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SOME ASPECTS OF PERFORMANCE OF STATE SECTOR
ENTERPRISES IN KERALA

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Almost all the state governments in the country assume the role of entrepreneur in one form or other for the development of industries supplementing the private and central government investment in the state-regions. The relative position of the individual states is however different with some states playing a primary rather than secondary role. At the time of the formation of the state of Kerala, it inherited an industrial base mostly from the princely state of Travancore which was one among the then states where the role of the state had been commendable in fostering industrialisation 1/ The story since the formation of the Kerala State is too well known to be repeated here. There were several constraints to carry forward the initial momentum in industrialisation. The state lost many major revenue yielding avenues for which there was no adequate compensation from the central government 2/. Consequently, the intencion of the

1/Other princely states like Mysore, Hyderabad and Baroda were also involved in developing industries and perhaps had a longer history than Travancore. See for details, Raman Mahadevan, "Some aspects of the pattern of Industrial Investment and Entrepreneurship in Travancore during 1930s and 1940s " paper presented in the seminar on South Indian Economy, Centre For Development Studies, Trivandrum, April 25-29, 1988. By 1950, State-aided industrial concerns had a total paid up capital of Rs.984.57 Lakhs . Of these share worth Rs 350.55 lakhs were held by the govt. Further the govt. had advanced loans worth Rs. 159.64 lakhs to these concerns, see for details K.T. Ram Mohan "Industrial Evolution of Travancore, Certain Issues in Historiography" (Mimeo) Centre For Development Studies, 1987.

2/T.M Thomas Issac and P.K. Michael Tharakan. "An Enquiry into the Historical Roots of Industrial Backwardness of Kerala. A Study of Travancore Region", Working Paper No.215, Centre For Development Studies, Trivandrum.

state to establish "an inter-linked system of large, medium, small scale, co-operative and home units in the modern sector to make optimum use of natural and manpower resources to generate employment and income"1/ could not be effectively carried out.

This may be due to the paucity of resources on the one hand and heavy commitment of government expenditure to other social overheads such as health and education on the other. State government was also saddled with another major responsibility of rehabilitating the traditional industries like coir, cashew, handloom, textiles, minerals, fisheries, handicrafts etc. The point of emphasis is that the resource constraints did not facilitate an accelerated investment in the State Sector. The industrial structure emerged since independence was too top sided to ensure inter-sectoral linkages and agglomeration economies for the overall industrial progress 2/. Yet, the number of State Sector units increased from just two companies 3/ in 1946 to eighty four units in 1983-84 with an investment of Rs. 1687.95 crores.

As hinted earlier the achievement made by the state in laying down an industrial base commensurate with its population base has been unimpressive. In terms of levels of industrial development as reflected in per capita value, Kerala remained

1/ See the statement of policy of Government of Kerala with regard to the development of industries issued in 1960 and industrial policy statement issued by government in 1967 and 1983, Government of Kerala.

2/ See. K.K. Subrahmanian and P. Mohanan Pillai, Kerala's Industrial Backwardness, An Exploration of Alternative Hypothesis, Economic & Political weekly.

3/ There were only two companies but the number of departmentally managed enterprises were around 8 but most of them were later converted into companies.

below the national average in the sixties as also today.^{1/} The performance of state sector manufacturing enterprises with an investment of Rs.428.90 crores on 1984-85 was poor to make a significant contribution to the accelerated industrialisation of the state. The investment in the state sector has not been yielding adequate returns with a number of enterprises continue to incur losses beyond the value of paid up capital^{2/}. The reasons for the poor performance of state sector manufacturing enterprises are complex and understanding on it is rudimentary.

There are a number of studies relating to the performance of public sector manufacturing enterprises and utilities owned by central government. The studies on the state sector enterprises owned by the state government are rather limited. After surveying the literature on public sector enterprises including the state enterprises P. Chadhopadhyay observes "Really speaking, not much is known about them and it will be a good idea if research is initiated in the functioning of the government companies under the control of different states.

Even the annual report of these companies are prepared in such a way that leaves much to be desired^{3/} In recent years, one or two studies have appeared on the utilities owned by the State

^{1/} K.K. Subrahmanian and P. Mohanan Pillai op.cit.

^{2/} The total accumulated loss of state sector manufacturing enterprises as on 1984-85 stood around 73.10 crores. Source - A Review of Public Enterprises in Kerala, 1985-86, Bureau of Public Enterprises, Trivandrum.

^{3/} See P.Chadhopadhyay "Public Enterprises", A Survey of Research In Economics, Allied Publishers, New Delhi, 1975.

Governments^{1/}. The point of emphasis is that the manufacturing enterprises under state government control remains a relatively darker area.

Probably, one reason for this lacklustere attitude towards state sector enterprises may be due to the attitude and approach towards them. Conceptually, they are treated as synonymous with the central sector enterprises. Although the investments in both the organisations are made out of government funds we cannot overlook important differences between them arising from economic, organisational and environmental factors of the regions. As Hiten Bhaya rightly puts it "it is natural for every owner to assist his enterprise management in its external problems and relations when it is beyond its reach or authority such as licenses, permits, quotas, extra financial needs, problems with statutory authorities or with relevant public such as registrar and organised consumers. The state sector enterprises which need more of such assistance get the least from their government. By and large, this is forthcoming in the central sector where it is easier to render such assistance^{2/}. The point to underline in this context is that there are inherent problems in treating the state sector enterprises synonymous with central sector enterprises and accepting solutions to the problems in the same framework. The nature of problems the state enterprises face are different. Hence they need to be analysed separately and the solutions be sought keeping in view the

1/ See for example, Hemalatha Rao: Financial Performance of Public Enterprise, A study of Karnataka Electricity Board, Print well, 1987.

2/ Hiten Bhaya. "Public Sector: Colossus with Feet of Clay", Economic and political weekly (Review of Management) May 1983.

objective conditions prevailing in the given state regions. Such studies are all the more urgent for these states which have made already considerable investment in state sector enterprises are yet where the industrial progress is rather tardy.

Coming to Kerala, there exists a serious research gap in such a vital sector as state sector enterprises. We could come across only one study dealing with the administrative problems that these enterprises face in dealing with the day to day management^{1/} Apart from this isolated work, State Sector enterprises do not seem to have attracted any attention of research by scholars that it deserved.

Statement of the problem

Some interesting questions come to surface in the development of state enterprises in Kerala. Has the growth of state sector enterprises been by a process of self generation of surplus and its reinvestment? The obvious answer is no. For, most of these enterprises have been loss making propositions. The academicians and politicians alike condemn these tendencies as unfortunate. The lack of financial autonomy is identified as the major factor in loss making but simultaneously, its impact is felt in other major aspects of performance such as management, marketing, technology, interindustry linkages etc. which in turn make the enterprises nonviable. This interrelationship of the problem is very seldom emphasised in the literature on central sector enterprises, not to speak of state sector enterprises!^{2/}

^{1/} See Gangadharan Pillai, 'State Enterprises in Kerala', Kerala Academy of Political Science, Trivandrum, 197.

^{2/} P. Chadhopadhyay op.cit.

In the above context, we may try to build a general picture of the performance of state sector manufacturing enterprises in Kerala. The questions which will be taken up in the study will as follows. What has led to the poor financial performance of state sector enterprises? While pursuing this question we will be analysing the capital structure of these enterprises and its implications to the economic viability and financial efficiency of these units. This we feel may be a pointer to the outward dimension of the disorder. The perversity of this pattern may be manifest in other aspects. Therefore, we shall evaluate the input transformation efficiency of these units or the physical performance. In particular, we will be pursuing the following questions: Has the state sector industry's growth at any stage been hampered by the lack of technological expertise and scientific knowledge? What are the means by which state enterprises have access to new technology? How efficient are these means? What importance does the state place upon new technology? Are technology factors of any relevance to the development of state enterprises? What are the underlying mechanism by which state sector enterprises are becoming sick? Here the emphasis is on identifying the forces and factors that add up to this phenomenon of sickness. Here the emphasis will be more on a case study method.

Initially, the major question of environment for growth of these enterprises will be dealt with in terms of linkages of macro sectors in general and that of the inter industry level in particular. On the basis of conclusions emerging from the study a policy package is suggested to put these enterprises on a healthy footing.

Methodology, and Data Sources

By 1983-84 there were 86 companies in which the state has varying degree of ownership with an invested capital of Rs.1687.9 crores. Out of these 86 companies only 45 companies are producing enterprises engaged in industrially productive activities; the rest of them are in public utilities, financing, promotional and trading activities. The heterogenous character of the state enterprises renders a very comprehensive analysis of its technology patterns an extremely difficult job. We may therefore confine our analysis to mostly technology intensive areas of industrial activity like chemicals, engineering etc. We may proceed with the analysis of the units by forming product clusters. Product clustering of the units will be done among the those units with identifiable technological characteristics.

The identifiable clusters with distinct technological characteristics will be analysed in terms of its financial and technological performance. This inter alia include an examination of capital structure and technological behavior such as linkages, R & D behavior, diversification, innovation etc. and the strategy of planning for technology acquisition etc. Following this we may analyse case by case the reasons for the sickness or health of state sector forms by undertaking case studies of a few number of selected enterprises. The Selection was on the basis of their performance pattern. The inter firm linkages which may highlight the flow of goods among the enterprises (forward and backward) was captured by identifying the material inputs and purchase groups and also by working out intersectoral linkage patterns.

As was mentioned earlier the study of state sector enterprises in Kerala is a largely neglected area in the economic literature. Therefore, for a study of this sort, data had been collected from the survey of the concerned units. Secondary sources such as administrative reports, reports of the committee on public undertakings, reports of the bureau of public enterprises etc. were also consulted. .

GROWTH AND CHARACTERISTICS

At the time of the formation of the State, Kerala inherited a strong industrial base from erstwhile Travancore consolidation of which was constrained by several factors; though additional investment in the state sector continued to grow. The relative progress achieved in the formation of state sector enterprises appeared commendable. By 1981-82, Kerala had the highest number of state enterprises (around 67) in the country, though its investment position is next to Uttar Pradesh and Andhra Pradesh (see Table 1). Of the investment of Rs. 13358 lakh, 71 percent was in the manufacturing/commercial establishments, 18 percent was in promotional enterprises and 11 percent in financial enterprises^{1/}. The latest picture (1985-86) a relative position of investment indicated that the total investment had in fact declined. To Rs.115070.75 lakh pushing Kerala down to fifth position vis-a-vis other states in the union.^{2/} But in relation to other sectors (private, central and joint) within the state, state sector manufacturing investment constituted only around 12%. The implications of the pattern and direction of this relatively low investment is discussed in the subsequent sections. Here we shall discuss in detail the characteristics of state sector investment.

^{1/} See Eighth Finance Commission Report, Govt. of India, New Delhi, 1984.

^{2/} See T.L. Sankar, R. Nandagopal and R. K. Mishra, State Level Enterprises In India, An overview, Economic and Political weekly, February 25, 1989.

Characteristics

Of the 86 companies 45 were fully owned by government, and 17 were partly owned. The remaining 24 were subsidiary companies. Of the subsidiaries, 21 were owned by fully owned government companies and 3 were partly owned government companies.

Table 1

Capital Investment by State Governments in Statutory Corporations/
Companies 1981-82
(Rs.Lakh)

States	<u>Financial</u>		<u>Promotional</u>		<u>Manufacturing/</u>		<u>Total</u>	
	No.of enter- prises	Invest- ment	No.of enter- prises	Invest- ment	No.of enter- prises	Invest- ment	No.of enter- ment prises	Invest- ment
1.Andhra Pradesh	1	728	8	5006	28	8616	37	14350
2.Assam	1	89	6	1510	15	1283	22	1882
3.Bihar	3	944	7	1929	23	3998	33	6871
4.Gujarat	3	1000	6	418	20	2954	29	4372
5.Haryana	3	224	9	2878	9	436	21	3538
6.Himachal Pradesh	1	119	5	1328	8	1021	14	2468
7.Jammu & Kashmir	3	112	4	1294	10	3568	17	4964
8.Karnataka	9	3014	11	1497	42	8070	62	12581
9.Kerala	4	1414	12	2404	51	9540	67	13358
10.Madhya Pradesh	5	313	6	1603	19	3574	30	5490
11.Maharashtra	2	2674	15	3444	19	1422	36	10240
12.Manipur	1	15	2	91	1	313	4	419
13.Neghalaya	-	-	3	420	6	842	9	1282
14.Nagaland	-	-	2	557	3	592	5	1282
15.Orissa	3	829	7	2721	52	4834	62	8584
16.Punjab	2	423	10	6630	14	3627	27	10680
17.Rajasthan	4	2762	3	374	18	1953	25	5089
18.Sikkim	2	105	1	22	8	370	11	497
19.Tamil Nadu	2	1302	8	5185	33	7939	43	14426
20.Tripura	2	24	3	129	3	491	8	644
21.Uttar Pradesh	5	2836	23	2850	31	18541	59	24227
22.West Bengal	1	338	13	1503	23	4838	37	6679
Total	57	14265	164	43783	436	91522	857	154570

Source: Eighth Finance Commission Report, Govt. of India, New Delhi, 1984.

The oldest of the government companies going by the year of incorporation was Travancore Sugars and Chemicals Ltd.

established in 1937, and the Metropolitan Engineering Company was established in 1945. These were private companies and came under the governmental control in 1974 and 1980 respectively. But the first company organised in the State sector was the Forest Industries Ltd. followed by Travancore Titanium Products Ltd., both were formed in 1946. At the organisational level there was also a process of conversion of some departmental undertaking into companies.

Table 2

Year-wise increase in the number of companies in State Sector

Year	Number of companies started	Cumulative Total	Year	Number of companies started	Cumulative Total
1946	2	2	1968	3	19
1947	0	2	1969	5	24
1948	0	2	1970	2	26
1949	0	2	1971	2	28
1950	1	3	1972	6	34
1951	1	4	1973	4	38
1952	0	4	1974	5	43
1953	0	4	1975	13	56
1954	0	4	1976	6	62
1955	0	4	1977	2	64
1956	0	4	1978	6	70
1957	1	5	1979	1	71
1958	0	5	1980	3	74
1959	0	5	1981	3	77
1960	1	6	1982	0	77
1961	2	8	1983	4	81
1962	1	9	1984	5	86
1963	5	14			
1964	1	15			
1965	0	15			
1966	1	16			
1967	0	16			

It is seen from the Table 3 that the decade seventies witnessed an unusual expansion of State enterprises with an addition of 21 enterprises. Activity-wise the distribution shows that of the 86 State sector enterprises 45 are in the

manufacturing, 6 in the area of plantation and fisheries, 18 are engaged in servicing and financing, trading and infrastructure 12, institutions for the upliftment of poorer sections. Total capital employed in these enterprises approximate Rs. 1687.95 crores and employment generated around one lakh. Enterprises engaged in trading and infrastructure dominate both in employment and investment followed by manufacturing.

Table 3

Sector-wise Picture of employment and investment in State Sector enterprises as on 1983-84

Sector	No.	Employment	Capital invested (Rs. crores)
Factories	45	22,336	428.90
Plantations, Fisheries	6	11,361	53.92
Servicing and financing institutions	18	5,898	298.63
Trading and Infrastructure	12	61,568	893.72
Institutions for the upliftment of poorer sections	5	284	12.78
-Total	86	101,447	1,687.95

Source:- Bureau of Public Enterprises, Kerala.

By 1982-83 the total employment represented by the State sector enterprises was around 101,447 regular employees and 30,625 seasonal employees.^{1/} This represents roughly 10 percent of the regular employment in the organised sector.

From the analysis of the type of enterprises established over time by the State, it is seen that 80% of the workforce employed and 60% of the invested capital are in 26 enterprises in

^{1/} The seasonal employees are mostly accounted by the Cashew Processing Industry.

operation before 1970. Similarly, the average number of employees per establishment before 1970 were 3000 and after 1970 was only 350. It is seen from the type of activity of the enterprises that most of the enterprises added after 1970 were in light technology areas of in service/promotional enterprises. During the emergency period 1975-77, 21 state enterprises were added.

Table 4 gives further details regarding the structure of employment in these enterprises. It is seen that 80% of the employment and 64% of the investment are in enterprises employing more than 100 employees. Their number is limited to only 14. However, the majority of enterprises numbering around 60 employ people below 200. It should be borne in mind that the State undertaking employing 1000 or more people are a few corporations/boards such as Electricity Board Transport Corporations etc. which are operating in the area of infrastructure and services. In the case of manufacturing enterprises those employing more than 1000 are limited in number and also they were established before 1960. Confining to the manufacturing sector, it is seen that on the average stage enterprises employ 440 persons per enterprise. It is also seen from the table 5 that very high capital labour ratio is associated with industries like chemicals and low capital labour ratio is associated with agrowood, ceramics and Textile and engineering industries. On the average one crore rupee employed by state sector generates direct employment for hardly 52 people. In other words the major chunk of investment is concentrated in highly capital intensive areas like chemicals. The total loss incurred by all enterprises amounts to Rs.161.56 crores.

Table 4

Classification of State Enterprises according to the number
of employees 1984-85

Number of employees	Number of units	Employees	Capital employed (Rs.crores)
1000 and above	14	81983	1093.00
500 - 1000	15	12017	299.23
200 - 499	20	6633	191.53
100 - 199	22	794	103.30
100 and below	18	101447	1687.95

Source:- Same as table 3.

The Manufacturing Sector

We have detailed above the picture of the entire spectrum of State owned enterprises in Kerala. Here we may confine to a discussion of manufacturing enterprises only.

The distribution of manufacturing enterprises according to the line of activities gives the following picture. Of the enterprises majority of them are operating in the area of chemicals and pharmaceuticals. As seen from the table the manufacturing sector account for around 20% of the employment of the State sector enterprises and 25% of the capital invested, 45% of the total accumulated loss of all enterprises. Industry wise investment per employee is highest in the case of chemicals and lowest in the case of ceramics and refractories followed by agrowood industries (See table 5). Similarly, accumulated loss per employee is highest in the case of Electricals and lowest in the case of agro-based and iron and steel industries.

By a rule thumb. we can now attempt the opportunity cost of the accumulated loss in terms of employment foregone due to the loss incurred by these enterprises. On the average, per employee investment in state sector enterprises works out to Rs.1.92 lakh. had there been no accumulated loss the state sector manufacturing enterprises who have generated 3807 more direct employment.

Table 5

Industry-wise distribution of factories according to employment investment and loss in State Sector Enterprises in 1984-85.

Industry	No.of enter-prises	Employment	Capital investigated (Rs.crores)	Accumulated loss (Rs.crores)	Investment per employee (in Rs.lakhs)
1. Electronics	8	3825	102.22	11.16	2.67
2. Chemicals and Pharmaceuticals	9	6267	210.11	14.54	3.35
3. Iron and Steel	4	1423	30.63	2.05	2.15
4. Textiles	3	1767	7.17	7.26	0.40
5. Electricals	5	3311	43.98	21.53	1.23
6. Ceramics & Refractories	5	1644	7.80	8.60	0.04
7. Agro-wood etc	7	3301	16.99	4.79	0.05
8. Engineering	4	728	10.00	3.17	1.37
Total	45	22336	428.90	73.10	52.00

Source:- Same as table 3. op.cit.

We have mentioned earlier that the percentage of employment generated by State owned enterprises is higher in regard to those enterprises started before 1960. The decade-wise distribution^{1/} showed that the share of employment and investment is higher in the case of enterprises established before 1965 accounting 67.76% and 55.65 percent of employment and investment respectively; though similar trend is not seen in the case of accumulated loss (see Table 6).

^{1/} Corresponding to the year of the formation of the state(1956)

Table 6

Employment, Capital invested, Accumulated loss in State
Factories according to the year of Registration

Period	Number of units	% of total employment	% of total capital invested	% of accumulated loss
Before 1965	18	67.75	55.65	48.94
1966-75	17	23.23	29.43	38.25
1975 and beyond	10	9.01	14.92	12.81
Total	45	100	100	100

Source:- Same as table 3.

The above description, presented a picture of loss making enterprises. Though, on balance this is largely true, of the 37 companies for which consolidated balance sheet was available there are at least ten profit making enterprises. The profit earned by these enterprises on the average works out to 3 percent of the paid up capital (see Table 7).

Table 7

Features of profit making companies: Present Position
of State Sector Undertakings (1984-85)

Industries	Number of Companies*	Profit as a % of paid up capital	Profit as % of Sales	Profit as a % of Fixed Assets(net)
1. Electronics	2(8)	1.84	1.43	1.97
2. Electrical	2(5)	7.56	2.76	9.25
3. Chemical	1(7)	4.26	5.72	10.30
4. Iron and Steel	1(3)	0.25	0.50	0.31
5. Ceramics	1(4)	1.60	1.53	1.83
6. Engineering	1(3)	2.09	3.20	1.03
7. Textiles	1(4)	0.06	0.09	0.10
8. Pharmaceuticals	1(2)	22.79	12.17	9.84
9. Others	0(1)	0.00	0.00	0.00
Total	10(37)	2.96	3.15	6.06

* Figures in the bracket represent the loss making companies.

Source:- Same as table 3.

We have given above only a snap shot picture of nature, characteristics of the state sector enterprises in general and that of manufacturing in particular. We may conclude this section with a relative picture of the size of these enterprises vis-a-vis other major sectors in the State. Among the large and medium industrial enterprises operating in the state, the State sector owned enterprises constituted 23 percent of all units, 10.9 percent of gross fixed assets, 10.9 percent of gross fixed assets, 12.1 percent of direct employment (See table 8). As a preliminary step to explore the loss making phenomenon, in the next chapter we shall be discussing some aspects of financial management of state sector enterprises in Kerala.

Table 8

Sector-wise distribution of large and medium Industries
in Kerala (1981-82)

Particulars	Central sector	State sector	Co-operative sector	Joint sector	Private sector	Total
A.Units in Production	17 (10.4)	38 (23.3)	7 (4.3)	11 (6.7)	90 (55.3)	163 (100)
B.Gross Fixed Assets (Rs. crores)	461 (55.8)	90 (10.9)	10 (1.2)	13 (1.6)	252 (30.5)	826 (100)
C.Total Investment (Rs.crores)	627 (52.6)	144 (12.1)	14 (1.2)	18 (1.5)	389 (32.6)	1192 (100)
D.Estimated Annual Turn-over (Rs.crores)	804 (54.2)	126 (8.5)	23 (1.6)	11 (0.7)	519 (35.0)	1483 (100)
E.Direct Employment	21163	16228	3062	1750	41442	83645

(Figures in the bracket shows percentage to total)

Source: Report of the High Level Committee on Industry Trade and Power, Government of Kerala, Volume I.

SOME INTER-RELATED ASPECTS OF FINANCIAL MANAGEMENT

Finance is a major area in business management and hence in this chapter we will be looking into some aspects of financial management of state sector manufacturing enterprises. The financial management deals with the three major decision making areas namely the investment decision, financing decision and the dividend decision. In this section we will be discussing mostly the second one ie. the implications of financing decisions with regard to the capital structure of state sector enterprises. To start with, a closer look at the capital structure of state sector enterprises reveal some interesting features. Of the capital invested hardly 23 percent was through the share capital and a major portion of capital base have been financed by long term borrowing. In the capital of manufacturing around 28 percent and the rest being accounted mainly by loan capital. This process of spreading thinly share capital across a wider spectrum of large number of enterprises is the characteristic feature of capital structure in State enterprises. The available resources had to be spread very thinly because the quantum of resources available with State Government for investment remained more or less the same over time relative to capital outlays in other sectors such as education, health, agriculture etc. Our analysis revealed that only the outlays committed to State enterprises (including services) not only fluctuated very widely over time but also declined sharply to 10.61 percent by 1984-85

from 22.3 percent in 1963-64 (see Table 9). The return from such investment during this period marked out hardly 2.70% from manufacturing and 0.5% from services.^{1/} Evidently, majority of enterprises have become loss making propositions as already discussed in the previous section.

Table 9

Government Investment in State Sector Enterprises in Relation to Investment in other Sectors

Years	Investment in manufacturing public enterprises	Investment in public sector engaged in service	Total investment	Total development outlay	1 as % of 4	2 as % of 4	% of governmental investment in public sector (3 as % of 4)
1960-61							
1961-62							
1962-63	11.85	0.52	12.37	1262	0.94	0.05	0.98
1963-64	98.86	183.85	282.71	1266	7.81	14.53	22.33
1964-65	154.51	44.99	199.50	1253	12.34	3.59	15.93
1965-66	174.31	97.25	271.56	1410	12.37	6.90	19.26
1966-67	254.75	70.88	325.63	965	26.40	7.35	33.75
1967-68	368.86	67.00	435.86	1481	24.91	4.53	29.43
1968-69	53.02	40.60	93.60	1680	3.16	2.42	5.58
1969-70	85.69	11.95	97.64	1717	4	0.70	5.69
1970-71	85.69	11.95	97.64	2430	3.53	0.50	4.02
1971-72	159.12	13.50	172.62	3157	5.04	0.43	5.47
1972-73	271.67	6.50	278.17	3170	8.57	0.21	8.78
1973-73	325.25	327.68	652.93	3837	8.48	8.54	17.02
1974-74	371.00	60.39	431.39	3228	11.50	1.87	13.37
1975-75	545.58	223.52	769.10	4498	12.13	4.97	17.10
1976-77	458.92	181.93	640.85	5632	8.15	3.23	11.38
1977-78	679.39	214.81	894.20	7334	9.27	2.93	12.20
1978-79	802.60	258.52	1061.12	6551	12.26	3.95	16.20
1979-80	1842.91	190.69	2033.60	10252	17.98	1.86	19.84
1980-81	1485.12	359.11	1844.23	11523	12.89	3.12	16.01
1981-82	2321.59	215.42	2537.02	12830	18.10	1.68	19.78
1983-84	1193.47	517.46	1710.93	20424	5.85	2.34	8.38
1984-85	1512.64	298.92	1811.56	19103	8.86	1.75	10.61
Total	14912.53	3687.37	18599				

Source: Finance Accounts Various Issues, Govt. of Kerala, Reserve Bank of India Bulletins: Finance of State Governments, Various Issues.

^{1/} See finance Accounts, Government of Kerala, various issues.

a) Spreading a thin layer.

As already mentioned in the first section, the growth in number of enterprises must have been possible due to this process of spreading the thin layer of capital. In fact with the growth of number of enterprises there was no commensurate growth of investment in manufacturing. We have also attempted to see over time how much resources in real terms (at constant prices) have been committed by the state in state sector manufacturing enterprises. The period taken was between 1962-63 to 1984-85. When the series at current prices were deflated by price series of plant and machinery (1960 = 100 and also 1970 = 100) it was found that the level of investment was found only marginally higher compared to 1962-63. In fact, the investment registered an increase of hardly 0.25 percent (at 70-71 prices). Table 10 gives the details of both the manufacturing enterprises and service enterprises separately.

Table 10

Annual Average Compound Growth Rates of Government investment in State Sector manufacturing enterprises and service enterprises

Period	State Manufacturing	State Service Sector	Total (Manufacturing service)
1962-63) 23 years 1984-85)	0.25 (24.70)	0.34 (33.60)	0.25 (25.40)
1962-63) 12 years 1973-74)	0.35 (35.20)	0.80 (76.7)	0.43 (43.4)
1973-74) 12 years 1984-85)	0.15 (-)	0.08 (-)	0.10 (9.70)

N.B. In brackets growth percentage are presented.

Loss making has its own inherent logic. The budgetary process in such a situation will be more adhoc and crisis oriented than development oriented. Since there is a total dependence of enterprises on governmental resources. Government have a preference to provide loan than equity, for, it will avoid the uncertainty about yield and the period over which it will be earned. Government provides loans to the extent that they are properly serviced. From the enterprise point of view equity is a flexible instrument while loans add to cost, in turn, affecting pricing and competitiveness of the firm.

We are not passing judgement on the behaviour of State Government in favouring loan to equity but what is questionable is the easy options like granting a loan to tide over the crisis when the crisis itself is generated due to the lack of sufficient equity base. When loan enters as a major element in the capital structure it generates its own logic of a debt trap. This tendency of providing only seed capital became more profound since Bank nationalisation. The prospect of loans from financial institution, it is often pointed out had led to a proliferation of state enterprises in all states with little thought on the viability of such enterprises.^{1/}

The gravity of the situation can be realised when we compare the extent of loan accumulated over time in the capital structure. * While the standard norm is of 50:50 distribution between debt and equity, in some enterprises under State Government the debt equity ratio is as high as 8:1. Around 18 such enterprises which have high debt equity ratio (3:1)

^{1/} I am grateful to Mr. Ramachandran former Chief Secretary, Kerala, in enlightening me on this aspect.

accounted for 71% of the total accumulated loss of the state sector enterprises. These enterprises accounted for 41% of the total equity capital of state sector enterprises. Coming to the revenue part accruing to the government our calculation showed that dividend is only a miniscule proportion of the total revenue.

Now let us hypothesise a situation in which these loans are converted to equity. How will the picture look like ! We have calculated the revenue due to government from dividend, interest charges, income tax, sales tax excise duty etc. If we add up these elements of revenue it stood at 24.60 crores in 1981-82 and steadily increased to 204 crores by 1984-85, increasing element being interest charges. (see Table 11). This way of looking at the contribution of State Sector Enterprises is erroneous because the revenue yield other than dividend and interest charges may be available to the government had the private sector invested the same resources. Hence we omitted those items and calculated the dividend and interest charges which worked out to 20%, on the 33 percent of the paid up capital invested in all enterprises in the year 1984-85.^{1/} which in turn means that the entire investment can be recouped within three years! The point of emphasis is that there exist scope for conversion of loan element into equity.

^{1/} As on 1984-85, government equity in all enterprises amounted to Rs. 241.10 crores and the interest and dividend accrued stood at Rs. 78.42 crores.

Source - Large And Medium Industries Including Public Sector Industries, State Planning Board, Trivandrum, November, 1988.

Above given is a snapshot picture of all state sector enterprises including those in trading activities where the debt equity ratio can be fairly high then in the case of manufacturing^{1/} Therefore, we have separately worked out the incidence of interest due to debt accumulation.

Table 11
Total Revenue Paid and Payable to the Government for four years
Rs. crores

	1981-82	1982-83	1983-84	1984-85
1. Dividends	0.17	0.17	0.17	0.64
2. Interest Charges	7.50	26.42	33.12	77.78
3. Income Tax	0.71	0.93	06.66	09.00
4. Sales Tax	7.14	19.51	17.04	37.89
5. Excise Duty	8.60	18.58	22.54	32.54
6. Other Taxes	0.48	0.84	18.77	37.12
Total	24.60	66.45	99.30	194.97
Govt. equity	239.10	240.00	240.18	241.10

Table 12
Total Revenue paid and payable to the government by manufacturing enterprises (1984-85)

	1984-85 (Lakhs)
Interest	1347.48
Dividend	1.20
Excise duty	1698.49
Sales tax	1346.17
Other taxes	541.86
	4935.20
Govt. equity	18500.41

As table 12 shows the major source of income to the state continues to be from interest charges and it constitutes nearly 9 percent of government equity committed in these enterprises in a

^{1/}See Report on the Economic Advisory Council "Public Enterprises In India, some current issues May, 1987, New Delhi and also see Report of the Committee To Review Policy For Public Enterprises (Chainman, Arjun Sengupta) Ministry of Industries, New Delhi, 1986.

single year^{2/} . Needless to say we found a high correlation (0.90) between the extent of indebtedness and loss making, the higher the debt element greeter the quantum of loss and viceversa.

This does not mean that debt or lack of sufficient equity base is the major factor in the poor performance of state sector enterprises. May be this successive debt element must have been accumulated while remaining 'seek' for a long time. Some aspects of it we will be analysing in later sections. Perhaps there may be other equally important factors such as defective project planning, product planning, pricing, sales promotion policies etc in explaining the phenomenon of loss making in state sector enterprises. An analysis of such factors are beyond the scope of this study. Therefore, we shall confine here to a further analysis of the pervasive impact of financial strategy on other aspects of performance.

Some Implications of financial strategy on financial performance

Let us discuss now the implications of this financial strategy on financial structure of state sector enterprises by measuring financial ratios. These ratios are conventionally used to see whether the financial position of the company is good or bad or indifferent. At the same time, they reflect the direction of change, rate of change as well as the future potentialities. But we may strike a note of caution here. The ratios are only a

^{2/} As on 1984-85 the government equity in the manufacturing enterprises stood at 185.41 and interest and dividend accounted for Rs.14.67 crores.

Source - Large and medium industries including public sector industries opcit.

preliminary step in interpretation. Therefore, we would like to see further the productivity performance of the state sector units before any further conclusion are drawn regarding the operational efficiency.

We had the intension to cover as many units as possible for this purpose but for uniformity regarding age and size, we had to drop many units in between. Another major problem faced by us had been the non availability of data for a longer period. The annual returns of state enterprises are not submitted to government in time. There are atleast eight or nine state sector enterprises which did not even finalise their annual reports submitted by the state sector enterprises, the systematic procedure of collecting information was initiated by Bureau of Public Enterprises from 1978-79. Therefore, we could begin our analysis with the base year 1978-79. The distribution of the sample units Selected for financial and productivity analysis between the period 78-79 to 83-84 according to the industry is given below (see table 13).

It may also be mentioned that, of the 16 units in the sample, eleven units are loss making enterprises and only four units are making any profits. The distribution of the profit making units in the sample according to the industry showed the following pattern; two units belong to the chemical industry groups, one in electricals, and one in engineering industry.

Table 13
The distribution of Sampled Units according to Industry

Industry	No. of sampled units	Share in the total output as on 1983-84
1. Chemicals	3	43
2. Electricals	3	34
3. Engineering	2	25
4. Ceramics & Refractories	2	32
5. Agro wood industries	3	40
6. Textiles	2	36
7. Rubber	1	na
Total	16	38

From the table 13 it is seen that of the 16 sampled units, their share of 16 units were around 38 percent in the total output accounted by all state sector enterprises in Kerala as on 1983-84. The average size of the firms as measured by total number of employees is relatively high in chemical industry and in ceramics and refractories. The average age of firms are found highest in the case of electrical goods industry and lowest in the case of textiles (Table 14).

Table 14
Average size and average age of a sample firms 1983-84

Industry	Average size (employment) No	Average age year
1. Chemical	1058	32
2. Electrical	513	41
3. Engineering	470	14
4. Ceramics & Refractories	345	19
5. Agro and wood based	480	36
6. Textiles	381	17
7. Rubber	125	32
Average	530	25

For the purpose of examining the implications of financial strategy of financial structure, we are considering the following financial ratios. They are (a) net worth to total assets

Table 15

Financial Efficiency Indicators of Firms in the Sample (78-79 to 83-84)

Ratios	For all firms	Industry wise						
		Chemicals	Electricals	Engineering & Refractories	Ceramics	Agro based	Textiles	Rubber
I Net worth to total assets	0.38	0.59 (0.96)	0.42 (1.00)	0.30 (0.99)	0.10	0.14	0.12	0.8
II Total Liabilities to total net worth	1.48	1.38 (9.8)	1.47 (11.1)	1.38 (0.99)	1.70	1.64	1.48	1.84

Figures in the bracket indicates the financial ratios of profit making enterprises.

(b) total liabilities to net worth. Let us briefly explain these ratios. The first ratio represents the percentage of total internal funds to total assets, the higher the ratio nearing 100 the stronger the financial stability and vice versa. The second ratio contrasts external with internal equity reflecting the relative interest of creditors and therefore the long run stability. The smaller is the ratio the higher is the interest of shareholders as compared with creditors. The ratio less than 100 is therefore desirable. If it exceeds 100 it would mean that handicap of interest charges become a critical burden.

Table 15 shows the stability ratios. Surprisingly, both overall and industrywise ratios showed extremely unsatisfactory levels which in turn reinforces our earlier hypothesis of weak capital base of state sector enterprises reinforcing a weak financial structure. It is a big relief to report that when the financial ratios of profit making companies were considered it was found that their ratios had been more less on satisfactory levels. Though industry-wise picture shows more or less the same

trend, a note of caution may be added. The broad comparison of financial ratios of firms dealing with heterogeneous product lines is apt to be misleading. But since there is considerable deviation from accepted norm product heterogeneity is unlikely to make much difference.

It may be mentioned in this context that the financial handicap imposed on them render them unable to initiate their own biological growth process. Since all the loss making enterprises listed in the strictly stagnates we do not have the scope to investigate the relationship between the financial policy variables. (such as profitability, retention ratio, liquidity, debt ratio etc). However, when we examined the case of profit making companies the rank correlation between the growth of firms and the growth of financial variables such as profitability ratio, retention ratio, for the period 78-79 to 83-84 the coefficients, showed positive signs. However, profitability alone was found highly co-related with growth only liquidity ratio has shown negative correlation with growth of profit making firms.

Let us now summarise the major points discussed in this chapter. An examination of the capital structure of the manufacturing state enterprises in Kerala revealed that it is heavily based towards debt. As substantiated by our empirical findings this has constrained the financial health of the enterprises by imposing a heavy interest burden ultimately resulting in vulnerable financial ratios. This does not mean that sufficient explanation on loss making phenomenon is provided

by equity debt ratio. Perhaps there may be equally strong explanatory variables such as technology, defective project planning, product planning, pricing etc. Though all these factors are important, an adequate treatment of all these factors is beyond the scope of our study. However, we may explore some technology related aspects in the next section.

1/ Growth Rate (G) was defined as the simple arithmetic average of the annual changes in the net asset for the period is the indicator of average profitability of enterprise.

(2) Retention ratio- the undistributed profit as a percentage of net profit (3) Profitability. Gross profit less taxation would be net income of the firm (4) Debt ratio this variable measures the external finance raised by the firm through loans and advances for financing the growth purpose (5) Liquidity: Another financial policy variable considered in the correlation exercise is liquidity defined as the ratio of net liquid asset (cash, tax, marketable securities) to total asset. This indicator shows access to cash which the firm enjoys apart from its power to run down or take net trade credits.

Productivity Performance

Following the analysis of financial efficiency let us examine the performance of state sector enterprises in Kerala as reflected in the productivity measures. One common and relatively simpler method of measuring productivity ratios are labour productivity (O/L) Capital Productivity (O/K) average product of material (V/M)^{1/}. The ratios would mean that there is saving in the use of particular factor. Though the partial productivity indices are indicative of efficiency of production, it does not tell us which force or set of forces generated that movement. Therefore, average product of any single factor cannot be used as an index of overall efficiency. For this purpose we constructed a measure of total factor productivity.

We have attempted both industry wise and overall analysis of partial ratios. The following procedure was followed in estimating the productivity indices. We have included all the 15 firms whose characteristics were discussed in the earlier chapter. However, the following adjustments are made. All the major economic variables which have been made available in current prices were converted into constant prices by using appropriate deflators. The wages and salaries have been deflated by cost of living index. Gross output and value added have been deflated by the wholesale index of concerned commodity or the nearest commodity price available. The fixed capital has

^{1/} O = output L = total number of employees V = Net value added
M = material input

been deflated by the price of machinery working capital was deflated by wholesale prices of all commodities. The growth rate of partial productivity indicators listed in table is revealing. When the productivity growth of the sample firms were worked out it is seen that all the major indicators registered negative growth rates. When the growth rates were worked out separately as between the Profit making and loss making enterprises recorded very high levels of negative growth rates. However, the record of profit making enterprises are also not so encouraging. It is instructive to note that the average material productivity showed negative growth implying inefficiency of technology. This point we shall take up in later sections.

Table 16

Partial Productivity Indicators of State Enterprises 1977-84

	Growth rate of		
	O/L	O/F	V/M
Overall growth	-1.10	-0.80	-0.92
I Profit making enterprises	0.10	0.82	0.05
Of which (1) Chemical	1.5	0.60	0.14
(2) Electrical	0.30	0.21	0.02
(3) Engineering	0.45	0.50	-0.18
II Loss making enterprises	-3.20	-3.48	-4.00
Of which (a) Chemicals	-1.10	-1.30	-2.30
(b) Electricals	-2.00	-3.20	-3.20
(c) Engineering	-1.8	-2.11	-5.20
(d) Agro basic	-3.10	-3.00	-4.10
(e) Textiles	-3.10	-3.12	-4.30
(f) Rubber	-4.12	-3.80	-4.20
(g) Ceramics and refractories	-3.05	-4.10	-4.28

The overall picture generally tend to obscure the industry wise experience and hence we worked out the partial productivity indicators for each industry such as value added per worker, average product of, capital, average material productivity (See

table 16). . Among the profit making firms the performance of the chemical industry appears relatively better. In the electrical and engineering industry average material productivity registered negative growth rate, a steeper decline was also registered in the case of engineering industry.

Coming to the loss making industries, needless to say, all indicators show negative signs. A higher degree of negative growth rates have been recorded in all three indicators in the case of rubber, agro based and textile ceramics and refractory industries.

We also attempted to see the correlation between wage share in value added and labour productivity for both the profit making and loss making enterprises in the sample. In the case of profit making firms the strong correlation between wage share and labour productivity is maintained only in the case of enterprise belonging to chemical and engineering industries.

Table 17

Growth Rate of Total factor Productivity 1977/84-85.

<u>Growth rate of Kendrick Index</u>	
I, Loss making enterprises	
all Industries	-5.0
a) Chemical	-4.2
b) Electrical	-3.1
c) Engineering	-4.00
d) Agrobased	-5.10
e) Textiles	-6.30
f) Rubber	-5.12
g) Ceramics and refractories	-4.12
II Profit making enterprises	
all industries	0.40
a) Chemical	0.70
b) Electrical	0.10
c) Engineering	0.12

In the case of loss making enterprises this relationship was found negative. Industry-wise variations showed that in three industries textiles, agro based and engineering and rubber goods wage share far exceeded the labour productivity.

An idea of declining efficiency of State Sector enterprises can be gathered from partial productivity indices discussed above, for, directions are very clear out. Still we thought of constructing a measure of total factor productivity to get a total picture of emerging trends. The index of total factor productivity we applied is Kendrick method, a linear neo-classical production function. This production function suffers from all the limitations of neo-classical production function and hence the results may only be taken as a rule of thumb.

The procedure is by constructing an index of both capital and labour respectively with respective weights. These weights are shares of labour and capital in the base year and are added to get the total input. Then an index of output and also of total input is prepared by using appropriate deflators. The ratio of output index to that of total input will yield the arithematical total factor productivity index. In this measure we are comparing the actual output of factors would have been, had the productive efficiency prevailed.

Worked out the growth rate of total factor productivity in this manner we found that the trend of loss making enterprises had been more or less similar to that of partial productivity indices worked out earlier. (See table 17). Industry-wise

variations showed that the negative growth rate has been highest in the case of textiles followed by rubber agro based industries.

In the case profit making enterprises, the results has not at all been encouraging, which in turn cast doubts in the long run stability of these enterprises.

In the above exercise of total factor productivity, we have not adjusted to capacity utilisation. We have looked into this dimension also which may exert a major influence on technology performance. When capacity utilisation was measured we could not see much evidence of improvement. The average utilisation of installed capacity for 38 products between two periods of time i.e. 1978 and 1984 showed that there is a decline of capacity from 52.2 percent to 47.5 percent by 1984. But when the capacity utilisation of profit making firms were separately worked out for profit making enterprises, it is seen that the between 1978 and 84 these enterprises recorded a growth of only 3% in capacity utilisation. The decline in the case of loss making enterprises is to the extent of ten percentage points.

The capacity utilisation of the products as percentage of installed capacity is given in Table 18.

Table 18
Capacity Utilisation as a percentage of Installed Capacity

1978		1984	
Frequency Class	No	Frequency Calss	No.
0 - 24	13	0 - 24	14
25 - 49	9	25 - 49	8
50 - 74	7	50 - 74	9
75 and above	9	75 and above	7
Total	38		38
Average utilisation rate	52.2		47.5
Average utilisation rate of loss making firms	52.20		42.30
Average utilisation rate of profit making firms	52.20		55.67

Industry-wise capacity utilisation is given in Table 19.

Table 19
Industry-wise Utilisation Rate

Industry Group	<u>Capacity Utilisation</u>					No. of products whose utilisation increased over 1978
	No. of products	Below 20	Above 20	Above 50	Above 70	
Chemical	11		7	4	1	3
Electrical	10		1	5	4	3
Engineering	7		5	2	-	Nil
Ceramics & Refractories	5		3	2	-	Nil
Agro industries	6		4	2	-	Nil
Rubber	1	1	-	-	-	Nil
Total	39					

It is interesting to observe from the table that only 6 products belonging to electrical goods and chemicals improved its utilisation over 1978. Needless to say these products belong to the profit making enterprises.

The interrelationship between Financial and Productivity Performance

Though there is no one to one relationship between financial and productivity performance, logically at least one disadvantage may lead to the other. We thought of examining this interrelationship in the case of sample firms under enquiry by means of rank correlation coefficient. When the indices of financial performance of loss making firms (in terms of accumulated loss) and technical performance (in terms of total productivity) were ranked, the correlation between the two variables were found highly significant at 0.92. In the case of profit making firms such a relation between technical and financial performance are also found significant at 0.80 implying a close inter relationship between these two aspects of performance. Here indices used were pretax profitability and total productivity.

Dissecting Cost Structure

The more or less similar pattern in productivity performance of state sector enterprises forced us to look into the cost escalating factors. This was done for two points of time 1978-79 and 1984-85.

When the movement of major cost items over time was examined, as seen in the Table 20, two major elements of cost had increased their share over time. They were raw materials, rent and interest. The wages and salaries element registered marginal increase. The depreciation element declined, the implications of

which we shall discuss in details later. The interest element showing higher proposition indicates the debt burden already discussed in the previous section.

Table 20
Cost Structure of Firms in the Sample

Major cost elements	1978-79	1984-85	Profit making		Loss making	
			78-79	84-85	78-79	84-85
1. Fuel	6.26	6.32	6.25	6.28	6.22	7.11
2. Raw materials	49.24	52.06	48.12	48.11	48.12	51.10
3. Wages and Salaries	23.32	24.82	21.10	23.84	23.19	25.80
4. Royalties, Technical fees etc	0.01	-	0.03	0.25	00.01	-
5. Rent	0.05	0.07	0.15	0.17	0.18	0.72
6. Interest	10.89	12.32	10.55	10.16	9.00	14.07
7. Depreciation	7.32	3.10	8.12	9.00	7.10	2.10
8. Others	2.74	1.30	5.75	2.18	6.00	4.70
Total	100	100	100	100	100	100

However this general picture changes when we separate out between the profit making and loss making firms in the sample some interesting features emerge. In the case of loss making firms the increase in cost elements had registered increase in particular raw materials and wages and salaries and interest. But in the case of profit making companies a number of disturbing features appear. To illustrate the fuel and raw material cost more or less remained the same time implying absence of incremental improvement in the productive efficiency ever time. Moreover, wages and salaries also recorded a tendency to increase.

We have also looked into the industry-wise variations in the cost structure of enterprises in the sample. In the case of loss making enterprises the broad features remain more or less similar as reported in table 20. In the case of profit making

enterprises the variation was observed in the case of chemical industry which registered a slight decline in the raw material and fuel cost. The escalating raw material and fuel cost indicates the falling conversion efficiency. Therefore in the following pages we will examine in detail the technology related problems of state sector enterprises.

Explaining Low Productivity

(a) Level of technology

We ventured to seek more details on the level of technology by these enterprises. Of the 16 enterprises in production only six of them had contracted any technology collaboration with foreign technology suppliers. Of the six collaborations five had already expired and the enterprises either did not renew them or entered into collaboration for new product lines. This can not however be interpreted as a sign of inefficient adaptation of technology but has been due to the sheer inability of the enterprises to sustain the cost of collaboration to reap the benefits later^{1/}. Of the 16 firms in our sample one firm only in the chemical is having ongoing collaboration. Two firms only added products for diversification since 1978. One was for vanaspati whose technology is already available domestically. The other example was vitamin A by state sector drug unit. The design for this technology was purchased from Roche, a multinational company. For both these products companies spent

^{1/} This opinion came from the Managing directors of respective state sector enterprises.

three crores worth of plant and equipment, out of which one crore was spent on imported plant and equipments. It is alleged in this context that the technology from Roche was an outdated one. The modern technology was developed starting from acetylene gas and the price of the product due to this technology is very much less^{1/}

In this context it should be mentioned that the profit making enterprises have a better record of product addition. In the case of chemical industry, the existing collaboration enabled the enterprise to add two more products. In the case of engineering and electrical industries four more products were added of which two are having some novel features. These two products belonging to electrical and engineering industry were added, the enterprises claimed, due to their interval technological strength. This point we shall examine in later sections.

(b) Renovation and replacement

As seen in the previous section, loss making by its inherent logic affects the operational efficiency. This built in resource constraints can not be overlooked or ignored when discussing the possibilities of technology upgradation of state sector enterprises. In this section we will be discussing in detail a few technology related aspects having considerable bearing on

^{1/} See P.V.S. Namboothiripad, A survey of chemical Industries In Kerala Paper presented in a Seminar organised by State Committees on Science and Technology, 1984.

productivity. Even in such a situation of resource constraints the minimum that should be aimed at is that these firms should provide adequate depreciation charges to replace fixed assets and thereby maintain operational efficiency at a minimum level. Our analysis relating to loss making companies revealed that even this provision, as seen in the cost structure data, had gone down considerably during the last few years. In the ordinary circumstances the replacement of existing capital asset through reserves and accumulation of surplus in the state sector enterprises can be a source of renovation and modernisation. For loss making enterprises the prospects of capitalisation of reserves have been very dim. In such a situation these enterprises have to fall back upon their day to day business needs on governmental loans, as we have seen in the last chapter, which in turn generate built in claims for interest and for replacement of capital assets. However, the depreciation provision though may be inadequate for timely modernisation of plants and equipments, effective utilisation of it may be adversely affected in a crisis situation. Since depreciation provision provides the enterprises liquidity without any servicing liability it can also be diverted to other channels. The analysis of ten loss making companies which provided information on this aspect suggested that of Rs.21139 lakhs demarcated for depreciation between the period 1978 and 84, only 6.8 per cent was used for expansion and renovation. It is interesting to observe from the Table 21 that only electrical goods industry spent more than its depreciation provision. The leakage of depreciation provision has been mostly due to its diversion in to the day today expenses.

Our way of interpreting the depreciation provision may be objected to, for, when utilisation of depreciation fund is not warranted and this fund can be used for investment elsewhere. But this possibility is not being supported in our inquiry. In fact, even this marginal provision for depreciation was misused by companies in meeting day today expenses which in turn has a telling effect on the obsolescence of capital is borne out by evidence such as the age of equipments used etc. which we shall discuss in the following paragraphs.

Table 21
Expenditure incurred on expansion Fund out of depreciation

Industry	Expenditure on expansion re- novation (Rs.lakhs)	Mobilisation through depre- ciation (Rs.lakhs)	Expenditure on expansion and re- novation as % of depreciation
Chemicals	696.78	19573.00	3.56
Electricals	581.35	223.00	261.00
Engineering	97.31	1117.00	8.77
Others	57.00	226.00	25.23
Total	1432.44	21139.00	6.78

(c) Technology Related Factors.

It is to be noted in this connection that the firms surveyed acknowledged the generally poor plant-wise labour productivity. As seen in table 21 all the engineering and electrical firms have listed the following factors affecting the productivity in the major industry groups like chemical, engineering and electricals. They were (1) Irregular delivery of parts and components (2) poor internal scheduling (3) Inadequate jigs and fixtures (4) poor plant lay out. In fact the first two factors reinforce each other and therefore mutually related.

Interestingly enough, sub-contracting components which was one of the major policy objective of the State Sector Enterprises^{1/} did not receive any serious attention. Of the 16 enterprises listed in our sample two have only such arrangements. But extent of procurement via sub-contracting is only 10 to 15 percent of the requirement of the enterprises. This has implications on cost reduction via ancillarisation and linkages about which we shall discuss later. The rest of the requirements are procured from outside the state. Apart from the cost escalating factors in such procurement, irregular delivery of parts and materials affect the normal flow of production leading to poor internal scheduling and thereby lower productivity of both labour and equipment. Scheduling problems got aggravated due to limited length of run per machine.

Inadequate jigs and fixtures on the normal circumstances are attributed to inadequate operational data, changes in customers specification, delays in the finalisation of designs etc. As the table shows even the profit making enterprises are not free from problems. One enterprise in the chemical industry admitted of having problems because of poor plant lay out. This firm thinking of diversifying into new products with imported technology find the existing lay out inadequate for new products lines. Even the existing product lines could have produced with lesser cost had the plant possessed a better lay out. The enterprises belonging to engineering and electrical industries complained of the irregular delivery of parts and components.

^{1/} Industrial Policy Resolutions, Government of Kerala, Op.cit.

(d) Age Profile of Equipments

In the context of state sector enterprises a major factor in depressing productivity appear to be lack of modernisation. This factor is being highlighted by the age of equipments used in

Table 22
Factors Affecting the Productivity the Reasons of Sample Enterprises in major Industries

Factors (Problems)	Loss making enterprises				Profit making enterprises		
	Chemicals	Electricals	Engineering	Ceramics and refractories	Chemicals	Electricals	Engineering
1. Irregular delivery of parts and components	-	2 (100)	2 (100)	-	-	1 (50)	1 (50)
2. Poor internal Scheduling	1 (100)	2	1 (100)	2 (100)	-	-	-
3. Inadequate jigs and fixtures	-	2 (100)	(100)	2 (100)	1 (50)	-	-
4. Poor plant layout	1 (100)	2 (100)	1 (100)	2 (100)	-	-	-
5. Poor quality tools	-	1 (100)	1 (100)	2 (100)	-	-	-
6. Inadequate pollution control system	1 (100)	-	-	-	-	-	-
7. Poor facilities for heating, cooling, mixing, chemical reactions, drying, pressure etc.	3 (100)	-	-	2 (100)	-	-	-
Total	6	9	6	1	1	1	
No. of Firms in the Sample	1	2	2	2	2	1	1

Figures in the bracket indicates percentage to the sample in respective groups.

industry. The age profile of equipments used in the industry gave very interesting insights. As seen from the table 23 only a fraction of the equipments is of recent vintage. This tells upon the lack of modernisation leading to poor quality of tools.

Table 23
Age Composition of Major Equipments Used in the Sample
(As percentage of the value of equipments less than
ten years old)

Industry	Loss making percentage of the value of equip- ments less than ten years old.	Profit making percentage of value of equipments less than ten years old
Chemicals	10.00	24
Engineering	15.00	20
Electrical	15.00	22
Others	21.00	--

In the case of chemical industry old equipments and poor plant lay out lead to less than the optimum use of plant even when each stage of operation is under optimum conditions of temperature and pressure. Since the instrumentation and control parameters remain old, a lot of time is wasted in between the batch cycles in emptying, cleaning and refilling vessels. Some times manual operations of the above type result in health hazards. We also felt during our survey that workers do not have adequate protection while handling toxic materials. The modern system of controls which manipulate variables in different operations is non existent.

Related to this problem is the pollution control system installed along with old machineries which is not sufficient enough to cater to the problems arising from effluent disposal. Whenever voluntary organisations take up this issue remedial measure are shelved on one pretext or another due to lack of

funds. The example of Travancore Titanium illustrate the case^{1/}. enterprises it was seen that the situation through relatively better is far from satisfactory. Here also the equipments of order vintage predominate.

The cumulative impact of loss making an technology can be illustrated in the case of a ceramic unit. Today the mining of the clay is done in the same way as it was 46 years ago. In the case of manufacture of porcelain table using China clay, the manufacturing process was installed in 1956, is still followed. The ship houses and preparatory machinery established later had a higher capacity than the process machinery established earlier leading to a mismatch between manufacturing process and preparatory process. This mismatch which remained uncorrected even today, had acted as a major deterrant to optimum utilisation of capacity.

The same story is repeated in the case of crockery finishing which is done with old machineries for colouring, edging flattening and scintillating. Therefore, the crockery product of the company is not only highly priced due to obsolete technology but also is inferior in quality. Ceramics technology had undergone changes in the last few years. The application of ceramics also had increased several times in areas such as cylinder liners for automobiles biotechnological items, ceramic

^{1/} Laying down the submarine pipe for effluent disposal to deep sea to reduce the intensity of pollution could not be carried out due to high cost. According to company sources the estimated cost for this measure works to Rs.13 crores and the under the existing low profit conditions company cannot raise that much money.

cutting tools, sanitary wares, glazed tiles etc. The management of the company appointed time to time from bureaucracy largely ignored such prospects or if thought of postponed due to paucity of funds.

(e) Profile of R & D and Skill mix

Most of the factors identified above are of direct kind associated with direct production activities. Capital stock is an example. But it should be remembered in its context that obsolescence of capital stock can be remedied to some extent by replacing or substituting the lower skill profile of the workforce by higher skill profile.

This is in accordance with the recognition that the firms may undergo substantial changes from one period to another with regard to the skill profile of workforce in accordance with the changing modifications and specifications of output. What is the pattern of changes in the skill-mix of the work force of these enterprises? Information about changing scenario of skill mix was gathered for two time points 1977-78 and 1983-84. Unfortunately, we could not gather information on employment position of all loss making firms. Of the 12 loss making firms, the relevant information we could get only from 9 firms (see table 24).

One interesting feature emerging from the employment situation of loss making firms is that the total work force over

time increased only marginally. However, work force engaged in marketing and administration registered an increase (21 percent). The decline was marked in the case of technicians and persons engaged in R & D activities. In general, the work force engaged in skilled occupations suffered a set back in particular this tendency was more marked in the case of engineering, and rubber based industry. Needless to say the negative impact on productivity was relatively high in these industries.

These observations bear implications. Given the product mix of the enterprises the thinness of the spread of the skilled workers lead to difficulties when it comes to improvements in productivity by modernisation and equipment, better design etc.

In the case of profit making industries, the picture is different. The total work force in these enterprises increased by 21 percent and that of man power engaged in R & D increased by 38 percent. In the case of chemical industry the increase in the allocation into highly skilled categories appeared better. One reason why a better productivity index for the chemical industry may perhaps be due to this(refer table 17)

In fact, the gains from cost saving is effected by changes in all the integral components of firms activity, one of the necessary forms of contribution is of course R & D activity. Before analysing the R & D activity of the enterprise let us from the data supplied by these enterprises make some preliminary reading of the capacity of these enterprises to undertake development work. It goes without saying that there is a high

Reading of the capacity of these enterprises to undertake development work. It goes without saying that there is a high correlation between the manpower employed and the design improvements.

Looked from this angle an analysis of loss making firms revealed that in the design staff in the R & D department only was found in two of the sampled enterprises. One is the electrical goods manufacturing firm and another in an engineering firm. They employ 5 and 3 engineers respectively in their design department. In fact, the design work constitutes only part of the work of design staff; otherwise they belong to production department.

Table 24
 Change in the Skill-mix of loss making Enterprises in the Sample

Categories	Industries												Total	
	Chemicals		Electricals		Engineering		Ceramics and refractories		Agro-based		Rubber		1977-78	1983-84
Engineers	18	20	30	34	40	49	10	9	3	3	20	12	121	122
Technicians	80	110	210	208	212	200	80	75	20	22	70	25	622	640
Unskilled and Semi Skilled	100	130	220	238	250	258	58	60	100	100	138	100	866	886
R & D	6	4	8	10	8	5	2	2	3	2	6	2	33	25
Marketing and administratio	98	132	160	180	120	140	40	48	60	68	142	100	550	668
Total	302	392	648	670	630	652	190	214	186	195	376	239	2242	2366
														(5.53)

(*) Figures in the bracket indicates percentage change over 1977-78.

Change in the Skill - index of Profit making Enterprises

	Chemicals	Electricals	Engineering	Total
1) Engineers	40	52	10	14
2) Technicians	200	250	83	92
3) Unskilled & semi skilled	350	350	170	210
4) R & D	10	10	5	9
5) Marketing	190	230	100	130
Total	790	934	368	455

However a better allocation is found in the case of profit making enterprises. In the case of chemical and electrical industries design staff numbering around 5 and 7 are found engaged in the upgradation of existing technology. This has had a favourable impact on diversification of product structure as seen in the earlier sections. However some loss making enterprises also claimed to undertake R & D work. From table 25 it is seen that as percentage to sales, these enterprises spend very little on R & D. The loss making enterprises claiming R & D facilities infact do not possess full fledged R & D laboratories. In reality, they are undertaking only the trouble shooting type of activities referred to by the production department. In other words, claims were made regarding R & D where it was quite clear that it was a misnomer to describe rather routine type of work for solving manufacturing problems than any genuine R & D. Needless to add even the allocation by profit making enterprises though relatively better, is far from satisfactory.

Table 25
Research Intensity of State Sector Enterprises
(Intensity as percentage to sales)

Industry	R & D as percentage to sale (loss making enter- prises)	R & D as Percentage to sales (profit making enter- prises)
Chemicals	0.45	1.2
Electricals	0.15	1.2
Engineering	0.33	1.1
Ceramics	0.10	--
Agro based and wood based industries	-	-
Textiles	0.10	-
Total	0.25	1.10

Benefits from External Linkages

The ability to make improvements in design and manufacturing concepts is not however directly related to explicit R & D programmes. A state sector unit even without formal R & D outfit can introduce new products, develop process by availing of various scientific services from the repositories as National Research Laboratories, consultancy organisation, horizontal transfer of technology from other enterprises. These can be useful sources of new products and improvement in the old process even if the enterprises do not have adequate facilities for research and development activities. This strategy can help the firms to achieve a balance between technological requirements and economic constraints. For example, firms can refer some of its technical issues to universities. They can also do collaborative research with national laboratories or in collaboration with public sector undertakings. Our inquiry revealed that such instances are rare.

Since many of the State Sector units do not have critical minimum threshold size R & D, there is all the more reason why they should rely on external innovation pool within the country. As seen from table 26, from 1978 to 1984 the firm had only 14 such contacts; on the average only two contacts per year by around 16 sampled firms! The loss making firms had a poor record of only 4 contacts. The largest number of contacts were by the group in the chemical industry. Here too, the tendency had been to send people abroad than using the internal development, hiring the services of local R & D institutions local engineering

services etc. The lack effective linkage with local centres that generate and disseminate knowledge is thus clearly reflected in our inquiry. It is ironical to observe that the generation of technology by the Governmental agencies, is not being used by government's own enterprises. This chary attitude about not utilising the existing technology for modernisation of plants and diversification led to missing opportunities. Take the case of Travancore Titanium. The existing Titanium plant continues to be used without modernising the Technology or diversifying the process into products. From the modified and upgraded process the company could have produced Titanium metal which is highly priced today.

Table 26
Means used for Creating Technological Capacity 1978-84

Means	Chemical		Electrical		Engineering		Ceramics refrac- tories	Others	Total
	Profit making	loss making	Profit making	loss making	Profit making	loss making			
1. Internal development	2	-	1	-	-	-	-	-	3
2. Hiring ser- vices of foreign designers	3		-	-	1	-	-	-	4
3. Sending Personnel abroad	1	1	2	1	1	-	2	-	8
4. Hiring the services of local rese- arch insti- tutes	-	-	-	-	-	-	-	-	-
5. Hiring the services of local engin- eering con- sultants	-	-	1	-	-	-	-	-	1
Total	6	1	4	1	2	-	2	-	16

Some Aspects of Inventory and Marketing Management

The management of the State Sector enterprises becoming inefficient due to the implanting of civil servants and politicians have been thoroughly discussed in the literature.^{1/} We are not going to repeat those arguments here. However, we can not but touch upon another major consequences of this managerial inefficiency reflected in the inventory management of state sector enterprises. The managers of the majority of these enterprises were civil servants only in two firms technically qualified personnel are occupying managerial positions. Ironically enough, these enterprises happened to be profit earning ones.

The inventory management has a very high bearing on efficiency, for, excessive investment on inventory (inventories in the form of raw materials, work in progress and finished goods) leads to over capitalisation. The enterprises in our sample except two had no uniform policies regarding inventories. As such the ratio of inventory to value of production or sales varied widely. The following table 27 presents information we gathered from the sample firms regarding the extent of inventory locked up expressed as percentage of the cost of production. The information pertains to loss making enterprises. It is important to point out in this context that the level of inventory in the State Sector Enterprises is high compared to the practices

^{1/} See Report of the Committee to review policy for public enterprises (Chairman Arjun Sengupta, Ministry of Industry, New Delhi, 1986).

followed in the private sector where it is generally around three months cost of production. In our sample, the inventory works out more than five months costs of production. In the case of profit making enterprises the inventory was found less. In the case of chemical industry it was two and a half months cost of production and electrical and engineering roughly three months cost of production.

It is to be remembered in this connection that the major element in the inventory stock in these enterprises is the finished goods. The reason most often advanced is 'lack of demand'. We have shown in the table the average figures only. It is worth mentioning in; this context two three firms in our sample do not have even one month stock of raw material inventory. This according to them is due to the lack of working capital. As and when they get order for finished goods they rush for purchase.

Table 27
Inventory in Terms of Number of Months Cost of Production
(Percentage)

Industry	1981-82	1982-83	1983-84	1984-85
I Chemicals	26.3	25.2	24.9	28.8
II Engineering	27.30	28.31	17.58	19.5
III Electricals	16.38	17.00	25.93	16.00
IV Ceramics and Refractories	19.32	15.38	18.60	14.82
V Agro Processing	16.2	15.8	14.83	18.32
Total	21.22	20.18	18.32	19.16

Let us now turn our attention to the major component of inventory namely raw materials. Our enquiry revealed that there is no advance plan drawn up based on material requirement indicating consumption or on the basis of economic ordering of

quantity required. With regard to the inventory management of equipments, materials and components we found that the loss making firms do not have a full fledged materials management department and qualified personnel to assure the quality of brought-in materials. The managing director takes the major purchasing decisions on a limited tender basis, ¹⁵ most often such purchases are getting influenced by considerations other than economics, sometimes leading to purchases more than the required quantity at higher prices. This is one side of the picture. The other side is that inventory management which has to undergo classification, standardisation, variety reduction ABC analysis, economic ordering, quantity reorder level, disposal of surplus and obsolete stock are not done on a scientific basis. As a result damages arising from faulty layout, improper codification and irregular verification is very high. All these call for a cordinated efforts among production department, material management who purchase materials and are responsible for processing and fabrication of materials. It is to be underlined this connection. That the system of inventory management iis done not in a scientific fashion even the base of profit making companies. In two enterprises where the managing directors are Technical personnel intimated the Scientific ordering and management of inventory. Nevertheless, the system has not become full fledged ones yet.

The marketing functions in all producing enterprises have a legitimate place. All the major objectives of the enterprises such as growth and expansion will have to be oriented to marketing goals. Our study revealed that the high cost-low

productivity syndrome in-built in the production structure is seen to have been carried forward when it comes to marketing also. Majority of the enterprises in the sample do not have a marketing planning to minimise the risks and optimise profit. An enquiry into the marketing problems of these firms revealed that the critical elements of marketing like (a) centralised testing facility (b) after sales servicing facility and (c) adequate sales promotion expenditures etc. are woefully lacking. As is well known the first two factors are important in assuring the quality of the products and the third one determines the marketing success.

As the table 28 reveals majority of the firms in the sample in the electrical and engineering firms in the loss making category do not have centralised testing facility. In the case of after sales servicing none of firms in the loss making category have this facility. These two major lacunae considerably undermine the 'good will' for the products produced by State Sector Enterprises. Almost all the firms in the sample feel the pinch of inadequate sales promotion expenditure. Needless to say, in a situation in which those enterprises face competition from private sector enterprises these marketing problems put them at a disadvantage.

Table 28
Problems associated with the marketing of products

Major Obstacles	Loss making Industries				Profit making Industries		
	Chemical	Electri- cal	Enginee- ring	Others	Chemical	Electri- cal	Engineering
(a) Absence of centralised testing facility	1 (100)	2 (100)	2 (100)	1 (50)	-	1 (100)	-
(b) Absence of after-sales services	-	2 (100)	2 (100)	2 (80)	-	-	-
(c) Inadequate sales promotion expenditure	2 (100)	3 (100)	2 (100)	3 (100)	1 (50)	1 (50)	1 (50)

(Figures in the bracket indicate percentage to the total number of firms in each group).

We have seen in this section how financially vulnerable enterprises are getting caught in the low productivity trap. The inter relationship between the financial and technology performance have been found strong. That is to say one disadvantages leads to the other. An examination of the cost structure enabled us to identify the major cost elements that must have pulled down productivity. In particular, the rising proportion of raw materials and fuel cost indicated increasing inefficiency in the technology used by these enterprises. The problems they confront in the technology front are too many. Our enquiry underlined the major problems such as inability, to undertake renovation due to shrinking depreciation fund, irregular delivery of parts and components, poor internal scheduling, inadequate jigs and fixtures, poor plant layout etc. Interestingly enough even the profit making enterprises do face some of these problems. The analysis on design development, changing skill mix, R & D allocation showed that the profit making enterprises are better placed in these respects. It appears from our analysis that though profit making category

could develop such capabilities in a comparative sense, the situation is far from perfect. A close examination of inventory management revealed several anomalies leading to leakages. However, some ordering and scientific management was found in this case of enterprises managed by technically qualified personnel. Coming to the marketing management, the major obstacles were identified in the case of loss making enterprises. Needless to say the profit making enterprises also do face such obstacles.

In this context it will be interesting to see a dynamic picture of the transformation of these enterprises into a given situation. In this next chapter we will try to construct such a scenario.

The Failure and Success: Some Illustrative Case Studies

In the previous sections we have been discussing the weak economic base of state enterprises in terms of finance and technology. However, we were discussing only a given situation. An interesting question in this context is how this particular situation is brought about! High interest burden and technological backwardness represent the outward manifestation of deeper contradictions in the development of state sector enterprises. This chapter therefore will examine with the help of illustrative case studies of the causatory factors and processes responsible for bringing out a given situation. For this purpose we selected four firms. Two belonging to the category of very bad performance (in terms of productivity both partial and total) and one moderate and the other having satisfactory performance. The first two firms have accumulated loss amounting to Rs. 6 crores. Of the latter two firms one is making profit consistently over the year however in the case of the other firm we found a fluctuating trend in profitability performance. This report is based partly on field investigation and partly on various reports such as Comptroller and Auditor General of India, Report of the subject Committees, Committees on public undertakings etc. We kept the names of state undertakings under investigation anonymous.

The Case of Company A

This company established in 1935 at Trivandrum was owned by the then princely state of Travancore and was engaged in the production of Cycle Tyres and tubes. The ownership of the company changed hands to private and again into partnership form until the Travancore government took over the administration of the enterprise in 1949. By 1964, the company has taken over two other companies producing cycles. By 1973, the enterprise was brought under Kerala State Industrial Enterprises. This was to facilitate services with respect to general management, finance, and production from the holding company.^{1/}

The Company has finalised its accounts only upto the year 1982-83. The latest position showed that the company has accumulated loss twice its paid up capital. The following gives a brief account of the factors which made the company what it is today.

Let us start from the days the company took over the cycle rim and Kerala cycles, the productivity levels of cycle plant was abysmally low. To illustrate in the case of cycles manufacture it was observed that none of the parts manufactured by the amalgated units were upto the standard^{2/}. We did not get the balance sheet to work out the trends in productivity of the

^{1/} Kerala State Industrial Enterprises, objectives and Functions, Government of Kerala, 1975.

^{2/} Committee on Public undertaking. Ninth Report, New Delhi, 1966.

Table 29
Indices of wage share and Productivity in Company A

	Productivity	Wage shares
1973-74	100	100
1974-75	101	102
1975-76	100	103
1976-77	99	104
1977-78	95	106
1978-79	82	107
1980-81	75	108
1981-82	62	108
1982-83	66	109

amalgamated units but the consolidated balance sheet of the company since 1973 revealed that capital and labour productivity started recording negative growth rates. At the same time the wage share outstripped the labour productivity. The declining productivity compared to wage share in value added is given in Table 29. This increasing disparity has been explained away both by the Management and labour in different ways. We shall return to it soon. Meanwhile let us discuss the logical culmination of events. In the seventies when the trouble started the company could have intervened to stall the low productivity phenomenon by a process of (a) technological upgradation of the cycle rim and tube factories in view of declining demand and increasing competition (b) a restraint on the behaviour of trade unions together with the creation of an environment leading to the development of an attitude appreciate to the predicament of the enterprise (c) restructuring the management so that technically more qualified and competent personnel with long term perspective should replace the then existing bureaucratic leadership.

But further developments gave a queer twist to the fate of the enterprise. In the early 70's, the rubber tyre division and cycle rim division of the company had to be closed down due to a major break down in the roller and calendering machines.1/ It was also a period that saw the establishment of many rubber factories in South India. Even after the reopening of the factory renovation of technology was not done and the production registered short-fall due to high price and the poor quality of parts produced. To underline the point let us take the case of tubes manufactured by the company. The company had erected Czechoslovakian machines for manufacturing tubes. This technology could produce only tubes having joints which was unacceptable in the market.2/ The response to such anomalies should have been quick. Though the board of directors have been appealing time and again to the government to release enough funds for modernisation, the typical answer to such requests was 'considering' the correspondence during this period between government and company suggested government was not sensitive enough to extend the timely help 3/. Moreover the general managers most of them on deputation from government had adopted a 'touch me not' attitude in regard to the perspective plan and strategy regarding diversification of product mix.

1/ Source Annual Reports of the company - 1974-75

2/ The Report of the Committee of Public undertaking, 75-76, secretariate, Trivandrum.

3/ The correspondence file between the company and the industry department was styled in an extremely bureaucratic fashion with queries and counter queries and at the end closing the file due to the inability to finance the proposed project.

Parallel developments in the labour front may be discussed now. Between 1969-70 the Company was closed down for nearly eight months due to labour troubles resulting in a loss of around Rs. 18 lakh. The settlement conditions were onerous given the financial position of the company. For example, it was stipulated that statutory bonus at a higher percentage even when the enterprises was running at loss. This has to be seen in the light of the emerging unhealthy trend of disproportionats share of wages in value added about which we already referred to earlier (See table 29). The Unions which were four in number with political affiliations to different parties had been vying with each other to enhance wages and other benefits. It is to be remembered in this connection that not all of them were blind to the predicament of the company. The charges levelled against the management gave certain flashes of mismanagement which was later confirmed by public Accounts committees.^{1/} The rescue attempts at this juncture was also not forthcoming from the management nor was there any attempt to reduce high percentage of waste which reached to 9.05 by 75-76 while the permittable limit was only 5 percent. Both the Public Accounts Committee and state productivity councils repeatedly urged the company to take comprehensive measures and correct the anomaly by changing the old presses of the fabrication plant and removing the defects in

^{1/} The major complaints voiced by Unions were for example (a) Company procedure in regard to the purchase of quality inputs (b) opening up retail outlet in places where it is not warranted due to demand problems (c) Sponsoring of advertisement in newspapers of low circulation to appeas political parties etc. See public Accounts Committee Report, opcit.

the assembling^{1/}. Moreover, it was high time for the enterprise to prepare a long term plan to shift product mix from low profitability items to items of high profitability like Moped tyre, Scooter tyre etc. Though some attempts to correct the technology problems were initiated the major task of replacement and diversification was postponed due to lack of finance.

The developments since then have been in the direction of failures all around, for, the enterprise had reached a slippery slope evidenced by declining stability ratios.^{2/} The company without adequate working capital margin could not attract fund from the banks. Therefore the company had relied increasingly on budgetary grants from state government. However government did not stipulate any conditions over its use and hence most of the funds were used to meet the demands of recurring expenditure. By 1975, its working capital was zero. By now the accumulated loss of the company had risen to 185 percent of paid up capital. The frantic attempts to modernise the plant did not realize mostly because the industrial financing corporation which took some interest in modernisation initially did not step in seriously because of the accumulated loss. The state government also displayed shyness to commit more resources in a sick enterprise. The closure at periodic intervals due to the heavy accumulation of inventory and

^{1/} State productivity council's report quoted by Public Accounts Committee opcit..

^{2/} Source the Annual Reports.

shortage of working capital have become a regular feature. In the late 80s there were attempts to keep the workers engaged by subcontracting the body building activities of bus engines bought by Transport Corporation.

The Case of Company B

The company established in 1958 originally started as a private company moved into government hands by 1964 after a series of labour troubles leading to lockout. When the company moved into government hands the capital structure appeared more favourable than at present; for, the debt equity ratio was 2:1 when as it assumed a high order of 7:1 by 1985-86.

This company to start with was producing electrical goods with product lines such as fuses, switch gears electric motors etc. The take over by government was justified then by the possibility of procurement of these goods by the State Electricity Department.^{1/} An analysis of the financial position of the company during the take over suggested that the stability ratios discussed earlier showed signs of vulnerability. The productivity ratios in particular the labour productivity started recording negative signs^{2/}.

^{1/} From the speech of the Chairman of the company reproduced in the company balancesheet 1972-73.

^{2/} based on balancesheet information

Government was well aware of this predicament, for, a technical team appointed to restructure the company's organisational and technological aspects recorded the above mentioned concerns. The committee interalia made two major suggestions. They were (1) cost reduction and diversification by adding new products by modernising the technology and infusing new technology. (2) Restructuring the management by appointing technically qualified personnel on top managerial positions^{1/}. In fact the committee noted then that existing switch gears and electric motors were based on obsolete design and energy conserving replacement of which should be undertaken on an emergency basis. The total requirement was estimated around Rs.10 lakh which the company was urged to mobilise from various sources like government, IDBI, ICICI etc.

The subsequent history of the company revealed that these major suggestions for revamping the units was not implemented. The managing director who was entrusted with the responsibility of preparing a perspective plan taking into account the sources of funds and technology was suddenly transferred. There was a time gap of around eight months for the new managing director to join office. Needless to say, the managing directors continued to be administrative personnel. A decade since the take over of the company by government at least five managing directors were appointed. All of them were from bureaucracy, with a minimum duration of two years office. None of the managing directors

^{1/} See balance sheet of the company 70-71 where major recommendations of the committee are reproduced.

have had time to push ahead a long term plan incorporating the suggestions for ravamping the unit.

Meanwhile, the company's performance deteriorated further. The market failures led to huge inventory accumulation and even the major user of the company's products the State Electricity Boards showed reluctance to buy because of the high cost and poor quality of companys products! To illustrate, at the time of the take over the capacity utilization of the plant was around 60% but in the course of next seven years it fell to 35.1/

The company all on a sudden woken up to the demand for better technology. The search for the new technology collaboration started on for modernisation of product lines and diversification. IDBI was approached for financial assistance^{2/}. However, IDBI assistance did not materialise mainly because the enterprise did not satisfy the IDBI norms for eligibility. The disapproval by IDBI on the request for the expansion scheme did not take the enterprise too far with the collaboration efforts.

The stagnation phase therefore continued unabated. Retrenchment was inevitable. The employees resorted to a massive strike which continued for around five months. A political settlement was soon reached according to which government

1/ Based on balance sheet information.

2/ Based on field study.

advanced a loan of Rs. 10 lakhs to tide over the crisis. The issue of retrenchment was temporarily postponed. While granting this loan there was no stipulation as to its use. The major claim for this loan came from the labour unions. By the time the settlement was reached the wage arrears of the employees accounted to a staggering figure of Rs. 6 lakhs.^{1/} The postponement of which was not agreeable to the unions and therefore out of Rs. 10 lakh received around 6 lakh was distributed as wages. The rest Rs. 3 lakh was not sufficient enough for either modernization or diversification. To illustrate at about the same time the company negotiated for another foreign collaboration for the manufacture of switch gear with a Canadian firm but the import of machinery required had an estimated cost of around Rs. 6.5 lakh. This excludes the payment on other items such as technology and associated royalty payments. There was a controversy as to whether the terms of collaboration was appropriate or not. The stalemate continued. Meanwhile, working capital requirements to initiate production was met by the remaining Rs. 3 lakhs.

But the company could not continue its operations for more than three months, again the same story repeated and today the enterprise is a relief undertaking with 75 employees doing the repair and maintenance works of transformers installed by Kerala Electricity Board.

^{1/} Based on field study.

The Case of Company C

The case of Company C we have listed under the group "moderate performance" was incorporated in 1945 was managed by a British firm until late sixties. The company though managed by British firm, Travancore government had granted assistance to the company by owning 53 percent of the paid up capital of the company. It should be reckoned in this connection that until the early sixties, there were only two enterprises producing Titanium dioxide in the country. The near monopoly of the enterprise in the production is clear from its large share in the total national output.

As on 1985, the company employed around 1425 persons and having a turnover of Rs. 1738.43 lakh.

The performance evaluation of the enterprise in terms of profitability suggested that the trend has been highly uneven.^{1/} Of the last 14 years ie from 1971-72 to 84-85 for which data are available, profitability was recorded only in five years reflecting certain unhealthy trends in the functioning of the enterprise. In the following pages we shall try to trace the major developments at the enterprise level which had a bearing on the fluctuating performance of the enterprise.

^{1/} based on balance sheet information

A study of the capital structure of the company suggested that debt element in the capital structure assumed a higher proportion in the 80s and commensurately the profitability ratios have shown a tendency to decline. We have used the following ratios to examine the financial health of this firm. The ratios used were (1) ratio between the earning before interest or taxes to total tangible assets. This ratio reflects as to whether the assets of the company is being effectively used to generate profit. A smaller ratio may reflect unhealthy trends for future and vice versa. Similarly, the ratio between current assets and current liabilities which indicates the availability of current assets in rupees for every one rupee of current liability. The current ratio provides an idea of cushion available with the firm to meet its short term liabilities. Therefore, the larger the current ratio, it indicates the financial soundness of the enterprises. Similarly, the asset turnover ratio which reflects the ability of generating sales from the financial resources committed to the firm. As the ratio increases it indicates increasing efficiency of the enterprise.

We have closely observed the movements of this ratios. It was seen that the movements have been uneven but we have found it highly correlated with profitability performance. That is to say the years of dip in profitability is followed by similar trends in financial ratios.

At this juncture it has to be pointed out that the utilisation of installed capacity has been stagnating for quite some time. To illustrate though the installed capacity per day is 50 tons the actual production did not exceed 25 tons. Though during periods of import restrictions demand problems are not felt periodic liberalisation tend to aggravate and the users tend to import. This has been due to substantial increase in price of the product. We have therefore analysed the cost and output trends of the enterprise.

At the outset it should be pointed out that our analysis for the last one decade showed that when output registered a growth rate of hardly 5 percent the cost escalation has been to the extent of around 20 percent. While the cost elements have registered increase the major increase has been marked in the case of raw materials and wages. When we examined the productivity of labour in relation to the value added and wage share as in the case of firms. A mismatch was evident i.e. the latter has been exceeding the former 1/. It leads to a situation of draining up otherwise disposable surplus demanded by the requirements of internal development. Here, unless the company step in to correct this anomaly the future will be bleak as suggested by the case studies earlier. The situation now is far from perfect.2/ The other problems arising from technology,

1/ balance sheet information.

2/ The practice of double increment in place of one stipulated by contractual agreements, higher bonus than what is permitted, and general indiscipline trade union fights are some of the issues voiced by the management and conceded even by some labour union leaders during the course of our field enquiry.

organisational matters, managerial aspects etc. are no less important. To illustrate, our enquiry revealed that the technology demands more attention than hitherto been given. For example the machineries installed are quite old which not only depress the plant level productivity but also have become more pollution prone. Some of these aspects we have already discussed in the section on productivity. The management still continues to be bureaucratic. The point of emphasis is that unless the enterprise embarks on a thorough revitalisation programme, the future of this company is at stake, perhaps it is likely to face the fate of one of the companies mentioned above.

The Case of Company D

This company incorporated in 1951 has a paid up capital of 659.75 lakh and presently employs 1236 persons. Its main activity is manufacture of heavy chemicals.

The capital structure of the company as seen from the balance sheet revealed that for the last seven years (1979 to 85). The loan equity ratio remained more or less at satisfactory level of 1.1. The out put had registered a growth rate of around 16 per cent between the period 1978-85. The post tax profitability on the average recorded an increase by 8 percent of the capital employed. The financial stability ratios also showed a healthy trend.

It may be pointed out in this connection that the high growth of variables we discussed may perhaps reflect the low base characterising long years of stagnation prior to 1975. The state of affairs prevailing then was almost similar to the one described in the case of companies A and B. A short description of the state of the affairs prevailing in the enterprise will be in order.

This company have been limping towards a closure due to heavy loss, a situation brought about by several factors internal to the enterprise. The capacity utilisation reached very low levels leading to heavy accumulation of inventory^{1/}. The productivity levels (value added per worker) have been declining. The breakdown of plant was a regular feature. Our investigation revealed that at that point of time the age of machineries installed was more than 25 years old. With continuous loss, enough provision for depreciation could not be made and hence increasing obsolescence pulling the productivity levels further down. Added to it was the bureaucratic management which some how was carrying on the day today affairs of the company! Needless to say, the labour front with three unions have been indulging in faction fighting and labour management relation have been straining.

The situation was drastically altered since the joining of a new managing director with considerable managerial experience

^{1/} Based on balance sheet information

and with science background. He joined, the office after a very hard bargaining with government and on the following conditions (1) relatively more autonomy in decision making, (2) the availability of sufficient funds for technological development (3) a five year tenure appointment.^{1/}

Subsequent events that followed showed that in the following years the company had acquired a new lease of life. To cut a long story short we may only summarise the major events which had a bearing on the performance.

The attention of the new regime was completely absorbed for some time on technology aspects. The scheme for modernisation drawn up was approved by the industrial financing institution and the government. Though there was some hesitation on the part of industrial financing institutions to commit funds for technology development on the strength of assurance by the management that within a period of two years a favourable debt equity ratio will be brought about, the sanction was granted to the scheme. Necessary funds allocated for the revitalisation scheme included replacement of existing machines which led to substantial improvement in the productivity as well as introduction of new process by means of foreign technical collaboration. This enabled the enterprise to go in for diversification, making use of one of its bye-products.

Simultaneously, attention was given to other weak links like

^{1/} Information based on field enquiry.

inventory management. In the case of inventory management the then prevailing system provided scope for leakages. The practice of limited tendering, rush purchases, etc. have given greater scope in the past for corruption is evident from some of subject committee reports^{1/}. The new regime took meticulous efforts to put the inventory management aspects on a scientific basis. A full fledged material department was created wherein classification, standardisation, economic ordering etc. has been undertaken.

The biggest achievement of the new management was in the field of labour relation. The warring factions came to an agreement regarding the work norms fixed by the state productivity council. This was possible because of the new dynamic leadership which could convince the unions that an enterprise which is running on a continuous loss cannot take care of the interest of the workers. This kind of ethos could carry more conviction with workers with the participation of the workers in the board of management and also setting up joint councils at the shop floor and plant levels to look after safety measures, working conditions, welfare measures, disciplines and measures for improving productivity and efficiency. In short, within two years after the introduction of these measures, the situation showed signs of improvement. From the third year onwards the profit performance recorded positive growth rates along with other major variable like sales, employment etc.'

^{1/} Based on subject Committee Report 74-75, Secretariate, Trivandrum

Differential Behavioral Pattern: Some tentative explanations

What explains the failures, stagnation and success stories outlined above? From our narration it may appear that a variety of factors had directly or indirectly contributed to the phenomenon of failures. The major one appears to be the entrepreneurial style with its bureaucratic organisational structure as seen in the first two cases have become a deadweight to the growth of state enterprises. There was no creative response to the problems confronting to the enterprises. When the problems arising from financial, technological and other related factors get confounded, the state was found stepping in with the panacea of 'loan capital' which was not even utilised properly for productive investment. The slippery slope on which the enterprise was placed by the acts of omission and commission by state government in fact demoralised the workers is evident from their strategy of maximising the short-term gains. In fact the same environment followed in the case of the firm 'C' having a monopoly position in the product market and hence the monopoly advantage could not be spun into a surplus generating proposition.

However, we found some difference in the case of firm D. The major factor for this difference appears to be due to change in the managerial strategy and associated changes that took place in the sphere of finances, technology, labour management relations etc. Though this example can not be emulated in all respects, it points towards the need of a package approach in the development of state sector enterprises.

Linkage patterns of state Enterprises

In this chapter we shall be examining some macro issues which has some bearing on the development of state Sector enterprises. The industrial development strategy of the state however did not consolidate the already initiated industrial base but moved into modern sectors like engineering, chemicals, electronics. Except in the case of electronics (around Rs.46 crores by 1983) in other sectors investment was spread very thinly. For example, engineering and electrical industry received only 12.24 crores (hardly 6% of state investment compared to other areas). Perhaps, one aspect of the linkage patterns that has relevance to policy measures is the inter relationship among these units in the industrial system. This relationship need not be and in effect not always competitive. The complementarities largely arise from joint interest which in turn depends on the strategy of product mix patterns and production process in terms of input mixes and thereby provide a nuclei of economic expansion.

As seen above in the context of Kerala there had been thin spreading of capital in areas where multiplier effect is very high. Engineering industry is typical of this under investment. The point can be illustrated by the estimate we had made on

linkage patterns of state enterprises. Linkage pattern can be crudely worked out in terms of their input purchase and output disposal from within the state and the rest of the economy. Table 30 shows, the firms in our sample show extremely weak linkage with the regional economy in terms of purchase of inputs. As seen from the table, in the case of units belonging to engineering and electronics, a substantial proportion of inputs necessary for production is procured either from outside the state or outside the country. The fact of the case is that policy instruments have not been used to stimulate the generation of the industrial cluster as a necessary programme for creating and fostering local activities. We may also add here emphatically that the high inventory sales ratio of the enterprises in the sample may be due to the inadequate growth of inter related industries, a hypothesis which needs to be examined in depth.

Table 30

Backward Linkages Among State Sector Enterprises in Kerala

Industry	Purchased from within the state (%)	Purchased from outside the state (%)	Imported (in%)
I. Chemicals	20.00	59.00	21.25
II. Engineering	8.00	90.00	2.00
III. Electricals	22.00	72.00	5.00
IV. Electronics	10.00	30.00	60.00
V. Agrobased industries	70.00	30.00	00.00

Forward Linkages and Procurement Policy

When it comes to disposal of output also, we have not found a strong linkage with the needs and requirements of governmental departments. The products of these 'uneconomical' enterprises when faced with unequal competition with private enterprises, government as user of the enterprises products, can procure them. The linkages with the user government departments could have served as an outlet for producing enterprises as well as can exert pressures on producing enterprises to improve quality. This two way approach can to a large extent help these enterprises to become more viable in the long run.

In our enquiry almost all firms have been emphasising the difficulties faced in the marketing of their products and the uncertain attitude of the government in assuring a stable market for their products. It is to be remembered in this context that utility departments of state government can be the major users of these products. To illustrate, there are three firms producing electrical goods (E.E.C., Metropolitan Engineering Company, United Electrical Industries) such as the tension transformers, switch-gears, electricity metre, irrigation structure etc. that can be procured by State Electricity Boards. Again products produced by the Kerala Drugs and Pharmaceuticals and Pharmaceutical Corporation can be procured by government hospitals. Likewise, the wood products of Travancore Plywood Ltd. and Forest Industries Limited, Textiles goods of Kerala

Garments and Sitaram Textiles can be procured by various government departments. Pipes supplied by Kerala Premo Pipes Limited can be procured by Public Works Department. Similarly, products of Steel Industries and Kerala Engineering Works can be procured by various government utility departments. Such examples can be multiplied.

We may mention here the concerns voiced by some of the enterprises. Let us illustrate the case of Metropolitan Engineering Company which started with producing switch gears, isolators, fuses and fire extinguishers. The major customers of the product was State Electricity Board. Because of the vagaries in the purchase policy of Kerala Electricity Board the Company faced the problem of under utilisation of capacity and higher lead time in clearing the stock. This enterprises is now a sick unit.

Take the case of another firm in the modern manufacturing sector producing pharmaceuticals. It is facing a serious crisis due to interdepartmental revalries. The firm under the ministry of industries have been supplying medicines for the requirements of government hospitals. The attempt of the health ministry to bring the firm under its control as cancellation of orders, placed on pharmaceutival firm by the health ministry. The outcome was cancellation of orders, placed on pharmaceutical firm by the health ministry. The company thereby lost 95 percent of its market and is now on the brink of collapse.

Such examples can be multiplied. The question is had there been a strong linkage with the using departments, could this crisis have befallen on them? But to make the linkages stronger, according to user departments the prices offered should correspond to the reality. Even when state enterprises are given a price advantage of 10% over the Private Competitors the products cannot sell to the users departments of government. This situation once again tells upon the all pervasive backwardness of state sector enterprises which can only be remedied by purposeful and planned intervention.

CONCLUSIONS OF THE STUDY

The inefficiency of the state sector enterprises and the reasons advanced to explain it are proverbial. These include bureaucratisation of management, politicalisation of recruitment, irresponsibility of trade unions etc.^{1/} Apart from these rhetorical explanation, no concrete economic analysis is available on state sector enterprises in the context of Kerala. Therefore, we hope our study will be a modest contribution in identifying the nature of problems afflicting the state sector enterprises.

As we have seen in the introductory section, in the absence of major investment from private and central sectors, state has taken major initiatives in establishing several industries in the modern manufacturing sector. However, proper functioning of State Sector Units in a mannerf such that it creates sufficient surplus is essential for Kerala to carry forward the task of industrialisation. But majority of the enterprises are incapable of generating any surplus. The major factors contributing to this phenomenon as revealed by our study are as follows:

^{1/} See Report of the High Level Committee on Industry, op.cit.

In its desire to spread and speed up industrialisation, the state has diffused the available resources very thinly across many industries. This had resulted in the formation of an inverted pyramid types of a capital structure characterised by top heavy loan capital and a thin base of paid up capital. In turn, this has also led to build in claims for more interest, resulting in further dependance on governmental loans for working capital. As substantiated by our analysis this has constrained the financial health of the enterprises by imposing a heavy interest burden resulting in vulnerable financial ratios. Some of the enterprises accumulated loss while remaining in a sick state for a long time.

However, this does not at all imply that sufficient explanation on loss making phenomenon is provided by debt equity ratio. There may be equally strong explanatory variables such as technology, organisational aspects, price policy etc. Since all the above factors cannot be explored in the study, we confined to a major aspect of performance namely technology. Our analysis of the technological aspects revealed that they face serious problems in the realm of technology. The inter relationship between the financial performance and technological performance have been found very strong. The greater the extent of loss, the more profound technological backwardness and viceversa. An analysis of the cost structure indicated rising cost of raw materials and fuel reflecting the increasing inefficiency in the technology used. The major problems in the technology front were

the inability to undertake renovation due to shrinking depreciation fund; irregular delivery of parts and components, poor internal scheduling, inadequate jigs and fixtures, poor plant lay out etc. Interestingly enough we found that even some of the profit making enterprises do face such problems. A favourable skill-mix, better R & D allocation and design development etc were some of the capabilities developed by profit making enterprises.

The information we gathered on other aspects like inventory management etc revealed that in the case of loss making enterprises a lot of disorder in inventory management was located, this leading to leakages and economic waste. However we found some difference in the case of profit making enterprises! Some of them are managed by technically qualified people. Marketing management is another area where a lot of difficulties these enterprises face irrespective of whatever they are loss making or not.

Our analysis also presented a dynamic picture of transformation of state enterprises into a given situation of profit or loss making with the case study of four enterprises. We could identify a variety of factors which had directly or indirectly contributed to the loss making phenomenon. The insensitivity of the organisational structure to gear up to the demands of production structure appeared the major reason for the backwardness. This dichotomy is also present in the case of an

enterprise having monopoly advantage in the product market. It is informative to report in this connection that this synchronisation was evident in the case study of another firm whose performance was found satisfactory.

Another major finding highlighted in our study is that state had diffused its investment in all sectors. This diffusion took place largely during the post independent period. The industrial development strategy of the state instead of consolidating the already initiated industrial base chose to move into several modern sectors ignoring linkages that largely arise from joint interest; consolidation of which depends upon the strategy of product-mix patterns and production process in terms of input mixes and thereby provide a nuclei of economic expansion. But this nuclei of economic expansion was not being appreciated by the planners of the state sector enterprises, for, state sector has only been spreading investment thinly in areas where multiplier effect is very high. Engineering industry is typical of this under investment. This point is illustrated by a case study of linkage patterns of state sector enterprises. It is seen that in the case of units belonging to engineering and electronics, a substantial proportion of inputs necessary for production is procured either from outside the state or outside the country. The firms in the sample showed extremely weak linkage with regional economy in terms of purchase of inputs. The point of emphasis is that the policy instruments have not

been used to stimulate generation of industrial cluster as a necessary programme for creating and fostering local activities.

As for the disposal of output, we have not found a strong linkage with the needs and requirements of user government departments. Such linkages could not only have served as an outlet for producing enterprises but more importantly can exert pressure on them to improve quality. This two way strategy could have helped these enterprises to become more viable. We have illustrated with several examples how the lack of effective linkage harms the longrun interests of enterprises.

In short, the slippery slope of state sector enterprises as we have seen is financial management, which sets the ball of inefficiency rolling. This spreads into the management, marketing, technology and linkages aspects all of which accentuates the crisis. Once the crisis set in reflected, as the case studies suggested, it assumes unidimensional character not being transmitted to organisational sphere.

Why is it that the organisational set up remains insensitive to the structural demands of the enterprises? An answer to this question necessitate an examination of the existing organisational set up. At the outset we would like to point out that the administrative aspects of State Sector enterprises are vested in around ten administrative departments. Majority of them, however are with the industry ministry. Needless to say,

the situation is chaotic at present. The interaction between the government and the enterprise is run through the Board of Directors on which are represented the Govt. representatives departmental most often Secretary will be the Chairman and the Senior bureaucrats as Chief executives. Therefore, the interface between the government and enterprise will be caught in a classical conflict between autonomy and accountability and the system will be perpetuated by other built in disadvantages arising from lack of professionalism, discontinuity of leadership etc.

It is not out of place in this context to mention some of the organisational reforms introduced in the past to strengthen the interface between government and the enterprise and thereby the efficiency of state sector units. The holding company concept was introduced in the case of few enterprises with the formation of Kerala State Industrial Development Corporation in 1972. The objective has been that the holding company will render managerial services to the companies under its fold in respect of general management, technology industrial relations and marketing. But the experience has shown that when this concept is introduced to a heterogeneous group of firms with differing product-mix its usefulness is limited.

The other organisational reforms were the establishment of Public Enterprise Board in 1979 and Bureau of Public Enterprises in 1982 with the objective of evaluation, monitoring and co-

ordination. But it produced only limited result because these nodal agencies possessed either adequate experience or technically qualified personnel. Moreover, the decision making regarding the new presents etc has mostly done by political considerations and economic rationale in such situations have to recede back. However, it goes to the credit of Bureau of Public enterprises to present a review of Public enterprises annually from the completed annual reports of state enterprises. Needless to say, the picture presented is still incompleter, for, one third of the enterprises do not complete the annual reports in time which in turn represent a major administrative lapse.

We may also mention in this context another experiment introduced in a limited scale, namely the workers participation in the Director Boards. This has produced only limited result. According to the official sources further scope for its extension is getting limited because of the inter union rivalries etc. It may be added in this connection that such experiments were without creating an environment for their emotional involvement etc. To illustrate, giving the workers a stake in the form of share holding, working together committees by representatives of recognised labour unions etc ought to have produced better results there giving mere representation in the Director Board.1/

Recognising the above policy limitations, there are a few initiatives at the governmental level to introduce organisational

1/ Report of the high level committee on Industry, opcit.

innovations like enterprise group (bringing together enterprises in the same sector under common Chairman, a substitute for holding companies) professionalism in management, widen the scope of labour participation in management etc. There are also some initiatives in introducing the Memorandum of understanding (MOU) in line with the steps undertaken by Central Government controlled enterprises.

Strengthening and sensitising the interface between the government and enterprise by organisational reforms may assure healthy interaction between the structural and organisational aspects of state sector enterprises in Kerala. This can be spun off into an industrial advance? Unless this is done the future industrialisation of the state may not get the necessary lead. As is obvious, such a lead greatly depends on the political and social environment of the region.

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