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DEPARTAMENTO DE ECONOMIA

**From Planning to Regulation:
Towards a New Dirigisme ?**

Dr. Deepak Lal. James S. Coleman



**Universidad de
San Andrés**

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Dr. Deepak Lal James S. Coleman (Profesor of
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FROM PLANNING TO REGULATION:
Towards a New Dirigisme ?

by

Deepak Lal

James S. Coleman Professor of International Development Studies
University of California, Los Angeles

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Professor B. R. Shenoy

(3rd June 1905, 8th February 1978)

Professor Bellicoth Raghunath Janardan Shenoy born on 3rd June 1905 dominated the discussion on Indian Economic Policy and Planning for nearly two and a half decades. He completed his studies at the Banaras Hindu University in 1929, passing his M.A. Examination with first rank in the first division. He was the first Indian economist, whose theoretical papers were published in a world-class journal like Quarterly Journal of Economics. After receiving his M.Sc. Degree in 1932 from the London School of Economics he came back to India and for sometimes worked as a Lecturer in Wadia College (Pune) and Gujarat College (Ahmedabad). In 1936 he again left India and joined the University of Ceylon. In 1942, Prof. Shenoy came back to India to become the principal of L.D. Arts College, (Ahmedabad) From 1945 to 1952 a period of almost a decade he remained with the Reserve Bank of India and held various important positions in the Bank. In 1948, he became the Far Eastern Representative of the International Monetary Fund and the World Bank.

In 1954, he left the R.B.I. to become the first Director of newly established School of Social Sciences of the Gujarat University. He stayed with the Gujarat University from 1954 to 1968 a period of almost fifteen years. During his Directorship he established a strong tradition of economic liberalism at the Economics Department of the School and exposed generations of young students to liberal economic ideas and doctrines. In those days of an almost axiomatic acceptance of anti-market ideology and the left radicalism students were encountering a person probably for the first time in their lives who was relentlessly challenging the basis of every "Sacred Cow" of the interventionist ideology and programmes. The recent changes in the Indian Economic Policy only prove how prophetic he was and how wrong were the majority of professional colleagues in the country who ignored his contribution.

(From : forthcoming book *Planned Progress or Planned Chaos : Selected Prophetic Writings of Prof. B. R. Shenoy* edited by Mahesh P. Bhatt and S. B. Mehta Published by Affiliated East-West Press Private Ltd. Madras.)

FROM PLANNING TO REGULATION:

Towards a New Dirigisme?

by Deepak Lal

INTRODUCTION

The Bible tells us that "a prophet is not without honour, save in his own country, and in his own house". Prof. Shenoy's life bears this out. Though as I shall briefly show how over the years his lonely views have been vindicated -even in India- he received little honour from his countrymen. However, as this lecture series in his memory testifies, at least in his "own house" he is honoured. In the wider world, in particular that associated with the Mont Pelerin Society- the learned society to promote classical liberalism set up by Prof. Hayek and other like minded spirits- Prof. Shenoy was regarded with admiration for keeping alive the flame - however feeble- of classical liberal ideas in the dark ages spawned by the Nehruvian economic settlement of the 1950's. But this was at a tremendous personal cost. Lord Harris of the Institute of Economic Affairs told me how Prof. Shenoy would periodically appear in London, beaten and dispirited, but after finding support from such stalwart figures of classical economic liberalism like Professors Bauer, Friedman, Hayek et al., he would return home to renew the battle with a lighter spirit.

I belong to a younger generation that was brought up in the shadow of the Nehruvian settlement, and given the widespread dirigisme of academic economics in the UK, when I began my study of economics at Oxford, Shenoy and Bauer were the two bête noirs of the newly emerging field of "development economics".¹ Not surprisingly I like most of my peers adopted these prejudices of our teachers. It was not until much later, particularly after a spell in the Indian planning commission, that my eyes and intellect were opened to the classical liberal tradition which- what I later termed (Lal (1983))- the Dirigiste Dogma had obscured. I was able at a

1. See Lal (1993) Chp. 1, and the introduction. For the mainstream view about the irrationality of these anti-planners see Hanson, p 5 and ff.

conference in honour of Peter Bauer in the 1980's to issue my mea culpa in a paper trying to explain why he had been right and yet been unjustly neglected, nay villified by his professional peers.(see Lal (1987)). Many of the same observations are relevant in explaining Prof. Shenoy's lack of honour in his country- and I will be turning to them shortly.

But I want to do more in this lecture in his honour, by sounding a warning bell for the new metamorphosis that the dirigiste beast seems to be about to make in India, as it has done recently in the UK, by taking the form of dirigisme that has plagued the US since the second world war - bureaucratic regulation of the market. In particular, given the growing importance- and shortage- of infrastructure, and the inability to finance it through taxation, faut mieux both State and central governments are increasingly being forced to look at private sector alternatives. But, as in the UK, the dirigiste impulse has not been stifled but merely transformed from planning that sought to supplant the price mechanism to regulation that seeks to supplement it. The intellectual basis for both sorts of dirigisme as I will hope to show is the same. But whilst the events of 1989 seem to have "done in" planning -except amongst diehards- there is an increasing rallying of dirigistes -who span the political spectrum- around the banner of bureaucratic regulation to correct various forms of perceived market failure, supposedly arising from externalities- in particular those relating to the environment- and those from various forms of monopoly. I have dealt with the former elsewhere (see Lal (1994), (1995)) and shall be concerned in this lecture mainly with the latter.

As many aspects of the infrastructural investments India desperately needs have characteristics of natural monopolies, which current wisdom and past practice in the US deems require regulation in "the public interest", they will I guess provide the major operational arena for the "new dirigisme". Fortunately for me, I have recently moved from UCL to UCLA. The latter has been at the forefront of the revival of the classical liberal case in advocating that efficiency considerations should guide antitrust or anti-monopoly

issues.² Part of my task in this lecture will be that of a messenger conveying the message of the IO school of my new home UCLA to a country which seems to be unfamiliar with it. But before doing so, I must begin by thanking Professors Bhatt and Bharadwaj for the signal honour they have done me by asking me to deliver this lecture in Professor Shenoy's memory.

I. THE MUTATIONS OF THE PLANNING SYNDROME

1. Shifting Notions of Competition

In thinking about the common intellectual basis of the justifications provided for planning and regulation, it is useful to note the subtle but important shift that has occurred in economists' notion of competition from the classics -spanning Adam Smith to J.S.Mill- to modern mainstream economics. The latter's intellectual moorings are provided by the so called Arrow-Debreu theory of general equilibrium, which it is claimed gives precision to the claims of the classics on the virtues of the market (see Arrow and Hahn). But as Blaug (1987) points out one needs to note:

"the subtle but nevertheless unmistakable difference in the conception of 'competition' before and after the 'marginal revolution'. The modern concept of perfect competition, conceived as a market structure in which all producers are price-takers and face perfectly elastic sales curves for their outputs, was born with Cournot in 1838 and is foreign to the classical conception of competition as a process of rivalry in the search for unrealized profit opportunities, whose outcome is uniformity in both the rate of return on capital invested and the prices of identical goods and services but not because producers are incapable of making prices. In other words,

2 As Demsetz (1995) notes: "as a small act of institutional inmodesty, I note that profession has allowed the University of Chicago to appropriate to itself the efficiency doctrine of anti-trust. The offering of this doctrine in a substantive, analytical way originated at least as much from work done at UCLA as from that done at Chicago" (p. 144, no.70). He along with Armen Alchian and Ben Klein have been the leaders of this UCLA-IO school.

despite a steady tendency throughout the history of economic thought to place the accent on the end-state of competitive equilibrium rather than the process of disequilibrium adjustments leading up to it, this emphasis became remorseless after 1870 or thereabouts, whereas the much looser conception of 'free competition' with free but not instantaneous entry to industries is in evidence in the work of Smith, Ricardo, Mill, Marx and of course Marshall and modern Austrians. For that reason, if for no other, it can be misleading to label classical economics as a species of general equilibrium theory except in the innocuous sense of an awareness that 'everything depends on everything else'" (p.443).

It is equally surprising that the "Chicago school" as Kirzner for instance has noted "maintains that the competitive market economy displays systematic regularities only to the extent that it can be reasonably fitted into the perfectly competitive mold. Subsequent [to Frank Knight] generations of Chicago theorists would maintain that as a matter of fact the real world competitive market so be fitted" (p.103). Thus we are now in the situation where most theorists on both sides of the market-dirigiste divide use the Arrow-Debreu model as their paradigm.

From this theoretical perspective the two so-called Fundamental Theorems of Welfare Economics are derived, which theorists (see e.g. Dasgupta (1980), Hahn (1984), Sen (1983)) assert provides the justification for the superiority of a market economy. Whilst if one or the other conditions for the existence of the Utopian state of perfect competition are not met, there is 'market failure' and thence a prima facie case for government intervention. This has always seemed bizarre to me. For it is child's play to show that because of incomplete markets, external effects and the existence of public goods, "market failure" defined as deviations from the perfectly competitive norm is ubiquitous, but the corollary that this then requires massive corrective public action is highly dubious to say the least.

But this was the intellectual basis of the planning syndrome. As emerged in the famous debate between Lange, Lerner, von Mises and

Hayek in the 1930's, the planners (Lange and Lerner) argued that (a) because of the ubiquitous imperfections in most markets, no market economy could ever in practice attain the Utopian norm of perfect competition, and (b) by using computers to simulate the outcome of a perfectly-competitive economy and legislating to compel the production of the resulting quantities of inputs and outputs (or their relative prices), a planned economy could achieve Nirvana. Hayek and Mises pointed out that, though such a form of planning might be theoretically feasible in a world where information about resources, technology and the myriad actual and possible production processes and tastes of consumers could be costlessly acquired by the central planning authority, in the real world it would be impossible. The market based price mechanism is essential because it makes use of the division of knowledge which is unavoidable in any real world economy.

The failures of centralised planning - not least in India- are now well known, with the events of 1989 having hopefully buried the planning syndrome. For even our theorists (see Greenwald and Stiglitz(1986), Dasgupta (1980), Stiglitz (1995)) accept that the major cause for incomplete markets in imperfect information, which causes problems of what is called "incentive compatibility"- exactly the point made by Hayek and von Mises in the 30's. Thus a command economy on Lange-Lerner 'market socialist' lines is ruled out.

2. Neoclassical Public Economics

But now the hope is held out that a full optimum or Pareto improvements can be achieved by the government implementing a system of optimal taxes and subsidies. This "optimal tax" basis for the 'new' dirigisme is set out in Stiglitz (1995), and its theoretical base is claimed to be the working out of this optimal tax structure in Greenwald and Stiglitz (1986). Its relevance is however strictly limited. First, because its implementation raises questions both about the character of the mandarins required to implement these 'optimal

taxes', and second because in a dynamic economy the optimal structure will have to be continually changing and the requisite information will not be readily available to the authorities- as Hayek (1945) noted a long time ago.³

On the first question concerning political economy, Greenwald and Stiglitz note in a footnote :

"It might be noted that we ignore any discussion of the political processes by which the tax-subsidy schemes described below might be effected. Critics may claim that as a result we have not really shown that a Pareto improvement is actually possible" (note 7, p.234).

Quite!

Whilst on their claim:

"that there exist Pareto-improving government interventions ..[and] that the kind of intervention required can be simply related to certain parameters that, in principle, are observable" (p.231),

they are in their concluding comments forced to concede:

"we have considered relatively simple models, in which there is usually a single distortion (one kind of information imperfection,

3. Nwebery and Stern have advocated the application of this optimal tax theory to developing countries. But as they note it assumes that "the government has coherent, unified and largely benevolent objectives, captured in the social welfare function, and we search for ways in which the tools available to it can be used to improve the measure of welfare" (p. 653). That the theory is irrelevant for most developing countries is patently obvious as most of their politics do not even come close to these assumptions about their character. Whilst if a predatory state or rent-seeking society is accepted as likely, the optimal tax rules are no longer valid even within this framework. (see Lal (1990a). For a trenchant critique of optimal tax theory see Harberger (1987), who moreover notes that it is based on a philosophy of government - the social engineering view - which differs from that of classical liberalism.

one kind of market failure). Though the basic qualitative proposition, that markets are constrained Pareto efficient, would obviously remain in a more general formulation, the simplicity of the policy prescriptions would disappear. Does this make our analysis of little policy relevance? The same objection, can of course, be raised against standard optimal tax theory. (Some critics might say, so much the worse for both.) Though simple expositions of optimal tax theory often focus on the case of independent demand curves, in the general case, one needs to know all the cross elasticities of demand, and these are seldom available. What is worse, if one abandons the unrealistic assumption of the standard optimal commodity tax formulation (eg. Diamond-Mirrlees (1971), with their assumption of 100 per cent pure profits taxes, no restrictions on commodity taxation, and no (progressive) income tax), then the informational requirements on the government are even greater" (p.258)

Quite!

To those of us who spent our misspent youth on advocating the second-best shadow pricing Little-Mirrlees rules which were the precursors of this "new" dirigisme, its policy irrelevance is hardly surprising.⁴ As I noted in *The Poverty of Development Economics* : "the very analysis which seemingly establishes a prima facie intellectual justification for the Dirigiste Dogma provides, in its fullness, the antidote" (p.16).

3. "New" Growth and Trade Theories

The other "new" theories of (a) endogenous growth (Romer, Lucas) and (b) trade in the presence of monopolistic competition (Brander and Spencer; Helpman and Krugman) which are being touted as providing justifications for dirigisme can be dealt with more summarily.

On the "new" growth theory we need only note that neither theorists (see Solow . Stern) nor practitioners (see Pack) have found

4 See Lal (1980) for one of these exercises in irrelevance, and Lal (1993) Chp. 1, of how I came to eschew this public economics approach to public policy.

it persuasive. In its so called AK version it is a reversion to the Harrod-Domar model.⁵ Whilst there is little evidence to support the purported externalities to human capital and "knowledge" as asserted by its proponents (see Lal -Myint).

On the cross country regressions based on the Heston-Summers data set, which have proliferated in the journals (eg. Barro (1991)), apart from their fragility (Levine and Renelt), they at best establish the case that statistically growth rates are determined by good policy (Barro (1994), Sala-Martin), but the regressions themselves cannot

5 Thus if g -growth rate of output (Y); s - the ratio of savings to national income (S/Y) k -the capital output ratio (K/Y) n -the growth rate of the labour force (L). The Harrod Domar equation for steady state growth is :

$$g = s/k = n \dots (1)$$

In the neo-classical model, with constant returns to scale the production function is :

$$Y = A f(K, L) \dots (2)$$

where A is total factor productivity. This yields the well known growth accounting identity :

$$g = t + a \cdot (dK/K) + b \cdot n \dots (3)$$

where t -rate of technical progress; a and b are the elasticities of output with respect to capital and labour. In the constant returns, Cobb-Douglas case $a+b=1$ With perfect competition a and b will also be the share in income of capital and labour. Since in the steady state $dK/K=g$, from (3) the determinants of steady state per capita growth rates is :

$$g-n = [t+n(a+b-1)] / (1-a) \dots (4)$$

with constant returns to scale $a+b = 1$, per capita growth rates are entirely determined by the exogenous factors t , and n . Endogenous growth theorists have shown that even without increasing returns to scale ($a+b>1$) there can be positive per capita income growth if there are constant return to capital ($a=1$) and with ($t=0$) non reproducible labour is assumed away, because it is argued that what is important for growth is not the numbers working but the human capital embodied in them. If all these reproducible inputs are put into a composite good called 'capital', then the production function becomes :

$$Y = AK^a \quad (5)$$

The growth accounting equation from this is :

$$g = t+a \cdot (dK/K)$$

with strict constant returns to capital ($a=1$), or else growth will be explosive, and no technical progress, this reduces to the Harrod-Domar identity : $g=s/k$.

conclusively establish what these policies are! The Lal-Myint study by examining the economic history of 21 developing countries whilst endorsing the role of good policy in determining the efficiency of investment, which more than its volume is found to be the major proximate cause for the differences in growth rates, also identifies these policies which echo the classical prescriptions, and now form what has been termed the "Washington consensus" on economic policy (Williamson).

On the "new" trade theory Baldwin (1992) has neatly encapsulated them in a refurbished Baldwin "envelope". This shows that part of the 'new' trade theory's case for intervention is another variant of the classic terms-of-trade type argument for trade intervention and another part is a variant of the infant industry argument for the domestic promotion of industry (but not its protection). As the practical irrelevance of both types of arguments have been discussed threadbare in the trade and welfare literature (see Baldwin (1992) for a restatement) these 'new' arguments for protection and industrial policy are once again mere theoretical curiosa.

4. Market Governance or Business Governance?

By contrast many have found the case studies of supposedly successful dirigisme in the Far East conducted by the market governance school more persuasive. Even the World Bank (1993) has leaned towards them. As I have discussed the former in detail in Lal (1993), and Little (1994) provides a devastating critique of the latter, I need only emphasise a number of points.

First, it is undeniable that these governments were dirigiste in many aspects of their trade and industrial policies. The question remains whether their undoubted success was due to or despite this dirigisme. Little, basing himself on estimates of social rates of return to investment for Korea (for which he had data), shows convincingly that they were inversely correlated with the degree of dirigisme. Whilst the World Bank Miracle study's empirics based on total factor productivity calculations, despite its circumlocutions, found that interventions in both Korea and Taiwan had little effect in altering

the structure of production at the sectoral level, and that the least selective intervention in these and other Asian miracle economies - the commitment to manufactured exports- was the most successful. Thus despite the claims of the 'market governance' school these economies vindicate policies of "getting prices right" rather than of getting them wrong!

Second, another more persuasive explanation can be provided for their industrial and trade policies (see Lal (1993)). Following some insights of Demsetz (1995) concerning the problem of control of business enterprises I have suggested that what these and other countries were concerned with was dealing with this problem as their industrial structure moved beyond the relatively labour intensive end of their ladders of comparative advantage. The problem is one of maintaining "beneficial control over resources in the presence of economies of size ...[which is related to the amount of private] wealth required to reduce the degree to which ownership is separated from control of these resources." (Demsetz(1995)). This agency problem arises as countries effectuate their emerging comparative advantage in more capital-intensive and ipso-facto larger scale enterprises.

There are three ways of overcoming this agency problem. The first is through sufficient concentration of private wealth, and some institutional means for its spread over a number of enterprises while maintaining control by some concentrated owners. The second is through foreign equity controlling local firms. The third is through public enterprises.

Korea following Japan, sought to create concentrations of private wealth through the promotion of the "chaebol". The major instrument was long term subsidised credit to a select number of industrial groups, who were "chosen" by a relatively efficient dynamic monitoring process based on export success -under a relatively neutral overall trade regime. But the resulting concentration of economic power has subsequently become a political issue.

In Taiwan, by contrast, as the government was concerned with the political consequences of promoting native Taiwanese economic

power, it chose the public sector route for capital -intensive industries like ship-building and petrochemicals; but with the usual damage to profitability as compared with the private sector (Wade, p.81).

Finally, Singapore chose the third route, but its "neutral" trade regime ensured that the direct foreign investment was not of the "tariff jumping" kind, and hence likely to be both socially as well as privately profitable.(Lal (1975)). Then there is the "laissez faire" example of Hong Kong. Whilst Singapore did try to force the pace at which its industries were to move up the ladder of comparative advantage (with some dire results as in the 1980's recession) Hong Kong let its industrial structure evolve more naturally. If performance is judged by the productivity of capital then Hong Kong has been the more successful (see Findlay -Wellisz; Lal-Myint; Young).

5. A Counter -Counter-Revolution in Development Theory ?

This suggests that there is little merit in the "new" dirigiste case. So why has Krugman (1992) proclaimed a "counter counter-revolution in development theory". Because he claims the ideas of the old development economics based on the importance of increasing returns, and pecuniary external economies arising from the effects of market size, which underwrote concepts like the "big push" and "backward and forward linkages", have now been formalised and shown to be logically consistent. He claims the reason why it failed to persuade in its earlier incarnation was because of the failure to formalise the ideas in mathematics. But this is ridiculous. As his discussant Stiglitz rightly noted: "That we can write down a model of a phenomenon proves almost nothing. It does not make the idea right or wrong, important or unimportant." (p.41). The reasons why the big push and linkages do not persuade were clearly set out in the detailed discussion by Little (1982). Murphy et al's formalisation of a model does not in itself validate a big push whose validity depends upon the income effects associated with increasing returns- which are irrelevant in an open economy.

Moreover we now have empirical evidence of the outcomes in countries which did try a big push. Four were included in the Lal-Myint study - Ghana, and Madagascar in Africa. Brazil and Mexico.⁶ The results invariably were disappointing if not disastrous (as in Ghana and Madagascar). To promote such bad policies just because some theorists have been able to write down some algebra is not only puerile but wicked - given the high costs that the poor people thus being experimented on suffer.

II. REGULATING MONOPOLIES - TOWARDS A NEW DIRIGISME

1. Monopoly and Competition

Whilst the above debates are unlikely- I hope- to have any practical influence in the current worldwide move from the plan to the market, another more ancient one concerning monopoly and how best to deal with it is likely to promote a new dirigisme. This, after all was the basis of the vast dirigiste regulatory framework which, has been built up over the years in that supposed beacon of the free market -the US, and is now being constructed in Thatcherite Britain.

Moreover, as the following quotation from Nehru's *Discovery of India* shows, it was the problem of private monopoly which he saw as the besetting sin of a market economy. Thus he quotes with approbation a statement of R.H.Tawney's that "the choice is not between competition and monopoly, but between monopoly which is irresponsible and private and a monopoly which is responsible and public". He then expresses the belief that public monopolies will eventually replace private monopolies under his preferred economic system which he labels "democratically-planned collectivism". Under such a system, he notes: "An equalization of income will not result from all this, but there will be a far more equitable sharing and a progressive tendency towards equalization. In any event, the vast differences that exist today will disappear completely, and class distinctions which are essentially based on differences in income, will

⁶ Also see Lal and Maxfield for a detailed analysis of the Brazilian case.

begin to fade away. Such a change would mean an upsetting of the present-day acquisitive society based primarily on the profit motive. The profit motive may still continue to some extent but it will not be the dominating urge, nor will it have the same scope as it has today." (Nehru (1956).p.555). I need not remind you that in the light of Indian experience, and as Prof. Shenoy so forcefully argued in his dissenting note on the 2nd Five Year Plan, this was pure hokum. The Indian people bore the cost in terms of stunted growth and poverty alleviation for three decades!

2. Two Views About Monopoly

But Nehru's view about the inevitability of a market economy being dominated by monopolies continues to resonate, not least in many supposedly market economies. But is it right? An important paper by my UCLA colleague Harold Demsetz is useful in setting the record straight. As he notes there have been two systems of belief about monopoly. One due to Adam Smith saw monopoly as being necessarily underwritten by government action which kept potential rivals from competing. The other, views monopoly arising without government intervention because of the theoretical model of monopoly, which provides an analysis of a case where there is only one firm in an industry as compared with the atomistic case of perfect competition. This view in turn has led to the belief that monopoly is significantly correlated with market concentration. But as he notes : "the monopoly model assumes that monopoly power exists, it does not explain how monopoly power is exercised and maintained" (Demsetz (1989).p94). In particular there is "no good explanation ..provided for how present and potential rivals are kept from competing without some governmentally provided restrictions on competitive activities" (ibid). The usual culprits, economies of scale, indivisibilities of capital, and advertising as sources of barriers to entry are acquitted whilst the empirical evidence in support of the view based on Bain's supposed demonstration of a positive correlation between profit rates and measures of market concentration is shown to be at best shaky if not non-existent on the basis of more recent research.

A similar view that the degree of market concentration does not imply that market prices and outputs will necessarily diverge from the competitive outcome is also stressed by the recent theory of contestable markets (see Baumol, Panzar, Willig (1982)). Even with scale economies which limit the number of firms that can service a particular market, as long as potential rivals can contest the 'monopoly', the single eventual incumbent's pricing and output policies need not diverge from those under competition. The only rent such a 'monopolist' can acquire are in terms of the sunk costs of firm-specific assets essential for production.

All this suggests that appearances to the contrary, the old Smithian view that monopolies ultimately depend on government support is valid. In the absence of such public protection, even in industries where- depending upon eg. 'scale economies'- only one firm survives, there is no necessary presumption that its behaviour will be monopolistic.

This of course means that regulations designed to increase competition- like antitrust legislation in America- are unnecessary. Worse, because of the evidence of the capture of the regulatory agencies by the companies being regulated (see the essays in Stigler (ed) (1988)), for well known reasons of political economy, there is the clear danger that such regulations instead of promoting competition create the very government mediated barriers to entry which nurture monopolies.

The basic reason for this is that, efficient economic performance does not only depend upon one type of competition- the imitative output competition emphasised by perfect competition. Equally important is innovative competition, particularly of the creatively destructive kind emphasised by Schumpeter. Whereas, for the imitative output competition of perfect competition, efficiency does require a large number of firms, innovative competition most likely does not. Much innovation has the hallmarks of a race in which the winner takes all. As Demsetz notes "the competitive intensity of [such] a contest is not always increased by adding more

contestants." (Demsetz(1995) p.139). What matters is the quality of the contestants and the size of the prize. The existence of patents and other devices to prevent imitative competition - at least for a time- to allow the winners in innovative competition to secure a big payoff for their innovative effort shows that, in a dynamic market economy, there may be many dimensions of competition, with some of the characteristics associated with the different dimensions being inversely correlated- eg. imitative competition requires a large, whilst innovative competition requires a small number of firms. Given this and the resulting incommensurability of different dimensions of competition relevant for the efficient functioning of a dynamic economy, there can be no single measure- such as market concentration- of competitiveness which can be used to judge the dynamic efficiency of an actual market economy.

3. "Rate of Return" and "Price Cap" Regulations

Nor will "rate of return" or "price cap" regulatory formulae necessarily ensure competition in the large. For once there are scale economies, prices can no longer equal marginal costs and there cannot be perfect competition. Competition will not be merely imitative but have some of the elements of a contest, in which some agents will lose and others win. It would be inappropriate to judge the intensity of competition of such a contest by the ex post rate of return of the winner. For as Demsetz notes "if one were to gauge competitive intensity by the rate of return on investment made by winners in a lottery game, the rate of return would be quite high, but a negative return is obtained if the calculation includes the wagers made by losers". So if one were to use the rate of return criterion to judge the competitiveness of a particular industry, the calculation should ideally also include the costs incurred by those who competed to become incumbents but lost. If, moreover, the decision on incumbency depends on government favours then the cost would also have to include the "rent seeking" costs of all the contestants associated with competing for political favour. This inclusive rate of return need not be above some competitive norm. But, of course, it will in practice be impossible to calculate.

III. NATURAL MONOPOLIES- REGULATION OR AUCTIONS?

But what of natural monopolies? Surely, once a firm acquires one, it will *faut mieux* exploit its monopoly power, and hence such natural monopolies will require some form of regulation. Much of the infrastructural services India so desperately needs have elements of natural monopoly. This in fact was the basic justification of putting them in the public sector. But given the constraints of public finance and the well-known inefficiencies associated with public enterprises there is a welcome move for the financing and production of these infrastructural services to be privatised. But will this not then lead inevitably to the exploitation of these natural monopolies by private producers at the cost of consumers, and does that fact not require some form of continuing regulation of these utilities?

I. "Competition for the Field" vis a vis "Contestable Markets"

The UCLA industrial organisation school has provided a distinctive and important answer to this question, which unfortunately is not as well known as the various dirigiste regulatory regimes currently being touted by mainstream theorists. The basic idea has been labelled "competition for the field" by Harold Demsetz, following a distinction due to Edwin Chadwick in the 19th century between it and "competition within the field".

It differs from the later development of the notion of "contestability", in so far as the latter is concerned with competition between an existing incumbent and potential entrants to the natural monopoly. By contrast, competition for the field as its name suggests is concerned with the competition for becoming an incumbent in the first place. This has important consequences for the price-output configuration and hence the competitive efficiency of the economy. In the theory of contestable markets it has been shown that, in equilibrium, the only rents the incumbent of a natural monopoly can acquire are the incumbent's sunk costs, associated with the monopoly which a new entrant would have to incur in moving in and out of the monopoly. If an outsider can enter and exit a market without incurring any transition costs, then the natural

monopoly would be perfectly contestable, and despite economies of scale and scope, the incumbent insider would not be able to garner any rents. But as there are unlikely to be many natural monopolies in which these transition costs are insubstantial, from the view of contestability theory usually insiders would be able to extract rents equal to these transition costs from consumers.⁷

The situation is very different from the viewpoint of competition for the field. Here the competition takes place before production begins, with would-be natural monopolists competing for the right to serve the market in which each rival could serve the market at the lowest cost, adopting the best technology. In this competition for the field as Demsetz showed in his famous essay "Why regulate utilities?", the potential rents of the natural monopoly would be competed away with the best bid amongst the rivals being accepted by the community for becoming the incumbent of the natural monopoly. Thereafter, there would be a distinction between insiders and outsiders, and substantial transition costs for the latter- in sharp contrast with the conclusions of contestability theory. For without these entry barriers, the potential cost reductions associated with scale economies may not be realised by the successful incumbent. How often there should be competition for the field, or equivalently for how long a bidder should be given a franchise to the natural monopoly, will depend upon the particular supply and demand conditions for the output of the natural monopoly. Also, there is no reason why there should not be contractual conditions attached to the possibility of renegotiation of the terms of the franchise before its expiry. In fact given uncertainty on this account, the rivals bidding for the franchise will take account of these renegotiation costs in their bids. Similarly, if there are likely to be future cost reductions because of technical progress, which would lead to future rents for the incumbent, these too would be taken into account in the rivals bids for incumbency if they can be forecast.

7 I have found this theory particularly useful in thinking of the natural monopoly which is the State. In Lal (1988) I develop a model of the predatory state in which contestability plays a central role. The model is used to explain the rise and fall of empires in India over the millennia (see *ibid.*, Ch. 13.2).

and the best bid again will involve the whittling away of these potential future rents.

As regards windfalls, which could be positive or negative, there need be no inefficiency resulting from this unavoidable uncertainty. For just as in any real world market, say the near perfect markets for commodities, economic agents suffer positive and negative windfalls all the time without this leading to any persuasive case for regulation. However, in the case of natural monopolies, as these windfalls could continue for some considerable period of time, there could be political pressure for their curtailment if they are positive, and the danger of bankruptcy for the incumbent and hence of a disruption of supply if they are negative. This would provide a case for some renegotiation clause in the contract granting a franchise to a natural monopoly.

But what cannot be laid down is some ideal form of contract. For given the ubiquitousness of imperfect information and the associated uncertainty, agents can only search for the best available mutually advantageous contract. In Hayek's felicitous phrase the market is par excellence "a discovery process".

2. Game Theory

In contrast with this UCLA view on regulation we have the emerging technocratic view on the regulation of natural monopolies. This is based on the frail framework of non-cooperative game theory.⁸ As the leading lights of game theory recognise, it is of very limited practical relevance because of the plethora of Nash equilibria which can be generated (Binmore(1990), Kreps(1990)). Though of use in training the intellectual muscles of the young, it has not as yet yielded any robust policy relevant results in my view.⁹

8 See for instance Gillbert and Newberry (1994), which also has references to this literature.

9. But see Laffont and Tirole (1993) for an attempt to provide a textbook for the dirigiste technocratic regulator!

IV. ON PRIVATISING INFRASTRUCTURE IN INDIA

So how in practice should the current and future provision of infrastructural services in electricity, natural gas, water, sewerage, roads, telecommunications, be dealt with? Though there are some important differences between these different "utilities", they have one common feature. The natural monopoly element in their provision consists essentially of the "networks" they use to "ship" their products. They provide common "transportation" facilities for all possible users rather than being dedicated to individual ones.¹⁰ Thus an electricity grid, a gas pipeline, a system of telephone lines, water and sewage pipelines, railway track and of course roads are "networks". All other aspects of the provision of the services of these utilities can be made competitive by allowing multiple users of these networks to service consumers.

Thus consider the provision of electricity or gas. There are three stages, and ideally they should be separated by having for instance separate companies in each. First there is the production stage, second the transmission stage through the common "network" and finally the distribution stage to consumers. There is no reason in the absence of government regulation why the first and last of these stages should not be competitive. If rival firms are free to produce electricity as they see fit, and to service users on the common "network" there is no intrinsic reason why the production and distribution of electricity need require regulation. It can be produced and distributed like any other commodity by competing firms.

This leaves the "common" network. Here there are two choices. The first, is for it to be communally owned and financed through taxation, but built and run through a franchise given to the lowest private sector bidder. The services of the network would then be available to any user at a fixed fee, or if thought desirable because of administrative costs say- free. This is the solution for instance adopted for most public roads in many countries.

10. See Kay (1994) for this illuminating characterisation of the natural monopoly element of utilities. But I do not subscribe to the technocratic regulatory conclusions of his argument.

However, given the severe fiscal constraints besetting both state and central governments, this tax financing of infrastructural networks is not likely to be of great appeal in India in the future. So the second purely privately financed alternative is worth considering.

Consider electricity. First, each regional grid is set up as an independent private time-bound franchise. This franchise is then auctioned, with the conditions of the franchise including price-quality and expansion considerations, during the fixed period the franchise will operate. The bidder who bids most for the existing grid whilst meeting the other franchise conditions gets the franchise for the stipulated period.

At the end of the franchise there are two options. One, is for the grid to return to the "community" which then auctions a new franchise for the grid as before. This reversal of the assets in the expanded "network" to the community is very much the practice, for example, which China has adopted in its foreign direct investment projects.

The other alternative is for the incumbent of the grid to obtain the highest price anyone is willing to pay for the grid, subject to the new price-quality and expansion conditions. Of course the incumbent would also be able to participate in the bidding procedure.

There are a number of reasons to favour this latter alternative rather than have the "network's" capitalised value revert to the community at the end of the franchise. As can readily be shown in the second form of contract where the incumbent recoups the capitalised value of the grid from the highest bidder for the new franchise, the price charged users of the network, and hence the price to final consumers will be lower than with the first option where the grid reverts back to the community. Of course, what the consumer gains through lower prices, he loses through the loss of tax revenue which would accrue if the grid reverted back to the

community.¹¹ But if, as is readily apparent in India, for reasons of what may cryptically be called political economy the social value of a rupee of tax revenue is less than one rupee, in contrast to what I believed in my misguided youth,¹² consumers may be better off getting their dissipation of the potential rents from the natural monopoly through a reduction in prices than through the government budget.

The second reason for preferring the second option where the incumbent "sells off" the grid to the highest bidder after the end of his franchise is that this reduces the time inconsistency in his investment decisions which could arise with the other option of the grid reverting to the community. For in this latter case, he would

11. Thus suppose the sum bid by the successful incumbent for the existing grid is K , and the price he agrees for the bid is p per unit, and also the level of expenditures of expansion and maintenance he incurs to meet the quality dimension of the franchise are $E(t)$ and $M(t)$ in any year t . The quantity of the service he hopes to see in any year is $Q(t)$. If his discount rate is r , and the franchise's life is for T years, the incumbent's present discounted value of his costs and benefits for the first option, under which the grid reverts back to the community at date T , will be given by :

$$\sum_{t=0}^T \{ [P \cdot Q(t) - E(t) - M(t)] / (1+r)^t \} - K = 0 \quad \dots (1)$$

If he can see the grid under the second option, at the end of the franchise for the sum $K'(T)$, he will with the same quality requirements concerning expansion and maintenance as before, bid a price p to break even, so that :

$$\sum_{t=0}^T \{ [P' \cdot Q(t) - E(t) - M(t)] / (1+r)^t \} - K + K'(T) / (1+r)^T = 0 \quad \dots (2)$$

As the potential incumbent should be indifferent between these two choices, (1)-(2) = 0, which yields :

$$P = p' = K - K'(T) / (1+r)^T \quad \dots (3)$$

The price under the second option will be lower depending upon the expected capitalised value of the grid the current incumbent can garner at the end of his franchise.

12. See Lal (1980), and Lal (1993) Chp. 12, for why I now believe the shadow price of public funds is likely to be less than unity.

have an incentive to underinvest in both maintenance and expansion towards the end of his incumbency, and thus run down the assets of the natural monopoly. This would be avoided if he could obtain the capitalised value at the end of his incumbency of the assets he bought, maintained and created during his franchise.

Now move to the next stage, the transmission of electricity at the intra-regional or local level. The same scheme would be applicable. Intra-regional or local franchises would be set up and auctioned on the same principle as the regional grid.

This would mean that the transmission and distribution functions of the existing State Electricity Boards (SEBs) would need to be separated. With any user of the "network" having access to it at the fixed fee determined in the auction for the "network", any company could set itself up without any government regulation to sell electricity to consumers. These companies distributing electricity could include the privatised part of the distribution component of the existing SEB's.¹³ With the generation of power privatised, these distributing companies would be able to purchase electricity from the cheapest source given the varying demands for power. In fact as has happened in the UK a spot market for delivery of power by competing generators would develop. These generators could also end up specialising, with some finding it profitable to provide base load and others peak load power. There would be no need for government intervention of any sort in either the production or distribution of power.

13 It should be noted that the existing losses on the books of the SEBs would have to be written off before privatisation, on the economic principle that "bygones are bygones". But the fear that such a privatisation of SEBs would necessarily involve large job losses amongst existing employees unfounded. Under the Scheme proposed in this lecture, the new private "network" companies at the local/regional level would take over the part of SEBs currently providing "network" services, whilst there is nothing to prevent the "distribution" part of the current SEBs launching themselves as a competitive private distributor of electricity services. What must not be permitted is for this "branch" of the current SEBs to retain their monopoly in the distribution of electricity to consumers.

Similar schemes can be set up for all the other infrastructural services whose supply needs to be urgently expanded in India, and which can no longer be funded from tax revenues. This would also prevent the regulatory jungle and rentseeking that the botched privatisation of utilities in the UK has promoted (see Robinson, Beesley (ed)). India would thus be able to avoid the dirigiste jump from the frying pan of planning to the fire of regulation.

CONCLUSION

Prof. Shenoy's was a lonely but eloquent voice pointing out the folly of planning in India. He was opposed by a clerisy claiming access to the latest technocratic thinking. They prevailed. But their prescriptions made it impossible to fulfill the pledge Nehru made in his famous "tryst with destiny" speech at Independence: "to wipe every tear from every eye". Thirty years after Prof. Shenoy's effective vindication, as India, however belatedly moves from the plan to the market, another form of dirigisme promoted by the current technocratic "best and the brightest" could once again blight the prospects of fulfilling this pledge. In this lecture I have attempted to show that first, as before, with so much contemporary theory, in Peter Bauer's sage words: "the emperor's new clothes are of the finest hue but there is no emperor within". Second, that as regards the problem of natural monopolies in the provision of infrastructural services- which India desperately needs to expand- there are simple ways to avoid the new dirigisme of regulation which, as in the past, the Siren voices of the clerisy are promoting. In this sense I hope this lecture is a fitting memorial to a great classical liberal economist and a great Indian who showed uncommon wisdom and courage, and whose only fault was not to be in tune with his times.

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