.g., Weisskopf 1992). However, this *ahistorical* explanations, ignoring the roots of corruption (the Czarist Russia was one of the most corrupt nations, Massie 1980) fails to reflect upon the conditions in the transition economies in the period immediately before and during the break down of the socialist system that acted as an ideal medium for the growth of 'monetary corruption'. The New Institutional Economics views corruption in transition as a continuum from the past, thus recognising the legacy of corruption under the socialist system. Since institutional changes occur slowly and incrementally, history may be taken as a predictor of the continuing patterns of corruption during the transition (Feige 1997). Though historical path dependency is an important framework of explanation of corruption, the experiences of the transition economies had an immense and immediate ('big bang') onset of political and institutional changes that were by no means evolutionary nor incremental. The changes imposed through *ex cathedra* proclamations in fact disregarded the need for a conscious development of a rule of law to substitute, while unleashing the reins of order of the old regime. And the resultant chaos filled the vacuum with full corruption.

The transition in India on both the occasions (of initial public sectorisation and the later liberalisation) was however within the confines

(of a modicum) of rule of law.<sup>32</sup> But the historical path dependency of corruption still stuck in the inevitable loopholes of rules.<sup>33</sup> Unlike the Western industrialised nations, India (and other developing countries) could not pass through a character-smelting cultural revolution in the progressive phase of the development of capitalism. Just as colonialism in these countries had found it profitable to prop up the corrupt cultural vestiges of the old feudal system, so did capitalism too. Thus corruption continued as if determined by a historical necessity for the State.

In the initial period of moulding a socialistic pattern of society under a sacrosanct planning system in India, almost every economic activity had some contact with control and regulation. Where control and regulation were tighter and grew in complexity, political and bureaucratic discretion in administering controls naturally involved an increasing scope for rent seeking (Government of India 1964: 7-8). Though Gunnar Myrdal (1968: 942-943) believed 'on the basis of scanty evidence' that India, 'where a moralistic attitude is especially apparent', might '...on the balance, be judged to have somewhat less corruption than any other country in South Asia', Santhanam Committee (on Prevention of Corruption 1964) found corruption as an increasing function of economic controls in the Indian planning system.<sup>34</sup> Krueger (1974), who formalised the notion of rent seeking, estimated the annual welfare costs of rent seeking on account of price and quantity controls in India to be about 7.3 per cent of the national income of 1964, 'judged large relative to India's problems in attempting to raise her savings rate.' (p.294). Following the same 'procedure of approximating rent seeking costs by the value of rents created by controls' in the external sector, capital market, goods market (including agriculture) and labour market, Mohammad and Whalley (1984) however found the cost of rent seeking to be approximately 30 to 45 per cent of the national income in 1980-81.

To the extent that politicisation of economic activities through control regimes results in vast scope for corruption, its antidote is sought in depoliticisation. Thus liberalisation, while putting an end to administrative discretion<sup>35</sup> of control *raj* over the private sector in principle closes down the associated avenues of corruption too. Where control is over ownership rights (the State sector), depoliticisation of economic activities entails privatisation, i.e., conversion of control rights, involving discretionary political and official actions, into private, market-driven choices, supposedly free of corruption. But an important question, not at all addressed in this respect is: are the benefits from elimination of costs of control rights greater than the costs of profit-driven private choices? Here we concur with the liberal socialists who would still say: ‘Officials subject to democratic control seem preferable to private corporation executives who practically are responsible to nobody.’ (Lange and Taylor 1938: 109-110). This is especially so in a country like India where the private sector is characterised by an absence of transparency in its functioning, let alone that of its susceptibility to social control. The infamous dysfunctionings of the capital market with the corresponding predatory behaviour of its actors lends sufficient credence to such a view.

Privatisation, transfer of control rights, is expected to reduce corruption, but the privatisation transaction itself can be corrupt in the same way as in the award of concessions and contracts. The prospective buyers may vie and pay for getting included on the list of pre-qualified bidders as well as for restricting the number of other bidders. Rose-Ackerman (1999: 35-38) illustrates three more corrupt practices in this respect. (1) In the absence of a scientific method of valuation of assets of the state enterprise marked for privatisation, the uncertainties of the process can facilitate scope for insider plays. The favoured buyer can easily procure information not available to others, or much earlier or

reserve special treatment in the bidding process. He can even get the assessment process corrupted in his favour by having assessors of his choice get the bid and do the work. (2) With no assets evaluation criterion to rule, corrupt officials can under-value a state enterprise in return for pay off. The firm may be presented as unhealthy and its prospects, feeble such that the favoured buyer can outbid others. (3) The prospective buyers would be keen and ready to pay more to retain whatever monopoly power was available to the State firm. 'To an impecunious State and its bidders, assuring monopoly power is in the interests of both. Thus the conflict between revenue maximisation and market competition arises for all privatisation deals. If a State gives lip service to competitive principles, however, it may be unable to endorse monopolisation openly. Corrupt back-channel deals can then accomplish that objective...' (ibid.: 37).

Privatisation of electricity sector in the Indian context is obviously ominous of disaster. The assets of SEBs are highly under-valued; the gloomy presentation of a sick SEB would further cut into its value. Howsoever professedly meticulous the assets valuation rule(s), privatisation would thus amount to a cheap sell-out. The very high corruption potential would just add to this woe. The whole assets, accumulated by two generations of tax payers over a period of half-a-century, would thus be lost for a one-time paltry payment to the then government to squander.

Moreover, privatisation of the electric utility necessarily involves the problem of retention of monopoly power of some degree, as history amply shows. Manzetti (1999) argues, among other cases, that the privatisation of electricity industry in Chile involved such (unfair) deals that could generate monopoly rents for the winners. For another example, the two major generators in the English electricity supply industry, viz., National Power and PowerGen, had enjoyed sufficient market power in

the Pool to raise prices and make supernormal profits (Green 1999). Rent seeking costs, related to such monopoly power retention processes, as explained earlier, are necessarily accommodated in higher market prices. In the English electricity supply industry too, as elsewhere, the increased cost was passed on to small consumers (ibid.).

The drive for power sector reform in India has been opening up a vast field for corruption in which the international lenders too have been eager to claim their stakes. Such experience comes with its rude shock from Orissa itself where the World Bank has been a major party to misappropriate and squander a good part of its structural adjustment loan to the state in the name of consultancy fee, service charges, and so on (see box 1). The Government has been forced to opt for foreign firms, instead of capable indigenous firms, as consultants in the reform programme, in violation of guidelines. Crores of rupees have been drained away into the consultants' coffers, of course with a part of it re-channelled into some domestic pockets also. The same is the case in almost all the states, whether or not the Government in power is keen on implementing any reforms at all. Even in Kerala, that is dead against the so-called power sector reforms, there have been much heated allegations of corruption in respect of appointing a Canadian firm (SNC Lavalin) as consultants on 'power sector reform-related policy matters'.

Yet another disastrous consequences comes from the fact that a private enterprise system necessarily works on exclusion principle. The vast scope for lodging all sorts of large scale rent seeking costs in over-capitalisation stands pretty well to inflate supply costs that can exclude a sizeable proportion of consumers with limited purchasing power. Higher incidence of exclusion would be one of the deleterious social costs of private sectorisation in a poor country like ours, leading to increasing or excessive inequality, both individual and regional. As argued by Galbraith

(1998), though in another context, the process, beyond a certain indefinable threshold, may become cumulative and unstable, and is likely to result in a loss of community and social coherence. And all this is in addition to the wasteful expenditures and transfer of resources. Moreover, such capital cost inflation confounds the very problem (viz., allocative inefficiency) presumably intended to be solved through privatisation.

***There is no TINA force!***

As nationalisation of natural monopoly ensures *both* productive as well as allocative efficiency *and* equity, a vertically integrated monopoly organisation of electric utility in the public sector remains a foregone conclusion. However, an atmosphere of warring sectional interests out to capture benefits along with a conducive regulatory policy of populism has contributed to a mismanagement syndrome in the case of most of the SEBs (Kannan and Pillai 2001). Their functional inadequacies and financial infirmities, though entirely avoidable, have come in handy for a mis-characterisation of the whole sector: the costly dysfunctionings are unreasonably identified with economic inefficiency, which in turn is associated with the standard notion of some market structure devoid of competition. As already explained, this inevitably makes restructuring in favour of privatisation seemingly desirable. Behind this work informed attempts unfortunately organised to focus solely on aspects of allocative efficiency to justify the move. For example, there are strong arguments that technological advancements (such as combined cycle gas turbine (CCGT) plants of smaller size and shorter gestation periods) render the natural monopoly in generation sector irrelevant and hence competition for allocative efficiency is possible in that sector – both competition *for* market (initially in setting up plants, *given* a corruption-free franchise bidding mechanism) and competition *in* market (later on during operation, *given* a highly efficient ‘*tatonnement*’ agency)

are postulated to be possible. The distribution sector, though purely a local monopoly, also is proposed to be compatible with competition *for* market. However, the invariable location specificity of plants other than CCGT ones and the asset specificity in the transmission-distribution sector still leave the system predominantly a natural monopoly and its nationalisation does ensure increased gains in both equity and efficiency.<sup>36</sup> It is at the cost of these gains *and* with higher (transaction) costs of coordination and regulation that the hypothesised competition is being sought.

The cunning generalisation of the experience of performance disorders of some of the PSEs has been at the cost of the name of other well-functioning ones. In the power sector itself, the National Thermal Power Corporation (NTPC) continues to be a star performer by world standard. The Maharashtra SEB (MSEB) had been adjudged as a model for other SEBs in both physical and financial performance till the entry of the Enron through the openings of liberalisation. The MSEB's encounter with the Enron illustrates the potential disaster involved in the new policy (see boxes 2 and 3). At the same time, this invalidates the already unfounded claims for liberalisation as stemming out of a TINA force of economic inefficiency; in fact the Enron *a la* liberalisation has been instrumental in inducing systemic inefficiency into the MSEB. Moreover, the glaring examples of the PSEs with golden track records have already refuted such TINA force argument. And this becomes evermore obvious as the Indian government is feverishly engaged in selling out *only* the profit making PSEs, for example, the Bharath Aluminium Company (Balco). If privatisation is thus resorted to not on account of economic inefficiency and out of a relevant TINA force, then, naturally a possible explanation is to be found in the vast scope for corruption in it.

### III

#### Concluding Remarks

As already explained, the socio-economic development India has achieved over the last half-a-century owes largely to the commanding heights of the public sector, even with all its failings and corruption channels. If the vested interests were restrained and government intervention moderated in its intentions, the sector could bear more fruits, as expected in a poor developing country like India. When public sector plays a crucial role (including in power supply) even in countries like France, Canada and Scandinavia, in defiance of any TINA force, its significance in poor countries goes without any argumentation. The primary concern in these countries should then be to restore its relevance to this sector, not to restructure it. In its self-rejuvenation, the public sector can adopt and use certain functional/behavioural traits from the private sector in a competitive environment of coexistence.

The private sector stands to sustain on account of its assignment-specific accountability of each and every agent in terms of measurable productivity. There is little scope for free rider plays in such arrangement of return-related hire-fire rules. This along with an appropriate mix of interactive policies of coercive compulsion and incentive compensation can yield an efficient outcome to the desired degree, despite some covert principal-agent problems. To the extent that such productivity-linked labour contracts based on superior selection procedure have nothing to do with the nature of property rights, there can be nothing to bar its application in the public sector too, barring the absence of a strong political will on the part of both the public and the government. This is *the* sure recipe for an efficient public sector. After all, if the government can relinquish its authority over public sector in favour of private parties,

there is no reason why it cannot do that over its costly populist policies in favour of an efficient public sector for the public good.

In concluding, let us re-stress the role of effective Government intervention in the interest of common good. The emergence of governmental authority in the history of the development of the social relations of the mankind signified the significance of common good over individual interests, though later on the institutional intention got tainted by the power of private property rights. The enlightened rulers of the ancients were expected to identify their own individual interests with common interests and to rule accordingly. At a progressive stage of the development of social history, even ‘the invisible hand’ of *laissez faire* could be thought of having yielded, though initially only, the greatest social benefit through individual pursuit of own interests. However, at a reactionary stage, as we seem to witness now, the *laissez faire* of private interests would only conflict and collide with each other under the ‘animal spirits’ of a natural selection rule. Hence the need for government intervention. This assumes added significance especially in a less developed economy of majority poor. However, such ethical commitments dry up under the hypocritical archetypes, ingrained in the Indian subconscious mind, in league with the political economy of corruption. The future holds promises only with the rise of an enlightened society out of a soul-cleansing cultural revolution, reminiscent of that of the era of liberalism, having ‘a system of politics and administration marked by a high degree of personal integrity’ (Myrdal 1968: 957).<sup>37</sup> Along with the Santhanam Committee, we would like to add: ‘We are convinced that ensuring absolute integrity on the part of Ministers at the Centre and the states is an indispensable condition for the establishment of a tradition of purity in public services. ....In the long run, the fight against corruption will succeed only to the extent to which a favourable

social climate is created. When such a climate is created and corruption becomes abhorrent to the minds of the public and the public servants and social controls become effective, other administrative, disciplinary and punitive measures may become unimportant and may be relaxed and reduced to a minimum.’ (Government of India 1964: 101-102). This underscores the imperative for a vigilant civil society, fully conscious of and committed to its duties and rights, to act as a watchdog in the common interest. However, the emergence of such a civil society cannot be spontaneous, but has to be striven for by conscious public praxis *in toto*. Although we recognise the exertion of such public praxis by a few concerned citizens and their organisations, the challenge is so enormous that it calls for much greater intensification of efforts so as to eliminate, at the least, the scope for rent seeking.

*“Praja sukhe sukham rajna: Prajanam ca hite hitam,  
Naatma priyam hitam rajna: Prajanam tu priyam hitam.”*

- Arthasastra<sup>38</sup> (1.19.34)

**Box 1****International Penetration of Corruption**

According to the latest report of the Comptroller and Auditor-General (CAG) of India, crores of rupees loaned by the international lenders went down the drain as foreign consultants were engaged in the country's maiden power sector reform launched in Orissa.

The consultants were appointed in violation of guidelines and no attempt was made to engage domestic firms for the purpose....

The report says that during the selection process, World Bank's senior energy economist virtually put pressure on the government to opt for foreign firms, particularly KPMG, UK and Arthur Anderson, USA, and sent the list for approval. The state government agreed to the World Bank (WB) official's suggestion without enquiring into the firms' experience and capabilities....

The WB staff, in violation of the Bank's own guidelines and without any request from the government, also reviewed *suo moto* the proposals submitted by the short-listed consultants and took Rs. 2.2 lakhs as service charges. A consortium of consultants led by KPMG was finally chosen with whom the state government entered into an agreement.

The consortium's work in the first stage was to formulate basic strategies for carrying out the reform program which were to be identified and implemented in the second stage for which it was paid Rs. 41.97 crores. Despite extension of the deadline from 44 to 300 months, it could not complete its work, which got extended to a third stage, costing the government an additional Rs. 72.96 crores. The state government and WB did not have "a

realistic perception of the requirement of the consultants' time", the report observes.

Though the consultants were supposed to review and help the state negotiate power purchase agreements (PPAs) and related contracts for the privatisation of Orissa power generation corporation, they claimed it as an additional work and took an extra payment of Rs. 75 lakhs. They requisitioned, without asking the government, a UK based firm, NGC, and billed an extra Rs. 35 lakhs. The NGC's system of load despatch, however, was ultimately found not suitable for Orissa!

Worse still, as per the CAG report, was the inability of the state government to draft a legislation on reforms. The work was entrusted to McKenna Company for Rs. 56 lakhs. Due to some delay in establishing the project office and providing the necessary office equipment, the consultants claimed, and were paid, 'idle time' valued at Rs. 35 lakhs!.....

-Based on *The Times of India*, July 17, 2000.

<b>Box 2</b>
--------------

### **Enter the Enron.....**

Close on the heels of a tour to the USA in May/June 1992 of a team of government of India officials for inviting private power producers to India, in the wake of the power sector liberalisation move, an official team of Enron Corporation and General Electric Company (GE) landed in New Delhi on 15 June 1992. They selected Maharashtra as their possible investment field as MSEB was the only healthy Board in India. So the team arrived in Bombay on the evening of 17 June, and the following two days they visited over half a dozen potential sites in the state. And on 20 June, on the third day itself, the MSEB signed a Memorandum of Understanding (MoU) with Enron and GE, by which MSEB would buy electricity for 20 years at a price of US cents 7.3 per unit (Rs. 2.34 per unit at then exchange rates) from a LNG-run plant of about 2000 MW capacity to be built, owned and operated by Enron near Dabhol. 'There is no explanation on record or otherwise as to why a decision that involved the largest series of payments in India's history was taken do quickly' (Mehta 2000: 21).

It should be noted that the World Bank was not in favour of this lop-sided contract. In its report of 30 April 1993, sent to the finance ministry, the Bank, in reply to the MSEB's request for financial assistance for the project, concluded 'that the project is not viable'. In fact, Maharashtra, like the Northern parts of India, had only peak load shortages of power and hence required suitable peak load plants only. But Enron plant was designed to be a base-load plant, which meant 'surplus power in the off-peak periods', requiring closing down of some of the Board's cheaper plants. 'LNG generation at a variable cost of about paise 150/kwh would displace coal-based power costing paise 30/kwh'! Again, taking at its face value the unit cost of energy of US cents

7.3 per unit as reported by the Enron, the Bank found that the 'resulting retail revenue from LNG power would .... (be).... Rs. 4.6/kwh in 1998 prices', thus imposing high-cost power on the consumers. Moreover, 'implementation of the project would place a significant long-term claim on India's foreign exchange reserves' with the 'estimated annual fuel cost' being 'about US\$ 500 million, subject to escalation'. Both the state government and the Board tried their best to refute the Bank's conclusions and to justify the project, but the Bank remained unmoved. In its final reply on 26 July 1993, the World Bank severely criticised the MSEB's attempt to justify the project on the grounds of a 'more pessimistic' projection of a decline in its own efficiency, without taking measures 'to reverse this projected deterioration', and declined to finance the project.

Central Electricity Authority (CEA) is the ultimate authority in India to accord or refuse to accord techno-economic clearance of a power project after examining the tariff and cost of the project proposed and its consequences on the system. Though the MSEB and the government of Maharashtra (GoM) of the Congress party under Sharad Pawar, wanted to go ahead with the project without waiting for the CEA procedures, the CEA intimated to the government of India (GoI) of the same party (on 7 August 1992) that its 'concurrence under Section 31' was 'statutory' and could not 'be dispensed with'. Then Enron submitted a technical report of the project that in fact did not contain any information on many essential parameters for evaluation such as cost components of the project, rate of interest, etc. The officially advertised capital cost of Rs. 9053 crores (about US\$ 2830 million) gives Rs. 4.48 crores per MW (US\$ 1.4 million) for the Dabhol plant. The CEA from its study however found that the reasonable capital cost of a similar combined cycle gas turbine plant would be Rs. 1.91 crores per MW (completed costs by December 1997). It is interesting to find that after five years, the ministry of power (MoP) officially conceded in September 1997 to the CEA estimate. The CEA study

also found that about 408 MW of MSEB's generating capacity, costing 50 paise to 80 paise a unit would have to be backed down in the first year in order to accommodate 695 MW of Enron's power at the MSEB-calculated rate of Rs. 3.47 a unit, that confirmed the World Bank's warning about the Enron's effect on MSEB's economic merit order system.

Enron simply refused to cooperate with the CEA by furnishing relevant information it had demanded for examination. In its final reply to the CEA on 11 October 1993, the company stated: 'It is important to note....that capital costs are irrelevant to CEA' [!] and 'Your request for more detailed project costs of equipment/system/works other than those provided in the capital cost summary cannot be supported and is not deemed necessary.' [!] Neither the government nor its bureaucracy was of any support to the CEA; and the MoP informed the CEA on 11 November 1993 that 'Finance secretary observed that the question of cost of power had been looked into and it had been found that it was more or less in line with other projects being put up in Maharashtra.' This in effect amounted to requiring the CEA not to look into the financial aspects of the project. The CEA therefore decided the next day itself 'that given this background, the completed cost would not be considered by CEA at a later stage', and that the project be given 'clearance to technical aspects' only.

While controversy still surrounds the actual date of technical clearance by the CEA, the power purchase agreement (PPA) was signed by the MSEB and Enron on 8 December 1993. The project was to be implemented in two phases: only the first phase of 695 MW (to be run initially on naphtha) was binding on the MSEB as per the PPA; the Board had thus option not to buy power from the second phase of more than 1450 MW. The payments due from the MSEB to Enron as per the PPA were guaranteed by the GoM (on 10 February 1994) and counter-guaranteed by the GoI (on 16 September 1994). According to clause 11.2 (f) of the PPA, the MSEB ought to pay the current month's bill on a two-part tariff

on or before the 25<sup>th</sup> day of the following month. In case of a default or delay in payment by the MSEB, Enron's first recourse is the irrevocable letter of credit against the MSEB's receivables. If the MSEB fails to pay, then the GoM is bound under its guarantee to make payments within 7 days of invoking of the state guarantee. If that too fails, then Enron can invoke the GoI's sovereign guarantee, in the event of which the Centre is entitled to reappropriate the amount, paid by it to Enron, through state devolutions that would in effect amount to cutting of assistance to social sectors in the state.

Meanwhile, the project had flared up much controversy and the Swadeshi Jagran Manch (SJM) under the political umbrella of the Shiv Sena (SS)-BJP opposition in the state was spearheading public agitation against the project. The SS-BJP combine called the project a betrayal of the nation involving large scale corruption and promised 'to throw the project into the Arabian sea'. This single issue brought them to power in the next election in 1995. Immediately after the election and before the alliance took over the reins of power, the caretaker Congress government of Sharad Pawar, as asked by Enron, waived the conditions precedent in the PPA, making the PPA contractually binding and enforceable. A cabinet sub-committee constituted by the new GoM on 3 May 1995 found that the previous government had 'committed a grave impropriety' by conducting 'private negotiations on a one to one basis with Enron' under 'circumstances which made the Enron/MSEB arrangement on Dabhol lack transparency'. The committee reached the 'irresistible conclusion' on the issue of 'whether undue favours and concessions' had been granted to the project, that 'several unseen factors and forces seem to have worked to get Enron what it wanted'. The GoM then decided on 1 August 1995 'to scrap phase 1 and cancel phase 2 of the project'. The government also filed a suit against Daphol power company (DPC) and MSEB in the

Bombay High Court seeking cancellation of the PPA 'on grounds of fraud, corruption and misrepresentation'.

The estrangement, however, lasted only for two months. Rebecca Mark, Enron's CEO, met, on 7 November 1995, Bal Thackrey, 'the self-proclaimed hand holding the remote control' of the SS-BJP government of Maharashtra; and the very next day, the government in a *volte face* announced 'renegotiations', despite its umpteen promises of 'no negotiations'. The government appointed a committee in the name of 'renegotiations', but having a mandate to 'revive both phases of the project', which the committee fulfilled in 11 days. The renegotiated agreement provided for an expansion of phase 1 capacity from 695 MW to 740 MW at no additional cost. Then on the Republic day of 1996, the GoM formally announced the revival of both phases of the project, thereby increasing the obligations of the MSEB to draw full power from the project, i.e., from both the phases! And to crown it all, the '*swadeshi*' government of the BJP coalition at the Centre cleared the sovereign guarantee to the 'new' project on the last day of its legendary 13 day reign in May 1996, just before dropping the reins of government in the face of a vote of confidence in the Lok Sabha. Interestingly, the new PPA was signed after 3 months only, in August 1996, by the MSEB and DPC, for the supply of over 2000 MW of electricity to the MSEB for a period of 20 years.

'The payments due on the renegotiated contract constitute one of the largest contracts (civilian or military) in world history, and the single largest contract in this country's history. Payments amount to about US\$ 1300 million in the first year of phase 2 of the project going on line. Total payments amount to about US\$ 35,000 million (Rs. 125,000 crores) over the life of the contract..... a conservative low-end estimate of the net present value (NPV) of this stream of payments is about US\$ 17 billion (Rs. 70,000

crores) to about US\$ 23 to 25 billion (Rs. 1,00,000 to Rs. 1,06,000 crores) at the middle end.’ (Mehta 2000: 3).

According to the MSEB’s own calculations now, when the phase 2 project also is put on line, the power bill from the Enron to MSEB would be Rs. 7000 crores a year, against the Board’s anticipated revenue of Rs. 12,000 crores; i.e., the MSEB would have to pay almost 60 per cent of its revenue for about 20 per cent of its power purchase! A termination of the project would cost the MSEB Rs. 35,000 crores by way of compensation to Enron! (*The New Indian Express daily*, 2 January 2001). Today the MSEB pays a capacity charge, that must be paid regardless of the quantum of purchase as per the two-part tariff, of Rs. 93 crores per month; this will go up to Rs. 230 crores a month, when the phase 2 project also comes on stream! (*The Hindu daily* (Business section), 21 December 2000).

<b>Box 3</b>
--------------

### **The Enron Effects**

The post-Enron period experiences have, however, painfully proved the critics right. The developments have put all the parties, government of Maharashtra (GoM), Maharashtra State Electricity Board (MSEB) as well as government of India (GoI) and the Enron, in a not unforeseeable quandary.

The first phase of 740 MW of Dabhol power project (DPC) was put on line in May 1999 at an actual unit tariff of Rs. 3.37 per kWh. This subsequently rose to Rs. 8.81 per unit in July 2000, and has remained well above Rs. 7 per unit. The total payments from the MSEB to Enron up to December 1999 were Rs. 1006.21 crores (Rs. 125.8 crores per month on average), and up to October 2000 was Rs. 2596 crores (Rs. 152.7 crores per month). MSEB soon felt this monthly drain too depleting, and all hell broke down there. The once-profitable and efficient MSEB found itself reduced to an inefficient loser. On the other hand, DPC, as per audited results, generated a cash profit of about Rs. 480 crores during the first 11 months of operation (*The Sunday Times* April 29, 2001). And the Enron project has come back in the hot news again.

Since June 2000, MSEB had failed to pay its monthly bills to Enron on their respective due dates. It could not pay fully its November 2000 bill for Rs. 198 crores even by January 2001. According to clause 11.2(f) of the PPA, the MSEB must pay the current month's bill on or before the 25<sup>th</sup> day of the following month. As the outstandings accumulated, MSEB requested GoM for a subsidy of Rs. 130 crores per month to help it to meet its obligations to Enron presently, and a monthly subsidy of Rs. 440 crores starting with the commissioning of Enron's phase 2 project. MSEB's inability to pay the bills led to Enron's resorting to the

three-tiered payment security mechanism one by one. First it invoked the letter of credit and then the state government guarantee and finally on 6 February 2001, the sovereign guarantee itself to recover Rs. 79 crores dues for November 2000. The temperature of the state of payments crisis was soaring up and the governments were losing face and hearts as well. The Credit Rating Information Services of India Ltd. (Crisil) downgraded the GoM by four notches at one stroke to speculative grade. Finally on February 12, the MSEB cleared the entire November 2000 bill, out of 'funds made available by the state government', without touching the dues of Rs. 152 crores of December 2000 bill for which also Enron had subsequently invoked the state government guarantee. And in early March 2001, Enron again invoked the GoI's counter guarantee for a second time to recover the outstanding dues of Rs. 102 crores towards the December bill.

The latest developments have, however, been more sordid. As per the PPA, if the Dabhol plant fails to generate its maximum capacity within three hours of notice, the Board can claim penalty for the same. And so did the MSEB, slapping on March 1, a penalty of Rs. 400 crores for a default on January 28; again MSEB recently decided for another Rs. 400 crores penalty for a similar breakdown on February 13. According to official reports, such breakdowns are primarily due to the sub-standard project equipment used by the Dabhol Power Company (DPC). However, the company found it in its interest to deal with the situation by invoking, on April 9, the 'political *force majeure*' clause of its PPA with the MSEB, which meant 'unforeseeable circumstances that prevent someone from fulfilling a contract'. The notice indicated that the concerted, deliberate and politically motivated actions of the GoM, GoI and the MSEB had or potentially would have a material and adverse effect on the DPC's ability to perform its obligations under the PPA. Significantly, the DPC invoked the *force majeure* clause just one day before the Godbole Energy Review Committee (constituted by the present GoM to scrutinise the Enron deal)

submitted its report, which pointed out, *inter alia*, how Enron had engineered to fleece the MSEB through the PPA ‘facilitated by the failure of governance’ at every step of the decision-making process related to the DPC matters. The Committee’s calculations show that the DPC is overcharging the MSEB by Rs. 930 crores per year, and compare this with its claimed equity of Rs. 3,500 crores! Evidently, the Enron wanted to evade and escape the hard impact of the findings. Swift moves and counter-moves have marked each day since then.

On April 25, the DPC Board of Directors that met in London voted to opt out of the project, and authorised the DPC’s managing director to issue a notice of intent to terminate its PPA with the MSEB. The GoM on its part mandated a new Committee, again headed by Dr. Godbole, to renegotiate a restructuring of the PPA, and on May 5, the Company agreed to meet the state panel for renegotiations. However, the DPC issued on May 19 a preliminary termination notice in view of the failure of the MSEB to pay two months’ dues and of the rebate (penalty) claim made by the Board. And the MSEB, authorised by the GoM in turn, retaliated on May 24 by issuing a notice to the DPC, to rescind the PPA, citing misrepresentation by the latter on the performance capability of the Phase I plant – the DPC had failed at least on three occasions to deliver power at nameplate capacities within three hours of demand by the MSEB. And since May 29, the MSEB has stopped buying power from the DPC! Thus the game is on!

Noteworthy in this respect are the following strands of fall-out from these sordid affairs:

1. The Maharashtra Electricity Regulatory Commission (MERC) directed MSEB to stick to the economic merit order ranking of power plants: to buy or generate the least in terms of the costliest power. Thus for the year 2000-01, the average realisation for the MSEB was projected at Rs. 2.80 per unit and energy costing more than this had to be purchased the least. In the case of Dabhol power, the variable cost exceeded

this average realisation mark in August 2000 and thereafter, leading to the least off-take from the Dabhol plant. In effect, the MERC pegged the quantum of power to be drawn from Enron at 3044 MU for 2000-01, corresponding to 50 per cent of its PLF.

2. The MSEB requested the GoM to keep on hold the two other independent mega power projects planned in the state, viz., the Reliance's 447 MW Patalganga project and the Ispat Group's 1084 MW Bhadravati project. Like the Enron project, these too have a dollar payment component to their cost. Moreover, the GoM made it clear that there would be no Enron-type agreements in future: 'We do not want to be trapped into the clutches of MNCs and in future there will not be Enron-type agreements', so declared the Maharashtra chief minister Vilas Rao Deshmukh (*The Hindu* 9 February 2001).
3. Another important Enron effect is the GoI's decision to drop its proposal to offer sovereign guarantees to the three other mega plants – the 3960 MW Reliance-SEAP promoted Hirma project, the 1800 MW LNG-fired Ennore project and the 2000 MW Pipavav project. (The government is in two minds now about the need at all for setting up the Pipavav project in Gujarat, following the CEA's findings that once the Hirma mega project is on stream six years from now, the off-take of power from the Pipavav project would be only at 60 per cent of plant capacity. This means either down-sizing the Pipavav project capacity or scrapping the project altogether.) The government, instead, offered the option of direct sale of power to earmarked consumers in the purchasing states. This arrangement obviates the need for the government to accord sovereign guarantee, necessitated primarily on account of the financially fragile monopsonistic nature of the power market (i.e., SEB). The Electricity Bill, 2000 also allows for direct sale of power to consumers. This

provision, as argued elsewhere, by facilitating the weaning away of a significant sure source of revenue (major industries) from the SEBs would in fact only worsen their position further.

The lessons from the Enron effects are obvious. Dabhol power project in effect offered a monopoly market for the products of its own owners – a LNG market to Enron, a gas supplier, operating oil/gas fields; an electrical machinery market to General Electricals, a supplier of power capital equipment; and a construction market to Bechtel, a project engineer firm. These three ‘suppliers’ possess the majority of stakes in the Dabhol power company (DPC). Once the market was captured, they managed to interpret the government notification on return on equity in their favour to corner more than 30 per cent guaranteed return also (Srinivasan 1996). Inefficient capital over-expansion (Averch-Johnson effect/‘gold-plating’) is the empirically proved behaviour under such conditions of guaranteed returns. With a guaranteed high return (the highest in the world), what incentives will a company get to minimise capital expenditure? It led both to accommodating all rent seeking costs in the project costs and also to over-capitalisation, making power consumption in India exorbitantly expensive. The over-capitalisation behaviour, on the other hand, is induced further by the guaranteed provision for payments in dollar denomination. Given a historically weak, submissive, rupee against dollar, nobody with a little sane commercial sense would venture into a contract wherein the payment for inputs (gas, machinery, etc.) were denominated in dollars, while the output (electricity) was to be sold out at rupees. When the project was contracted in 1993, the dollar, on its rising trend, was quoting at Rs. 32.50, whereas at present it is around Rs. 46.50!

All the Indian authorities concerned were not unwise to this imminent danger that would make Indian electricity costlier. For example, the MSEB’s letter (of 8 July 1993) to the energy

secretary of the GoM, considering the effects of a range of scenarios of escalations of exchange rate, capacity charge, oil price, gas price, etc., shows full awareness of this on their part. Despite this exercise, the MSEB wrote (on 30 September 1994) to the energy secretary (GoM) that the Board 'had already examined the tariff structure of the Dabhol Power Company and accordingly intimated the Central Electricity Authority .... [on] September 17, 1993....that the tariff offered by M/s Enron is lower than that calculated on the basis of two part tariff notified by Government of India.'

Nowhere else in the world is naphtha, the highly volatile and costly fuel, used for power generation. Maharashtra had at that time only peak power shortages, which could have been met through import from the Central pool. The import price of naphtha in January 1999 was Rs. 5,200 a tonne, which shot up to Rs. 16,000 a tonne by December 1999; today it is around Rs. 19,000 a tonne (*Malayala Manorama daily* 8 February 2001). The unique Indian adoption of naphtha for power generation was the offshoot of a wrong forecast by the petroleum ministry of the domestic availability of naphtha, expected to be in high surplus. The power ministry based its entire liquid fuel policy on this forecast, and suggested to Enron (as well as to NTPC) to turn to naphtha; Enron had originally planned to use distillate in the first phase (*The Hindu Business line daily*, 2 January 2001). Contrary to the forecast, the domestic production of naphtha fell short, and at the same time, the world price soared steeply up.

As a way out of the present impasse of payments crisis, the GoM and MSEB have suggested that the Centre buy the entire output from DPC directly or through NTPC, 'pool its higher costs with what is generated elsewhere and sell it to other deficit states' (*The Hindu daily*, 8 February 2001). Simply it amounts to spreading the heavy burden of Maharashtra's own sin all over the other deficit states!

## Notes

- 1 Remember in a Smithian regime individual pursuit of self-interest maximisation by itself results in public interest maximisation.
- 2 Equivalently,  $C(\lambda q) < \lambda C(q)$ ,  $\lambda > 1$ , for any  $q \neq 0$ , where  $C(q)$  is the total cost of producing  $q$ .
- 3 This is the condition of strict subadditivity of the cost function. More formally, strict global subadditivity of costs for the multi-product cost function  $C(q)$  implies that for any  $m$  output vectors,  $q^1, \dots, q^m$ ,  $C(q^1 + \dots + q^m) < C(q^1) + \dots + C(q^m)$ , where  $q^i = (q_1^i, \dots, q_n^i)$  is the  $i^{\text{th}}$  output vector.
- 4 The Chicago school view of interest group politics started with Stigler's (1971) discussion on the capture of regulatory authorities by industries they were meant to regulate. Both Stigler and his colleague Peltzman (1976) have built on the work of Olson (1965). Becker's model also is in the same grain except that he suppresses the role of legislators, driven by the self-interest of maximising political support. 'Politicians, political parties, and voters .... are assumed mainly to transmit the pressure of active groups' (Becker 1983: 372).
- 5 Tullock (1967) started the analytical discussion of rent seeking in economics as a socially costly pursuit for income transfers, though it was Krueger (1974) who, unaware of Tullock's work, characterised the behaviour in the present terminology, in a theoretical framework where rent seeking in the face of restrictive policies in international trade results in social costs. Posner (1975) was the first to develop a formal model of and to empirically estimate the social costs of rent seeking, and the first survey of the theory came from Tollison (1982). In the theoretical arena of international trade, rent seeking appears in the form of tariff evasion (Bhagwati and Hansen 1973), competition for premium-fetching import licences (Krueger 1974), lobbying for protectionist trade tariffs (Brock and Magee 1978) and for tariff

revenue resulting from the adoption of protectionist tariffs (Bhagwati and Srinivasan 1980), and so on. On the other hand, rent seeking in the public choice theory represents competition (e.g., lobbying) for monopoly rents (Tullock 1967) and for rent-creating regulation (Stigler 1971), ‘rent-sharing’ by trade unions through collective bargaining with rent-earning regulated firms (Rose 1987), lobbying for and against a tax-financed transfer, rent-seeking contract (for money, votes, etc.) by politicians (Peltzman 1976) or just ‘rent-taking’ by them or rent extraction – by threatening to extract private rents (e.g., through taxation) and then refraining from doing so at a payment (McChesney 1987, 1997), and so on. Rent seeking can thus be extended to government and bureaucracy too.

- 6 The term ‘principal-agent problem’ appeared first in Ross (1973). The earlier discussion on principal-agent problem in the framework of imperfect monitoring and imperfect information appeared in Stiglitz (1975), Mirrlees (1976), Harris and Raviv (1978), Holmstrom (1979) and others. For excellent surveys, see Hart and Holmstrom (1987), Levinthal (1988) and Holmstrom and Tirole (1989). It should be noted that the principal-agent model was originally employed to analyse insurance, sharecropping, physician-patient relation, law enforcement, etc. It was only with the development of the model in the framework of imperfect monitoring and imperfect information by Stiglitz and others that the model was applied to analyse bureaucracies and hierarchies of organisations.
- 7 The significance of the scope for collusive behaviour in the principal-agent environment is explored by Tirole (1986) and Laffont (1988, 1990).
- 8 Hence Samuelson (1970: 771) wrote: ‘through direct public services and through transfer-payment programs, the modern mixed economy is in effect a gigantic system of mutual insurance against the worst economic disasters of life.’

- 9 The KSEB has estimated that just two new industrial units (in steel smelting and electro-chemicals) are drawing more than 8.7 MU every month at concessional rates. The tariff difference alone gives them a benefit of about Rs. 30 crores a year, while the employment generated is only nearly 350. That is, the KSEB is forced to give a subsidy of about Rs. 8 lakhs per year for each job thus created (Menon 1999:464).
- 10 For example, recently in a presentation to the union power ministry on 'measures to attract foreign direct investment in power sector in India', leading foreign financial institutions have required the Central government to take measures to move the power sector from the concurrent list to the Central list as in the case of the Telecom sector (*The Hindu daily* 27 March 2001).
- 11 Note that the *total* commercial loss in the sale of 293479 MU at a cost-tariff deviation of 43.4 paise per unit in that year comes out to be Rs. 12740 crores only, against this revenue loss on account of corruption of Rs. 10705 crores.
- 12 Though theft of power has been made a cognisable offence since 1986 under the amended Electricity Act, 1910, collusion stands to nullify its effect. All the SEBs do have anti-theft squads that conduct regular but superficial homilies of checks and detect some pilferage cases of small fry, just to justify the survival of the squads. In 1997-98, the anti-theft squad of the KSEB detected cases of theft of energy worth Rs. 1.21 crores, in 1998-99, worth Rs. 1.04 crores and in 1999-2000, worth only Rs. 80.42 lakhs. This steep fall in detection trend, despite an officially recognised rise in theft losses, points to the need for vigilance over the vigilante squad itself! The Board as well as the government keeps the eyes closed and ejects some regular warnings and orders (just to justify their own presence!) such as the one recently put out again in vain by which each of the squads at centres of Thiruvananthapuram, Kochi and Kozhikode is required to detect cases of theft of at least 50 lakhs units a year (*Malayala Manorama daily* 23 August 2000).

- 13 For example, Mehta (2000:10) cites a case from Maharashtra. The Mula Pravara Cooperative Society is reported to have outstanding dues of power bills to the Maharashtra State Electricity Board (MSEB) to the tune of about Rs. 250 crores, accumulated over a decade. The scion of the society had defected to the Shiv Sena and was a minister in the Shiv-Sena- BJP government last time. The MSEB still accounts for this amount as 'receivables' and writes off a fraction each year as bad debts.
- 14 The Santhanam Committee in its Report on Prevention of Corruption remarked long back: 'We were told by a large number of witnesses that in all contracts of construction, purchases, sales, and other regular business on behalf of the Government, a regular percentage is paid by the parties to the transaction, and this shared in agreed proportions among the various officials concerned. We were told that in the constructions of the Public Works Department, seven to eleven per cent was usually paid in this manner and this was shared by persons of the rank of Executive Engineer and below down to the Ministry, and occasionally even the Superintending Engineer might have a share.' (Government of India 1964: 10)
- 15 The Santhanam Committee noted that 'There is a widespread impression that failure of integrity is not uncommon among Ministers and that some Ministers who have held office during the last 16 years have enriched themselves illegitimately.' (Government of India 1964:101).
- 16 This was the first time that a court convicted a minister for corruption in Kerala. The starting point was the detection of a leak in the power tunnel of the Idamalayar hydro-power project (that took 17 years for completion by 1987 with a cost escalation of 387 per cent). Under pressure from the opposition parties in the State Assembly, the then Congress-led Ministry instituted, on 21 December 1985, an enquiry commission (The Justice Sukumaran Enquiry Commission) to examine the allegations of

corruption involving the then power minister, power secretary, high officials of the KSEB, and the contractors. The Commission, on the basis of detailed enquiry, indicted all of them on charges of corruption involving huge losses to the exchequer. After a due process of judicial trial, they all were convicted also. Subsequently, there have been allegations, followed by enquiry commissions, relating to the award of contracts in the construction of other power projects also (for example, Brahmapuram diesel power plant near Kochi). It should be added that the same minister along with the officials were convicted in another case also – the Graphite case that concerns illegal diversion for resale of NTPC power to six companies in Karnataka including the Bangalore-based industry, Graphite India Ltd., when Kerala was reeling under unprecedented power shortage during the mid-eighties. These private companies are alleged (in the FIR) to have profited to the tune of Rs. 70 lakhs by way of getting the cheaper Kerala power.

- 17 The MoU for a 513 MW combined cycle power project at Kannur at an estimated cost of Rs. 1500 crores was signed in February 1995 by the KSEB and the KPP Nambiar and Associates. It was one of the nine mega projects cleared by the High Power Committee (at the Centre) in 1995, when a Congress-led Government was in power in Kerala. The power purchase agreement (PPA) was signed on March 14, next year, and by the end of 1997, the Kannur project was accorded techno-economic clearance (TEC) by the CEA. But the project was an ill-starter. The new left Government in Kerala could not tolerate the Enron co-sponsorship of the project and hence rejected the state clearance to the project. However, after some dilly dallying, the government agreed to clear the project (the Chairman of the company being a close relative of the Chief Minister!) provided it found a new co-developer acceptable to the state government. Thus a new Kannur Project was then recommended by the state government with the El Paso Energy International of the US as

the co-promoter. Kannur power project was one of the three projects in the power sector (including the NTPC-Birla sponsored 1886 MW Ennore power project in Tamil Nadu with 100 per cent foreign (US) participation) identified by the Union Government to be presented at the Indo-US summit in Washington to attract US investment to India during the recent visit by the Indian Prime Minister there. But the state electricity minister called the joint secretary in the Union Power Department, on the eve of the PM's visit to the US and said, "We have decided in favour of Ennore and not Kannur" (*The New Indian Express daily*, September 20, 2000). The Kannur project is pictured as the most recent victim of inner party factional frictions as well as unrequited kickback demands (*The New Indian Express*, September 28, 2000). The Chairman of the company himself has recently come out and reported to the Press of the kickback demands for Rs. 75 crores by the son of a political bigwig controlling the government. The El Paso co-sponsorship of the project also has been recently rejected by the government.

- 18 This has been at the tragic cost of the domestic producers of power generating equipment, especially Bharat Heavy Electricals Ltd. (BHEL), which, being up to mark technologically and much cheaper, has gained good markets in some of the developing countries. Till the late seventies, the BHEL had won nearly all international tenders floated in India for power equipment (Mehta 2000: 15). However, its share in the capacity addition in thermal sets in India has recently come down to the order of 50 to 60 per cent: 'BHEL itself has repeatedly stated that the single most important handicap it faces in India is its inability to arrange for kickbacks' (Morris 1996: fn. 15, 29).
- 19 The Brahmapuram project, the first thermal power plant of the KSEB (and the second diesel power plant in the country, the first being the Yelahanka project in Karnataka) of 100 MW capacity was implemented with French assistance of Rs. 160 crores loan

under the Indo-French protocol. The Justice V. Bhaskaran Nambiar Enquiry Commission has found that the purchase contract with a French company SEMT Pilistik for five generators (each of 20 MW) without calling for international tenders as per guidelines resulted in a gain to the French company (and a loss to the KSEB) to the tune of Rs, 71 crores, that the contract with Geo Tech for land reclamation and levelling led to a loss of Rs. 2.96 crores, and that the contract with Tata Project for generator erection works involved a loss of Rs. 1.38 crores. The files in the government and the Board, examined by the Commission, were clear proofs for the high powered collusion that had gone out of their way to favour the contractors (*various dailies* 12 April 1999). Diesel, a highly expensive fuel like naphtha, is not at all permitted by the Central government in power generation. The KSEB has, however, now two diesel plants – at Brahmapuram (100 MW) and at Kozhikode (120 MW). These two plants have often been run much below capacity, sometimes at not more than 30 per cent, because of the high operating costs, much more than Rs. 5 per unit, greater than twice the cost of imported energy from the Central pool. It is estimated that to run a generator at Brahmapuram for 24 hours requires about 120 kilo litres of diesel worth Rs. 9 lakhs, whereas its energy fetches less than Rs. 5 lakhs only. This then involves a loss of about Rs. 20 lakhs per day to the Board from the Brahmapuram plant alone. Hence it has been decided to run the diesel plants only during the peak load hours. The same peak load could, however, be met by cheaper power from the Central share with a judicious import policy. A simple lesson from this then is that the KSEB could safely have dispensed altogether with the costly diesel plants and saved substantial resources.

- 20 In this context, Morris (1996: fn. 29) writes: ‘From other sources we know that for a small favour of a year or so’s extension, a former chairman of the NTPC had to arrange for a contribution of a crore of rupees to the Congress [party] kitty. Thus even the

task-oriented enterprises within the PS [public sector] necessarily have to accommodate corruption. (The state of affairs in enterprises that have veered too far from their primary task can well be imagined.)'

- 21 A high Level Committee even went to the extent of recommending to the government of Kerala long back to enact 'appropriate legislation prohibiting strikes under any circumstances in all power projects under construction', especially citing a 'classical' example of three strikes by the construction workers of a project (Idamalayar hydro-power project, works on which started in 1970 but completed only in 1987) that extended over a total period of three years and one month, causing a loss of Rs. 33.65 crores to the KSEB (Government of Kerala 1984: 57-61).
- 22 Excluding the hydro projects of Kallada and Pooyankutty, and the two diesel power plants. If we stick to the strict assumption that the original project cost estimate allow for possible inflation during construction period, such that the estimate be as on the completion date, then the corruption charges involved would be very much higher.
- 23 Interestingly, in an advertisement by the Public Relations department of the KSEB announcing the commissioning of the Kuttiady extension project claimed it to be 'the first project to be completed on time in a span of 25 years' (*various dailies* 26 January 2001), whereas in fact the project, major works on which were started in February 1994, was originally scheduled to be commissioned in 1995-96, thus involving a time overrun of about 5 years and a cost escalation of more than Rs. 160 crores. Again, the advertisement put the project cost at Rs. 160 crores, while the latest cost estimate is given at Rs. 198 crores by the *Economic Review 2000*. Even at the advertised capital cost, the energy potential of 129 MU from the project cost as much as Rs. 12.4 per unit!

- 24 Rose-Ackerman (1999:28-29) quotes a number of cases of corruption-inflated project costs: for example, Itaipu dam on the Brazilian border. In the 1970s, two German companies reportedly paid bribes of 20 per cent of the value of construction contracts for a steel mill in Indonesia to a state government official. In Germany, in the mid 1990s, bribes played a major role in awarding contracts to build Terminal 2 at Frankfurt Airport; according to the public prosecutor, corruption led to an increase in the air fares of about 20 to 30 per cent. In Italy, the costs of several major public construction projects reportedly fell steeply after the anti-corruption investigations of the early 1990s. Overall successful bids on public tenders were reported to be 40 to 50 per cent lower in 1997 than five years back.
- 25 Another possible explanation for this divergence is that while the CEA has been giving original cost estimates, the MoP has been reporting the final estimated costs, after allowing for overruns. But as we have already argued, overruns are often deliberate and conceal corrupt collusion.
- 26 Examples come galore in India in this respect – the revelations of Harshad Mehta, the bull instrumental for the great stock market crash in India, about his crores worth bribes to the Congress party kitty through the then prime minister (PM) during the early 1990s, confession of a Jharkhand Mukthi Morcha MP of having been bribed by Congress party by crores of rupees for voting in favour of its PM in the face of a non confidence motion in the Lok Sabha (the very same PM was convicted in this case), the recent allegations by the chairman of Kannur Power Projects about the demand for a bribe of Rs. 75 crores for sanctioning the power project by a Marxist bigwig's son wielding full power in the power ministry of Kerala, etc.
- 27 The absence of relevant files would also prove the cases (!) as it has so happened in the case of the Graphite energy resale cases in Kerala. There has not been a single official paper in the Board or

in the ministry regarding the energy export to Karnataka; the matter came into light when the Karnataka SEB wrote to the KSEB about the energy sales later on!

- 28 A former chief secretary of Kerala, when convicted recently in a corruption case, reportedly simply quipped: 'No problem; there are higher level courts!'
- 29 While enlarging upon the need for Indian economy's restructuring, the World Bank (1996: 3) had to recognise, though in passing, that 'India's pre-1991 planned development strategy helped the country escape from the massive illiteracy, recurrent famines, fertility rates of about 7 children per woman, and secular stagnation prevailing before Independence.'
- 30 See, for a comparative analysis of corruption levels across countries, World Bank (1997). Corruption in the transition economies is explained among others by Boycko *et al.* (1995), Feige (1997), Kaufman and Siegelbaum (1997), Malia (1995) and Weisskopf (1992).
- 31 According to Quinglian (2000), what has occurred in China since 1978 as a result of what she calls 'the marketisation of power' has been nothing but a 'socialist free lunch' by which the politically powerful in China have used their still awesome administrative and personal power to plunder the former state-owned economy and 'laugh all the way to the bank'!
- 32 To be precise, the changes in India were *not* political and institutional, but were in the ruling economic principles.
- 33 See Thakur (1979) for a detailed discussion on corruption in the ancient India. Myrdal (1968 Chap. 20) gives a good discussion on corruption in modern India, extensively quoting from Santhanam Committee Report (1964).
- 34 For one example, the Committee (Government of India 1964:18) found that import licences in India were worth 100 to 500 per cent of their face value!

- 35 ‘Where there is power and discretion, there is always the possibility of abuse, more so when the power and discretion have to be exercised in the context of scarcity and controls and pressure to spend public money.’ (Government of India 1964: 9)
- 36 Remember, in a country like India, rich with hydro-power potential, a judicious hydro-thermal plant mix in generation capacity, along with considerations of high-cost gas power vis-à-vis cheap and clean hydro-power can ensure this for a long time.
- 37 The Santhanam Committee (1964) long back recognised that ministers and legislators must be above suspicion and proposed codes of conduct for these two categories of politicians and special procedures for complaints against them. Accordingly, on 29 October 1964 itself, the Government of India released the text of a code of conduct for ministers both at the Centre and in the states. The code required disclosure by a person taking office as minister of the details of his and his family’s assets and liabilities as well as business interests. He was also required to sever all connections with the conduct of any business. However, the scepticism expressed at that time itself on the loyalty on the part of the intended persons to the codes of conduct has proved right. Myrdal in 1968 itself wrote: ‘Later, the eagerness for reform seems to have died down. The reports are that corruption in India has recently been increasing.’ (p. 956, fn. 2)
- 38 “In the happiness of the subjects lies the happiness of the king; in the welfare of the subjects is the welfare of the king; what is desirable and beneficial to the subjects and not his personal desires and ambitions, is desirable and beneficial for the king.”

## References

- Arrow, K.J. (1985), 'The Economics of Agency', in Pratt, J.W. and Zeckhauser, R.J. (eds.) *Principals and Agents: The Structure of Business*, Harvard Business School Press, Boston: 37-51.
- Baumol, W. J. (1977), 'On the Proper Tests for Natural Monopoly in a Multiproduct Industry', *American Economic Review*, 67 (5), December: 809-822.
- Becker, Gary S. (1983), 'A Theory of Competition among Pressure Groups for Political Influence', *Quarterly Journal of Economics*, 98 August: 371-400.
- Bhagwati, J.N. (1982), 'Directly Unproductive Profit-Seeking Activities', *Journal of Political Economy*, 90 (5), October: 988-1002.
- Bhagwati, J.N. (1993), *India in Transition*, Clarendon Press, Oxford.
- Bhagwati, J.N. and Hansen, B. (1973), 'A Theoretical Analysis of Smuggling', *Quarterly Journal of Economics*, 87, May: 172-187.
- Bhagwat, J.N. and Srinivasan, T.N. (1980), 'Revenue-Seeking: A Generalisation of the Theory of Tariffs', *Journal of Political Economy*, 88 (6) December: 1069-1087.
- Boycko, M., Shleifer, A. and Vishny, R.W. (1995), *Privatising Russia*, MIT Press, Cambridge, M.A.
- Breton, A. (1996), *Competitive Governments*, Cambridge University Press, New York.
- Brock, W.A. and Magee, S. P. (1978), 'The Economics of Special Interest Politics: The Case of the Tariff', *American Economic Review Papers and Proceedings*, 68, May: 246-250.
- Buchanan, J.M. (1975), *The Limits of Liberty*, University of Chicago Press, Chicago.
- Downs, A. (1967), *Inside Bureaucracy*, Little, Brown, Boston.

- Feige, E.L. (1997), 'Underground Activity and Institutional Change: Productive, Protective and Predatory Behaviour in Transition Economies', in *Transforming Post-Communist Political Economies*, National Research Council, National Academy Press, Washington DC.
- Galbraith, J.K. (1998), *Created Unequal: The Crisis in American Pay*, The Free Press, New York.
- Government of India (1964), *Report of the Santhanam Committee on Prevention of Corruption*, Ministry of Home Affairs, New Delhi.
- Government of Kerala (1984), *Report of the High Level Committee on Industry, Trade and Power, Vol. III, Report on Power Development*, May, State Planning Board, Trivandrum.
- Green, R. (1999), 'The Electricity Contract Market in England and Wales', *The Journal of Industrial Economics*, 47 (1), March: 107-124.
- Harris, M. and Raviv, A. (1978), 'Some Results on Incentive Contracts with Applications to Education and Employment, Health Insurance and Law Enforcement', *American Economic Review*, 68(1), March: 20-30.
- Hart, O.D. and Holmstrom, B.R. (1987), 'The Theory of Contracts', in Bewley, T.F. (ed.) *Advances in Economic Theory*, Fifth World Congress, Cambridge University Press, New York, 71-155.
- Holmstrom, B.R. (1979), 'Moral Hazard and Observability', *Bell Journal of Economics*, 10(1) Spring: 74-91.
- Holmstrom, B.R. and Tirole, J. (1989), 'The Theory of the Firm', in Schmalensee, R. and Willig, R.D. (eds.) *Handbook of Industrial Organisation*, Vol. 1 North Holland, Amsterdam: 61-133.
- Kalecki, M. (1967), 'Observations on Social and Economic Aspects of 'Intermediate Regimes'', *Coexistence*, 4 (1): 1-5. Reprinted in

*Selected Essays on the Economic Growth of the Socialist and the Mixed Economy*, Cambridge University Press, 1972.

Kannan, K.P. and Pillai, N. Vijayamohanam (2001), 'Plight of the Power Sector in India', *Economic and Political Weekly*, Vol. 36 (2 & 3), January 13 & 20, 130-139; 234-246.

Kaufman, D. and Siegelbaum, P. (1997), 'Privatisation and Corruption in Transition Economies', *Journal of International Affairs*, 50 (2): 419-458.

Kreuger, A.O. (1974), 'The Political Economy of the Rent-Seeking Society', *American Economic Review*, 64 (3) June 291-303.

Laffont, J.J. (1988), 'Hidden Gaming in Hierarchies: Facts and Models', *Economic Record*, 64 (187) December: 295-306.

Laffont, J.J. (1990), 'Analysis of Hidden Gaming in a Three-Level Hierarchy', *Journal of Law, Economics and Organisation* 6 (2), Fall 301-324.

Lange, O. and Taylor, F. M. (1938), *On the Economic Theory of Socialism*, University of Minnesota Press, Minneapolis.

Levinthal, D. (1988), 'A Survey of Agency Models of Organisation', *Journal of Economic Behaviour and Organisation*, 9 (2), March: 153-185.

Mackay, R. and Weaver, C. (1978), 'Monopoly Bureaus and Fiscal Outcomes: Deductive Models and Implications for Reform', in Tullock, G. and Wagner, R. (eds.) *Policy Analysis and Deductive Reasoning*, Spring, D.C. Heath.

Malia, M. (1995), 'The Nomenklatura Capitalists: Who's Running Russia Now?', *The New Republic*, 212 (21): 17-22.

- Manzetti, L. (1994), *Privatisation South American Style*, Oxford University Press, Oxford.
- Massie, R. K. (1980), *Peter the Great: His Life and World*, Alfred A. Knopf, New York.
- McChesney, F.S. (1987), 'Rent Extraction and Interest Group Formation in a Coasean Model of Regulation', *Journal of Legal Studies* 20: 73-90.
- McChesney, F.S. (1997), *Money for Nothing*, Harvard University Press, Cambridge.
- Mehta, A. (2000), *Power Play: A Study of the Enron Project*, Orient Longman, New Delhi.
- Menon, R.V.G. (1999), 'Energy Planning: The Need for a Departure from the 'Kerala Model'' , in Oommen M.A. (ed.) *Rethinking Development: Kerala's Development Experience*, Vol. 2: 459-469, Institute of Social Sciences and Concept publishing Co., New Delhi.
- Mirrlees, J.A. (1976), 'The Optimal Structure of Incentives and Authority Within an Organisation', *Bell Journal of Economics*, 7(1) Spring 105-131.
- Mishra, R. (1984), *The Welfare State in Crisis*, Wheat-sheaf Books, Brighton.
- Mohammad, S. and Whalley, J. (1984), 'Rent Seeking in India: Its Costs and Policy Significance', *Kyklos*, 37 (3): 387-413.
- Morris, S. (1996), 'Political Economy of Electric Power in India', *Economic and Political Weekly*, 31 (20) May 18: 1201-1210.
- Myrdal, G. (1968), *Asian Drama: An Enquiry into the Poverty of Nations*, Penguin Books, Middlesex.
- National Working Group on Power Sector (1994) *Current Power Policies: A Critique*, September/October.

- Niskanen, W. A. (1971), *Bureaucracy and Representative Government*, Aldine, Chicago.
- Niskanen, W. A. (1973), *Bureaucracy, Servant or Master ?* Institute of Economic affairs, London.
- Olson, M. (1965), *The Logic of Collective Action*, Harvard University Press, Cambridge, Mass.
- Peltzman, S. (1976), 'Toward a More General Theory of Regulation', *Journal of Law and Economics*, 19 August: 211-240.
- Posner, R. A. (1975), 'The Social Costs of Monopoly and Regulation', *Journal of Political Economy*, 83 August: 807-827.
- Quinglian, He (2000), *China's Descent into a Quagmire*, reprinted in *The Chinese Economy*, 33 (3) May-June.
- Raj, K. N. (1973), 'The Politics and Economics of Intermediate Regimes', *Economic and Political Weekly*, July 7: 1189-1198.
- Rose, N.L. (1987), 'Labour Rent-Sharing and Regulation: Evidence from the Trucking Industry', *Journal of Political Economy*, 95: 1146-1178.
- Rose-Ackerman, S. (1999), *Corruption and Government: Causes, Consequences and Reform*, Cambridge University Press, Cambridge.
- Ross, S. (1973), 'The Economic Theory of Agency: the Principal's Problem', *American Economic Review*, 63 (2), May: 134-139.
- Samuelson, P. A. (1970), *Economics*, McGraw-Hill, 8<sup>th</sup> edn., New York.
- Srinivasan, K. (1996), 'Indian Power Policy, Enron and the BoP', *Economic and Political Weekly*, 17 August: 2207-2214.
- Stigler, G.J. (1971), 'The Economic Theory of Regulation', *Bell Journal of Economics*, 2 Spring: 3-21.

- Stiglitz, J.E. (1975), 'Incentives, Risk and Information: Notes Towards a Theory of Hierarchy', *Bell Journal of Economics* 6(2) Autumn 552-579.
- Thakur, U. (1979), *Corruption in Ancient India*, Abhinav Publications, New Delhi.
- Tirole, J. (1986), 'Hierarchies and Bureaucracies: On the Role of Collusion in Organisations', *Journal of Law, Economics and Organisation*, 2 (2), Fall: 181-214.
- Tollison, R.D. (1982), 'Rent Seeking: A Survey', *Kyklos* 35 (4): 575-602.
- Tullock, G. (1967), 'The Welfare Costs of Tariffs, Monopolies and Theft', *Western Economic Journal* 5 June 224-232.
- Tullock, G. (1980), 'Rent Seeking as a Negative-Sum Game', in Buchanan, J. M., Tollison, R.D. and Tullock, G. (eds.) *Toward a Theory of the Rent-Seeking Society*, Texas A & M University Press, College Station: 16-36.
- Weisskopf, T. (1992), Russia in Transition: Perils of the Fast Track to Capitalism', *Challenge*, no.11: 28-37.
- Williamson, O.E. (1968), 'Economies as an Antitrust Defence: the Welfare Trade-offs', *American Economic Review*, 58 March: 18-36.
- World Bank (1996), *India: Five Years of Stabilisation and Reform and the Challenges Ahead*, Washington DC.
- World Bank (1997), *World Development Report 1997: The State in a Changing World*, Oxford University Press, New York.
- Zaidi, A.M. and Zaidi, S.D. (1981) (eds.) *The Encyclopaedia of the Indian National Congress*, Vol. 15: 1955-1957; S. Chand and Company Ltd., New Delhi.

**CENTRE FOR DEVELOPMENT STUDIES**  
**LIST OF WORKING PAPERS**

*(From 1991 onwards)*

- MRIDUL EAPEN** Hantex: An Economic Appraisal.  
September, 1991, W.P.242
- SUNIL MANI** Government Intervention in Commercial Crop Development:  
A Case of Flue Cured Virginia Tobacco.  
November, 1991, W.P.243
- K. PUSHANGADAN** Wage Determination in a Casual Labour Market: The  
Case Study of Paddy Field Labour in Kerala.  
January, 1992, W.P.244
- K.N. NAIR & S.P. PADHI** Dynamics of Land Distribution: An Alternative  
Approach and Analysis with Reference to Kerala.  
January, 1992, W.P.245
- THOMAS ISAAC** Estimates of External Trade Flows of Kerala - 1975-76 and  
1980-81.  
March, 1992, W.P.246
- THOMAS ISAAC, RAM MANOHAR REDDY, NATA DUVVURRY** Re-  
gional Terms of Trade for the State of Kerala.  
March, 1992, W.P.247
- P. MOHANAN PILLAI** Constraints on the Diffusion of Innovations in Kerala:  
A Case Study of Smokeless Chulas.  
March, 1992, W.P.248
- R. ANANDRAJ** Cyclicity in Industrial Growth in India: An Exploratory  
Analysis.  
April, 1992, W.P.249
- T.M. THOMAS ISAAC, RAM MANOHAR REDDY, NATA DUVVURY**  
Balance of Trade, Remittance and Net Capital Flows: An Analysis of  
Economic Development in Kerala since independence.  
October, 1992, W.P.250
- M. KABIR, T.N. KRISHNAN** Social Intermediation and Health Transition:  
Lessons from Kerala,  
October, 1992, W.P.251

- SUNIL MANI, P. NANDAKUMAR** Aggregate Net Financial Flows to India: The Relative Importance of Private Loan vis-a-vis Foreign Direct Investments.  
August, 1993, W.P.252
- PULAPRE BALAKRISHNAN** Rationale and the Result of the Current Stabilisation Programme.  
November, 1993, W.P.253
- K.K. SUBRAHMANIAN, P. MOHANAN PILLAI** Modern Small Industry in Kerala: A Review of Structural Change and Growth Performance.  
January, 1994, W.P.254
- DILIP M.MENON** Becoming Hindu and Muslim : Identity and Conflict in Malabar 1900-1936.  
January, 1994, W.P.255
- D. NARAYANA** Government Intervention in Commodity Trade: An Analysis of the Coffee Trade in India.  
January, 1994, W.P.256
- K.J. JOSEPH, P. NANDAKUMAR** On the Determinants of Current Account Deficits: A Comparative Analysis of India, China and South Korea.  
January, 1994, W.P.257
- K.K. SUBRAHMANIAN, K.J. JOSEPH** Foreign Control and Export Intensity of Firms in Indian Industry.  
February, 1994, W.P.258
- PULAPRE BALAKRISHNAN, K. PUSHANGADAN** Total Factor Productivity Growth in Indian Manufacturing - A Fresh Look.  
April 1994, W.P.259
- D. NARAYANA, K.N. NAIR** Role of the Leading Input in Shaping Institutions: Tendency in the Context of Irrigation Uncertainty.  
May, 1994, W.P.260
- G. MURUGAN, K. PUSHANGADAN** Pricing of Drinking Water: An Application of Coase Two-part Tariff.  
December, 1994 W.P.261
- MOHANAN PILLAI** On the Mexican Crisis.  
December, 1995, W.P.262
- SUNIL MANI** Financing Domestic Technology Development through the Venture Capital Route.  
December, 1995, W.P.263

- T.T. SREEKUMAR** Peasants and Formal Credit in Thiruvithamcore: The State Institutions and Social Structure 1914-1940.  
December, 1995 W.P.264
- AMITABH** Estimation of the Affordability of Land for Housing Purposes in Lucknow City, Uttar Pradesh (India): 1970-1990.  
March, 1996. W.P.265
- K. PUSHPANGADAN, G. MURUGAN, K. NAVANEETHAM** Travel Time, User Rate & Cost of Supply: Drinking Water in Kerala, India:  
June 1996. W.P.266
- K.J. JOSEPH** Structural Adjustment in India: A Survey of Recent Studies & Issues for Further Research,  
June 1996 W.P.267
- D. NARAYANA** Asian Fertility Transition: Is Gender Equity in Formal Occupations an Explanatory Factor?  
October, 1996 W.P.268
- D. NARAYANA, SAIKAT SINHAROY** Import and Domestic Production of Capital Goods from Substitution to Complementarity,  
October 1996. W.P.269

<b>NEW SERIES</b>
-------------------

- W.P. 270 ACHIN CHAKRABORTY** *On the Possibility of a Weighting System for Functionings* December 1996
- W.P. 271 SRIJIT MISHRA** *Production and Grain Drain in two inland Regions of Orissa* December 1996
- W.P. 272 SUNIL MANI** *Divestment and Public Sector Enterprise Reforms, Indian Experience Since 1991* February 1997
- W.P. 273 ROBERT E. EVENSON, K.J. JOSEPH** *Foreign Technology Licensing in Indian Industry : An econometric analysis of the choice of partners, terms of contract and the effect on licensees' performance* March 1997
- W.P. 274 K. PUSHPANGADAN, G. MURUGAN** *User Financing & Collective action: Relevance sustainable Rural water supply in India.* March 1997.
- W.P. 275 G. OMKARNATH** *Capabilities and the process of Development* March 1997
- W. P. 276 V. SANTHAKUMAR** *Institutional Lock-in in Natural Resource Management: The Case of Water Resources in Kerala,* April 1997.

- W. P. 277 PRADEEP KUMAR PANDA** *Living Arrangements of the Elderly in Rural Orissa*, May 1997.
- W. P. 278 PRADEEP KUMAR PANDA** *The Effects of Safe Drinking Water and Sanitation on Diarrhoeal Diseases Among Children in Rural Orissa*, May 1997.
- W.P. 279 U.S. MISRA, MALA RAMANATHAN, S. IRUDAYA RAJAN** *Induced Abortion Potential Among Indian Women*, August 1997.
- W.P. 280 PRADEEP KUMAR PANDA** *Female Headship, Poverty and Child Welfare : A Study of Rural Orissa, India*, August 1997.
- W.P. 281 SUNIL MANI** *Government Intervention in Industrial R & D, Some Lessons from the International Experience for India*, August 1997.
- W.P. 282 S. IRUDAYA RAJAN, K. C. ZACHARIAH** *Long Term Implications of Low Fertility in Kerala*, October 1997.
- W.P. 283 INDRANI CHAKRABORTY** *Living Standard and Economic Growth: A fresh Look at the Relationship Through the Non- Parametric Approach*, October 1997.
- W.P. 284 K. P. KANNAN** *Political Economy of Labour and Development in Kerala*, January 1998.
- W.P. 285 V. SANTHAKUMAR** *Inefficiency and Institutional Issues in the Provision of Merit Goods*, February 1998.
- W.P. 286 ACHIN CHAKRABORTY** *The Irrelevance of Methodology and the Art of the Possible : Reading Sen and Hirschman*, February 1998.
- W.P. 287 K. PUSHANGADAN, G. MURUGAN** *Pricing with Changing Welfare Criterion: An Application of Ramsey- Wilson Model to Urban Water Supply*, March 1998.
- W.P. 288 S. SUDHA, S. IRUDAYA RAJAN** *Intensifying Masculinity of Sex Ratios in India : New Evidence 1981-1991*, May 1998.
- W.P. 289 JOHN KURIEN** *Small Scale Fisheries in the Context of Globalisation*, October 1998.
- W.P. 290 CHRISTOPHE Z. GUILMOTO, S. IRUDAYA RAJAN** *Regional Heterogeneity and Fertility Behaviour in India*, November 1998.
- W.P. 291 P. K. MICHAEL THARAKAN** *Coffee, Tea or Pepper? Factors Affecting Choice of Crops by Agro-Entrepreneurs in Nineteenth Century South-West India*, November 1998
- W.P. 292 PRADEEP KUMAR PANDA** *Poverty and young Women's Employment: Linkages in Kerala*, February, 1999.
- W.P. 293 MRIDUL EAPEN** *Economic Diversification In Kerala : A Spatial Analysis*, April, 1999.

- W.P. 294** **K. P. KANNAN** *Poverty Alleviation as Advancing Basic Human Capabilities: Kerala's Achievements Compared*, May, 1999.
- W.P. 295** **N. SHANTA AND J. DENNIS RAJA KUMAR** *Corporate Statistics: The Missing Numbers*, May, 1999.
- W.P. 296** **P.K. MICHAEL THARAKAN AND K. NAVANEETHAM** *Population Projection and Policy Implications for Education: A Discussion with Reference to Kerala*, July, 1999.
- W.P. 297** **K.C. ZACHARIAH, E. T. MATHEW, S. IRUDAYA RAJAN** *Impact of Migration on Kerala's Economy and Society*, July, 1999.
- W.P. 298** **D. NARAYANA, K. K. HARI KURUP**, *Decentralisation of the Health Care Sector in Kerala : Some Issues*, January, 2000.
- W.P. 299** **JOHN KURIEN** *Factoring Social and Cultural Dimensions into Food and Livelihood Security Issues of Marine Fisheries; A Case Study of Kerala State, India*, February, 2000.
- W.P. 300** **D. NARAYANA** *Banking Sector Reforms and the Emerging Inequalities in Commercial Credit Deployment in India*, March, 2000.
- W.P. 301** **P. L. BEENA** *An Analysis of Mergers in the Private Corporate Sector in India*, March, 2000.
- W.P. 302** **K. PUSHPANGADAN, G. MURUGAN**, *Gender Bias in a Marginalised Community: A Study of Fisherfolk in Coastal Kerala*, May 2000.
- W.P. 303** **K. C. ZACHARIAH, E. T. MATHEW, S. IRUDAYA RAJAN**, *Socio-Economic and Demographic Consequences of Migration in Kerala*, May 2000.
- W.P. 304** **K. P. KANNAN**, *Food Security in a Regional Perspective; A View from 'Food Deficit' Kerala*, July 2000.
- W.P. 305** **K. N. HARILAL, K.J. JOSEPH**, *Stagnation and Revival of Kerala Economy: An Open Economy Perspective*, August 2000.
- W.P. 306** **S. IRUDAYA RAJAN**, *Home Away From Home: A Survey of Oldage Homes and inmates in Kerala*, August 2000.
- W.P. 307** **K. NAVANEETHAM, A. DHARMALINGAM**, *Utilization of Maternal Health Care Services in South India*, October 2000.
- W.P. 308** **K. P. KANNAN, N . VIJAYAMOHANAN PILLAI**, *Plight of the Power Sector in India : SEBs and their Saga of Inefficiency* November 2000.
- W.P. 309** **V. SANTHAKUMAR AND ACHIN CHAKRABORTY**, *Environmental Valuation and its Implications on the Costs and Benefits of a Hydroelectric Project in Kerala, India*, November 2000.

- W.P. 310** **K. K. SUBRAHMANYAN. E. ABDULAZEEZ**, *Industrial Growth In Kerala: Trends And Explanations* November 2000
- W.P. 311** **INDRANI CHAKRABORTY** *Economic Reforms, Capital Inflows and Macro Economic Impact in India*, January 2001
- W.P. 312** **VIJAYAMOHANAN PILLAI** *Electricity Demand Analysis and Forecasting –The Tradition is Questioned*, February 2001
- W.P. 313** **VEERAMANI. C** *India's Intra-Industry Trade Under Economic Liberalization: Trends and Country Specific Factors*, March 2001
- W.P. 314** **U.S.MISHRA AND MALA RAMANATHAN** *Delivery Complications and Determinants of Caesarean Section Rates in India - An Analysis of National Family Health Surveys, 1992-93*, March 2001.
- W.P. 315** **ACHIN CHAKRABORTY** *The Concept and Measurement of Group Inequality*, May 2001.

This work is licensed under a  
Creative Commons  
Attribution – NonCommercial - NoDerivs 3.0 Licence.

To view a copy of the licence please see:  
<http://creativecommons.org/licenses/by-nc-nd/3.0/>