

Impact Estimation of Investment Returns: A Study of Manufacturing Sector in Indian CPSEs

Sudipta Ghosh^{1*} and P.S. Aithal²

¹PDF, Srinivas University, Mangaluru, Karnataka, India

&

Department of Commerce, Prabhat Kumar College, Contai, West Bengal, India

*Corresponding Author E-mail: sgcostmanagement@gmail.com

²Institute of Management and Commerce, Srinivas University, Mangaluru, Karnataka, India

E-mail: psathal@srinivasgroup.com

Abstract: The term 'investment' is an asset whose currency value multiplies over time. In other words, it indicates the modus operandi of distributing funds to produce revenue or profit. In the literature of fiscal administration, it is a recital gauge which is affianced to work out the competency or productivity of the amount invested in an organization. In the industrialized zone, the CPSEs produce several products like steel, machinery, fertilizers, petrochemicals, etc. The expansion of CPSEs was meant to lessen poverty, attainment of self-sufficiency, elimination of inequalities, etc. However, these goals could not be achieved up to the ideal level. As a result, disinvestment of the Indian CPSEs took place in the fiscal year 1991-92. In this locale, the intention of the cram is to judge the collision of investment takings in manufacturing sector of Indian CPSEs. To ordeal the intention of the cram, popular accounting ratios are applied and apposite arithmetical test is calculated to adjudicate the collision of investment takings. The study concluded that industrialized zone generated affirmative takings on their investment in a good number of years beneath cram. Significant positive impact in equity takings connote that industrialized zone of the CPSEs in India have contributed optimistically towards the Government exchequer. Hence, the Govt. should adequately invest their scarce resources in the industrialized zone to maximize their investment returns.

Keywords: accounting ratios, Indian CPSEs, investment returns, manufacturing sector.

1. INTRODUCTION

The term 'investment' is an asset whose currency value multiplies over time. Therefore, funds derived through investment are employed for diverse needs like reducing shortage in revenue, repayment of loans, etc. In other words, it indicates the modus operandi of distributing funds to produce revenue. In kin to investment, low threat is connected with low profits, while high threat is linked with higher profits.

In the literature of fiscal administration, it is a recital gauge which is affianced to work out the competency or productivity of the amount invested in an organization. Investment return also assesses the competency of diverse funds at a dot of era. Thus, income from fund is an endeavour to straightforwardly estimate the income of a fastidious investment in connection to the price of the fund.

2. CENTRAL PUBLIC SECTOR ENTERPRISES (CPSEs) IN INDIA AND DISINVESTMENT: AN OVERVIEW

CPSEs occupy a significant position in the monetary and community enhancement in India. The elemental objectives of establishing CPSEs is to construct

communications for monetary development, creation of employment activities, encourage impartial provincial extension and make investable funds for growth of the motherland.

The Indian Govt. established the civic enterprises to build up a fiscal structure in which the concentration of prosperity and ways of manufacturing do not damage the general man. To accomplish augmentation of the nation, CPSEs were formed as a separate entity in the form of corporations or companies so that they may be operated on profitable basis. In the industrialized zone, the CPSEs produce several products like steel, machinery, fertilizers, petrochemicals, etc.

Expansion of CPSEs was meant to lessen poverty, attainment of self-sufficiency, elimination of inequalities in earnings, etc. However, these goals could not be achieved up to the ideal level. As a result, disinvestment of the Indian CPSEs took place in the fiscal year 1991-92. Disinvestment may be defined as a method in which equity capital of the Govt. is introverted either in part or in whole. The Industrial Policy Statement in India affirmed that disinvestment in the CPSEs would be conducted on a choosy basis.

The basic objective of divestment is to augment capital, support wider community participation and to achieve market answerability. The most significant purpose of divestment is to make sure most positive consumption of nationwide affluence and to boost prolific effectiveness in CPSEs.

3. REVIEW OF FORMER STUDIES

Mishra, R.K. & Nandagopal, R. (1989), affirmed that the method of divesting equity in the PSEs could make the majority of well-being among the customers. Antony, M.T. (1992), found decreasing tendency in the mold of investment. On account of low capacity exploitation, the

CPSEs faced enormous loss of production. The researcher recommended that to attain competency, privatization is a temporary measure rather than a lasting gauge.

Sankar, T.L. et al. (1994), indicated that disinvestment of the shareholdings in PSEs was a fiscal necessity. The researchers found that the Govt. failed to attain the basic purpose of disinvestment.

Meggison, W.L. and Netter, J.M. (2001), in their cram discovered that companies in which privatization took place were more capable and recorded improved fiscal health.

Gupta, K.L. and Kaur, H. (2004), found that PSEs which were sick should be stopped by selling their property. Such sick PSEs were typically restricted to those PSEs which were formerly acquired as sick units from the private segment.

Patnaik, I. (2006), observed that with restricted privatization and administration with control had resulted higher production. The researcher recommended that public should be offered shares of profitable entities through disinvestment, because it would circumvent concentration of monetary authority. **Trien, V.L. and Jonathan, P.B. (2010)**, revealed a pessimistic impact on firm recital when debt as well as state possession was applied individually. However, the joint influence of debt and state possession had an optimistic outcome on firm recital.

Singh, G. (2015) observed that profitability recital of the loss making CPSEs had enhanced due to disinvestment. The study recommended that the staff and the community of the profit oriented CPSEs ought to be offered equity shares. Additionally, the cram suggested that disinvestment may show the way to competency, but irresponsible privatization may not bring affirmative outcomes on a long term basis.

Achini, A. and Begum, S. (2018), observed that due to disinvestment, Maharatna companies had remarkable impact. However, inconsequential impact was experiential in Navratna companies.

Richard, P.V. and Kalyani, B. (2019), found affirmative fiscal ratios among the distraught and non-distraught firms. The study observed that Indian PSEs may grow to be fiscally sound if they set up a good quality of fiscal administration strategy.

Choudhary, V.K., Singh, K. and Gupta, V. (2021) found positive impact on monetary recital of the Indian CPSEs on the basis of liquidity, value, etc. However, profitability, leverage, and operational efficacy of the CPSEs did not alter drastically.

4. RESEARCH INTENTION

The intention of this research paper is to empirically judge the collision of income on investment in manufacturing sector of Indian CPSEs.

5. HYPOTHESIS OF THE STUDY

Null Hypothesis (H_0): There is no significant impact of investment returns in manufacturing sector.

Alternative Hypothesis (H_A): H_0 is not true.

6. RESEARCH DESIGN

6.1 Sample

The sample border comprises of the whole industrialized zone in Indian CPSEs except the public organizations that continues on departmental basis.

6.2 Cram Phase

The phase from 2010-2011 to 2019-2020 forms the cram phase. To assess the impact of investment returns in the manufacturing sector, the total study episode (2010-11 to 2019-20) has been broken down into two sub-periods (i) 1st sub-period: 2010-11 to 2014-15 and (ii) 2nd sub-period: 2015-16 to 2019-20.

6.3 Data Source

The cram stands on derived data which are composed from the available yearly information of the PES. Furthermore, aggregate data is applied to arrive at a momentous conclusion.

6.4 Methodology

Both accounting and statistical techniques are applied in this cram. The accounting ratios engaged in the cram are shown below:

$ROA = NPAT \div Total\ Assets.$

$ROCE = EBIT \div Capital\ Engaged.$

$ROE = NPAT \div Equity\ Shareholders$

6.5 Descriptive Statistics

Average, standard deviation, and C.V. have been measured for the chosen ratios to observe the overtime changes and to help comparison involving two vice-phases under study.

To measure stability in income on investment, it has been haphazardly estranged into comparatively stable (C.V.: up to 25%), fairly unstable (C.V.: 25.1% to 50.0%), very much unstable (C.V.: 50.1% to 75.0%), and irregularly unstable (C.V.: greater than 75.0%) (**Selvi and Vijayakumar, 2007**).

6.6 Paired 't' Test

The collision of investment income in industrialized segment is examined by paired 't' ordeal. The ordeal measure is shown underneath:

$$t = (\bar{d}) \div (s \div \sqrt{n-1})$$

Where: \bar{d} = mean and 's' = S.D. of the dissimilarity d_i i.e., $\bar{d} = (\sum d_i \div n)$ and $s = \frac{\sqrt{\sum d_i^2 \div n - (\sum d_i \div n)^2}}$.

7. RESULTS AND DISCUSSION

7.1 Analysis of Investment Income in Manufacturing Sector

ROA: Table I and Figure 1 shows a fluctuating trend in ROA. The ratio ranges between 0.01 and 0.05 with a mean of 0.03 and C.V. at 33.33% (i.e., moderate fluctuation) for the duration of the complete period.

Further, there has been no alteration in mean ROA all through the two sub-phases. During 1st phase, ROA lies between 0.01 and 0.05 and in the 2nd half, it lies between 0.01 and 0.04. ROA has a high level of fluctuation (C.V. 66.67%) in first phase, while it varies fairly (C.V. 33.33%) in the 2nd half.

ROCE: The ROCE (Table I & Figure 1) of the industrialized zone also reveals a fluctuating trend with a mean of 0.13 all through the complete cram stage. The ratio lies between 0.07 and 0.23 with C.V. at 38.46% (i.e., moderate fluctuation) for the duration of the complete era.

The results of sub-period analysis show that mean ROCE (0.10) is lower in the second sub-phase than that of mean ROCE (0.15) in the first sub-phase. The ratio ranges between 0.07 and 0.23 in the first sub-phase. However, the same lies between 0.07 and 0.14 in the second sub-phase. Nevertheless, the ratio varied fairly during the two sub-phases of the cram era.

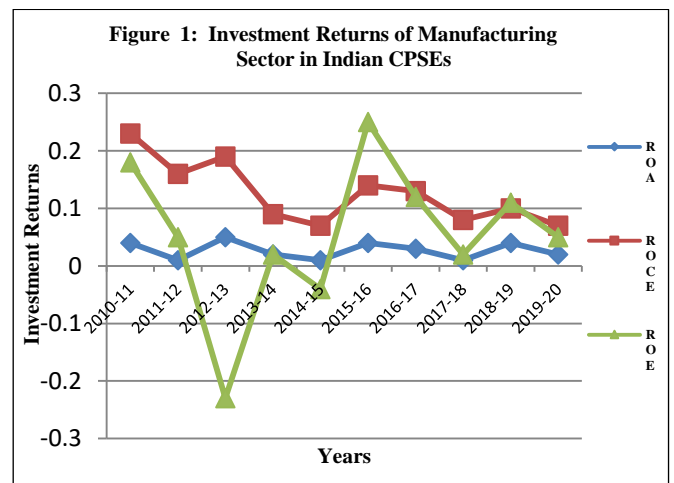
ROE: For ROE (Table I & Figure 1), fluctuating trend has been observed with a mean of 0.05. The C.V. shows 260.00% (i.e., erratic fluctuation) all through the complete stage under cram. Movement of ROE in the industrialized zone is recorded from -0.23 to 0.25 all through the complete phase.

Further, sub-period analysis of ROE indicates that mean ROE (0.11) in the second sub-stage is greater than that of mean ROE (-0.01) in the first sub-stage. The ROE ranges between -0.23 and 0.18 in first half, while ROE in the second half lies from 0.02 to 0.25. From the movement of ROE during the two sub-stages, it clearly indicates that industrialized zone has generated both positive and negative takings in the first half and only positive takings in second half. The ratio has fluctuated erratically during the two sub-stages of the cram.

Table I: Investment Income in Manufacturing Sector

Ratios Year ↓	Investment Income		
	ROA	ROCE	ROE
2010-11	0.04	0.23	0.18
2011-12	0.01	0.16	0.05
2012-13	0.05	0.19	-0.23
2013-14	0.02	0.09	0.02
2014-15	0.01	0.07	-0.04
2015-16	0.04	0.14	0.25
2016-17	0.03	0.13	0.12
2017-18	0.01	0.08	0.02
2018-19	0.04	0.10	0.11
2019-20	0.02	0.07	0.05
Entire Period:			
Mean	0.03	0.13	0.05
S.D.	0.01	0.05	0.13
C.V.	33.33%	38.46%	260.00%
1st Sub-Period:			
Mean	0.03	0.15	-0.01
S.D.	0.02	0.07	0.15
C.V.	66.67%	46.67%	1500.00%
2nd Sub-Period:			
Mean	0.03	0.10	0.11
S.D.	0.01	0.03	0.09
C.V.	33.33%	30.00%	81.82%

Basis: Computation by the Authors.



7.2 Collision of Investment Income in Manufacturing Sector

From Table II, we found no alteration in mean ROA involving the two sub-stages. For ROCE, we found that its average value has decreased in the second half in comparison to that in first half, while mean ROE has improved significantly from 1st sub-period to 2nd sub-period. However, balancing 't' test (Table II) reveals insignificant results for ROA ($t = -0.18$) and ROCE ($t = 1.83$). For ROE, the outcome is considerable at five percent ($t = -3.32$).

For ROA and ROCE, we found insignificant results. Thus, void supposition is acknowledged in the cram. For ROE, the same supposition is rejected. This shows that income on equity shareholders of the industrialized zone improved significantly (i.e., optimistic collision) all through the era beneath cram.

Table II: Balancing 't' Test for Collision of Investment Income in Manufacturing Sector

Details	Investment Income		
	ROA	ROCE	ROE
Mean (1 st Sub-Period)	0.03	0.15	-0.01
Mean (2 nd Sub-Period)	0.03	0.10	0.11
Calculated value of t	-0.18 ⁱ	1.83 ⁱ	-3.32 ^{**}
Collision	No Collision	No Collision	Positive Collision

Notes:

1. ^{**} marked value indicates considerable at five percent (2-tailed).
2. ⁱ marked values indicate trivial.

Basis: Computation by the Authors.

8. CONCLUSION AND RECOMMENDATION

The industrialized zone generated affirmative takings on their investment in a good number of years beneath cram. Sub-phase investigation reveals no alteration in mean performance of ROA, while the average performance in ROCE reduced in the second phase in relation to that in the first phase. However, average performance of ROE has significantly increased from first sub-period to second sub-period. The stability of investment income in second sub-period has shown better performance in relation to the first sub-period.

Significant positive impact in income on equity shareholders shows that industrialized zone of Indian CPSEs has positively contributed to the economic progress of the motherland. Hence, the Govt. should adequately invest their scarce resources in the industrialized zone to maximize their investment returns.

References

- [1] Achini, A. & Begum, S. (2018). Impact of disinvestment on financial performance: A comparative study of Maharatna and Navratna

- companies. *International Journal of Pure and Applied Mathematics*, 118(15), 65-69.
- [2] Antony, M.T. (1992). *Efficiency in Central Public Sector Enterprises in Kerala: An Analysis of Capacity Utilization, Profitability and Productivity*. Ph.D. Thesis. Department of Applied Economics, Cochin University of Science and Technology, 253-262.
- [3] Choudhary, V.K., Singh, K. & Gupta, V. (2021). Impact of disinvestment on performance of select central public sector enterprises in India. *Mudra: Journal of Finance and Accounting*, 8(2), 1-20.
- [4] Das, N.G. (1990). *Statistical methods (Vol. II)*. Kolkata: M.Das & Co., 223-303.
- [5] Gupta, K.L. & Kaur, H. (2004). *New Indian economy and reforms*. New Delhi: Deep and Deep Publication Pvt. Ltd., 80-113.
- [6] Khan, M.Y. & Jain, P.K. (1994). *Financial management – text and problems*. (2nd ed.), New Delhi: Tata McGraw-Hill Publishing Company Limited, 103-106.
- [7] Magginson, W.L. & Netter, J.M. (2001). From state to market: A survey of empirical studies on privatization. *Journal of Economic Literature*, 39(2), 321-389.
- [8] Mishra, R.K. & Nandagopal, R. (1989). *Capital Market and Privatization of Public Enterprises: The Case of India*. Institute of Public Enterprises and Bobolinks Corp., India, 123-150.
- [9] Patnaik, I. (2007). *PSU Disinvestment*. Available at: <http://www.Indiaseminar.com/2006/557/557%20ila%20patnaik.htm>. Retrieved on 19.6.21, 1-12.
- [10] Published Annual Reports of Public Enterprises Survey (2010-11 to 2019-20), *Department of Public Enterprises*, Government of India, New Delhi.
- [11] Richard, P.V. & Kalyani, B. (2019). Empirical analysis of financial distress of selected public sector undertakings in India. *International Journal of Business and Management Invention (IJBMI)*, 8(4), 30-38.
- [12] Sankar, T.L. & Mishra, R.K. (1994). Divestments in public enterprises: The Indian experience. *International Journal of Public Sector Management*, 7(2), 69-88.
- [13] Selvi, A. M. & Vijayakumar, A. (2007). Structure of profit rates in Indian automobile industries – A comparison. *The Management Accountant*, October Issue, 815-816.
- [14] Singh, G. (2015). Disinvestment and performance of profit and loss making central public sector enterprises of India. *Paripex – Indian Journal of Research*, 4(4), 4-7.
- [15] Trien, V.L. & Jonathan, P.B. (2010). Can two wrongs make a right? State ownership and debt in a transition economy. *Journal of Management Studies*, 47(7), 1297-1316.