262

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Working Paper

PRODUCTIVITY IN PUBLIC
SECTOR ENTERPRISES
– Identification of problem area

by

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The main objective of the working paper series of the IIMA is to help faculty members to test out their research findings at the pre-publication stage.

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The Central Public Enterprises have come to occupy a pivotal position in the economy of the country. These enterprises function predominantly in key areas of the industries supplying basic inputs to commerce and industry such as coal, steel, minerals, metals and heavy equipment including those needed for generating power. There are also service enterprises, operating in the fields of trading and marketing, shipping and transportation, contracting and consultancy, tourism and development of small enterprises. In a way, Public Sector in its widest sense covers all activities of government, and the overall expenditures of five year plans are described in this way. More specifically, public sector covers industrial and commercial undertakings of the government which are in the form of statutory corporations or companies registered under the Indian Companies Act. The present study refers to these type of undertakings.

An appreciation of the growth of investment in Public Sector can be had from the growth in the investment levels in different plan periods as shown in Exhibit 1. The general principle followed by the Government is a parity between paid up capital and long term loans. Out of the total investment mentioned above Rs. 5,413 crores were accounted for by paid up capital.

With such a huge investment it is natural that the health of the undertakings, their growth, current performance and future development are a matter of general concern and interest.

Classification of Undertakings

Currently the PSE are classified in the following groups, based on the approval of the CPU accorded in their 46th report to parliament.

Exhibit 1

Growth in Public Sector Investment

	Total investment	No. of Enterprises
Commencement of 1st Plan (1-4-51)	29	5
2nd Plan (1-4-56)	81	21
3rd Plan (1-4-61)	953	48
End of 3rd plan (31-3-66)	2415	74
Commencement of 4th Plan (1-4-69)	3902	85
5th Plan (1-4-74)	6237	122
(1-4-75)	7261	129
(1-4-76)	8973	129
(1-4-77)	11097	145

1. Projects under construction
2. Running concerns

I. Production Companies

A. Basic Raw Materials
   a. Steel
   b. Minerals and Metals
      (i) Coal
      (ii) Other minerals and metals.
   c. Petroleum
   d. Chemicals and Pharmaceuticals

B. Capital Goods
   a. Heavy Engineering
   b. Medium and Light Engineering
   c. Transportation Equipment

C. Consumer Goods

D. Agro-Based Enterprises

E Textiles.

II. Service Companies
   a. Trading and Marketing Services
   b. Transportation Services (Air, Sea, Road)
   c. Contracts and Construction Services
   d. Industrial Development and Technical Consultancy services.
   e. Development of Small Industries
   f. Tourist Services
   g. Financial Services
   h. Insurance
   i. Companies licensed under section 25 of the Companies Act.

A second classification of the enterprises is possible based on the ministerial control exercised. Under the present allocation of business, the following groups may be identified:

A. Ministry of Agriculture and Irrigation

   a. Department of Agriculture
   b. Department of Food
   c. Department of Rural Development
   d. Department of Irrigation

B. Ministry of Commerce.

C. Ministry of Communications

D. Ministry of Chemicals and Fertilizers

E. Department of Defence Production

F. Ministry of Energy

   a. Department of Coal
   b. Department of Power

G. Ministry of Finance

   a. Department of Economic Affairs

H. Ministry of Health and Family Welfare

   a. Department of Family Welfare

I. Ministry of Industry

   a. Department of Heavy Industry
   b. Department of Industrial Development

J. Ministry of Information and Broadcasting.

K. Ministry of Petroleum

L. Ministry of Railways

M. Ministry of Shipping and Transport.

N. Ministry of Steel and Mines

   a. Department of Mines
   b. Department of Steel.

P. Ministry of Tourism and Civil Aviation

Q. Ministry of Works and Housing

R. Ministry of Supply and Rehabilitation

   a. Department of Rehabilitation

S. Department of Atomic Energy

T. Department of Electronics

U. Department of Science and Technology

Omitted from the present study is the group of enterprises under construction. Since these haven t reached the commercial production stage, inclusion of these would doubtless present erroneous picture. This is done for every particular financial year, under consideration.

Present Research:

Several interesting studies have already appeared relating to Public Sector Enterprises. Apart from BPE s routine comprehensive analysis of performance based on annual reports, and the studies of the Committee on Public Undertakings (CPU), studies relating to several other asepcts of specific interest are regularly reported by the Institute of Public Enterprise (IPE). Notable amongst these are .... The monthly publication Lok Udyog of the BPE regularly carries technical articles on the working and problems of public enterprises. Reports of the proceedings of many a seminar are also a source of valuable information relating to the PSEs. The mass of information and available data reflect the growing awareness and concerns with respect to the efficiency of Public Sector, measures taken to overcome bottlenecks to efficiency, and the critical dependence of efficiency on the total physical performance of PSE. It is in the form of the physical performance that managerial effectiveness of the enterprise is brought into sharp focus in a truly multi-dimensional sense. An efficient public sector, implies its ability to generate surpluses for accelerated economic growth.

Perhaps the most extensive analysis of performance of the PSE s, with a historical perspective, is that by Satyanarayana (2). Data base for this study covers a period of 1960-69, and the author broadly seeks the following two fold objective(i) analysis of financial and physical performance, (ii) causes for unsatisfactory performance of PSE s. The analysis of financial performance is based primarily on performance ratios which include gross profit to capital employed, trading net profit to net worth, total net profit to equity capital, gross profit to sales, total net profit to sales, cost of sales to turnover, sales to capital employed and sales to fixed assets. As regards other aspects of financial management in particular, working capital management, analysis is focused on the assessment of cash or liquidity position, receivables vis-a-vis sales and capital structure. Here again assessment is on ratio analysis including cash to current assets, inventories to current assets, cash to current liabilities, current ratio, acid test ratio, loan-equity ratio, loan-net worth ratio. The author has identified the following factors as having predominant influence on performance, namely - (i) delays in project commissioning, (ii) escalation of project costs, (iii) under utilization of capacity, (iv) losses incurred on townships, (v) surplus personnel and (vi) ineffective management of working capital. Recommendations of this study include suggestions for restructuring the capital base to write off capital to the extent of over capitalisation, cash grant for undertakings with accumulated losses, interest holiday during gestation period, relieving the enterprise of loan capital during initial stages of operations, scientific control of inventories and a subsidy to recoup losses on townships particularly in case of enterprises incurring losses.

While it is not proposed to review other similar studies reported in the past, they mainly seem to centre on the focal question of relatively unproductive use of available resources by the Public Sector, as a whole. Higher productivity inevitably means better physical performance through more effective use of resources and in turn it necessarily implies better financial performance. Interestingly enough, there appear to be conflicting views even on the definitional aspects of productivity. In this context, there are multifold questions still deserving attention. What, for instance is the current productivity level in PSEs Are these significantly different for different enterprises and industries ? Are there any discernible growth trends in the productivity of PSEs over the years ? Are these trends significantly different for different industries ?

A second and possibly more fundamental question relates to the very concepts of a productive enterprise. Currently, performance of an enterprise is based upon a number of physical and financial ratios. Multiplicity of such ratios can at times be misleading during evaluation of performance. For instance, an enterprise may have a high ratio of gross sales to capital employed and yet incur a net loss and on the other hand, enterprise may have a relatively low ratio of gross sales to capital employed and yet make a net profit. The pertinent question that arises is whether out of these conceivably numerous ratios, are there any which can help discriminate well between productive and non-productive enterprises, and therefore be used as effective determinants of productivity in PSEs. If there do indeed exist such determinants, they may clearly have far reaching implications to the policies and programmes of the enterprise, with a view to gear them to a favourable, lubricating effect on productivity.

A third important question relates to the identification of Enterprise level factors which have significant effect on productivity of PSE. For instance, questions of the following type arise. Does specific capital structure of an enterprise influence its productivity? What is the effect of on-going capital works on the overall productivity? To what extent does capacity utilisation affect this? so on. The entire productivity programme of the enterprise may be provided with a sharper focus, if such enterprise level factors could be identified.

The over-riding concern for productivity of PSE is aptly reflected by the deliberations of the seminar on higher productivity in PSEs organised by BPE in collaboration with standing conference on Public Enterprises (SCOPE). Among many contributions to this seminar, is an excellent state of the art survey on organised usage of modern productivity techniques in manufacturing PSEs, carried out by BPE (3).

Although several distinct productivity improvement techniques hav e appeared and been applied with varying degrees of success, and several enterprise level productivity improvement factors have been identified, there appears to be information gap presently about the relative extent of influence of these factors or the extent to which various techniques contribute to productivity improvement.

In the present study, we attempt to answer the questions raised above - Specifically, we propose to examine the following aspects:

1. Trends in the growth of productivity in PSEs.
2. Effects of sectoral and control groupings of industries on productivity.
3. Identification of effective determinants of productivity in PSEs.
4. Identification of enterprise level factors affecting productivity in PSEs.
5. Implications of the study to management.

Selected References:

1. Ramanadham., 'Survey Report of Research on Public Enterprise', Ind. Inst. of Public Enterprises.

2. Satyanarayana J., 'Accumulated deficits of Public Sector Enterprises', Ind. Inst. of Public Enterprises.

3. Proceedings of Seminar on 'Productivity in Public Sector Enterprises', SCOPE, (1975)