

## Evaluation of the Financial and Operating Performance of Fertilizers and Chemical & Pharmaceutical Sectors of Indian Public Sector Enterprises After Disinvestment

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**Abstract** - After 1991 the Government of India is following a policy of economic liberalisation and concept of disinvestment has been more or less accepted by at least all the parties whenever they are Government Disinvestment involves the sale of equity and bond capital invested by the government in PSUs. The failure of the public sector to fulfill the role assigned to it resulted in the protest become louder and more articulate. The main focus of the present paper is to examine the impact of disinvestment on the financial and operating performance of fertilizers and chemical & pharmaceutical sectors of Indian Public sector enterprises. April 2009 onwards, there are fourteen enterprises in which government has undertaken disinvestment recently. After partial disinvestment of both fertilizers and chemical & pharmaceutical sectors of Indian Public sector enterprises, their dependence on the outsiders' funds has been increased.

**Keywords** - Disinvestment, Enterprises, Liquidity, Operating, Profitability, Strategic.

### I. INTRODUCTION

Public Sector Enterprises (PSEs) occupy an important place in the national economies of most countries of the world irrespective of their political orientation. Before independence, there was almost no "public sector" in Indian economy. The only instances worthy of mention were Railways, the Post & Telegraph, the Port Trust, the Ordnance and the Aircraft Factories and few Government control undertakings. After independence India adopted the road of planned economic development through Five Year Plans. The objectives of public sector enterprises of any country should broadly confirm to the objectives of the state policy which it wants to accomplish through the medium of public sector (Singh, V. S, 1986). "Necessity of infrastructural investments, heavy capital investment, long gestation period, dim prospectus of profits in the near future, distrust on private enterprises, impacts belief that Public Sector Enterprises (PSEs) is economically" as well as morality, having a high hand on private enterprise, and above all the policy ideology to which the society is committed, being some significant factors that determine objectives conditions of a country. The forms of organization of the public sector vary not only from one country to another country but also one enterprise to another depending on the one hand, upon the socio-political structure of the

country and upon the objectives of the enterprise, for fulfillment of which it has been established, on the other. The foregoing analysis reveals that the growth of public sector is inter-linked with the growth and the development of economy operating in a particular country and in a system. An economically underdeveloped country may be recounted with unexploited natural resources and growing population with poor quality (Hasan, 1996).

### Fertilizers Sector

Indian Fertilizer industry today has succeeded in meeting the demand of all chemical fertilizers over the years. The first manufacturing unit was started by the Indian Fertilizer Industry which was of Single Super Phosphate (SSP) in Ranipet near Chennai with a capacity of 6000 MT a year. In India, presently there are 57 large fertilizers plants producing urea, DAP, Complex fertilizer, Ammonium Sulphate (AS) and Calcium Ammonium Nitrate (CAN). Indian Fertilizer Industry is one industry with immense scopes in future. India is primarily agriculture oriented country and its economy is highly based on the agrarian produce the agricultural sector and its other associated spheres provide employment to a large section at the country's population and share about 25% to the GDP. The Indian fertilizer industry is one of the allied sectors of the agricultural sphere. India has emerged as the third

largest producer of nitrogenous fertilizers. The fertilizer sector by enhancing the agriculture productivity has in turn resulted in providing a major support to the farmers who are primarily depend on agriculture. The Indian fertilizer industry has come a long way since the setting up of the manufacturing unit of Single Super Phosphate (SSP) near Chennai in 1906.

### Chemical and Pharmaceutical Sector

The Indian chemical industry is among the established traditional sectors of the country that play an integral role in the country's economic development. This sector forms a part of the basic goods industry and is a critical input for industrial and agricultural development. The Indian chemical industry is one of the oldest industries in India and has made immense contribution to the industrial and agricultural development of India. It encompasses both large and small-scale units. The chemical industry serves the needs of sectors such as textiles, leather, plastics, paper,

printing inks and food stuffs, among others. The chemical industry is among the most diversified industrial sectors and includes basic chemicals and its products, petrochemicals, fertilisers, paints, gases, pharmaceuticals, dyes, etc. The Pharmaceutical industry in India is the world's third-largest in terms of volume. According to Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers, the total turnover of India's pharmaceuticals industry between 2008 and September 2009 was US\$21.04 billion. Indian pharmaceuticals industry is expected to grow at 19% in 2013. India is now among the top five pharmaceutical emerging markets. There will be new drug launches, new drug filings, and phase II clinical trials throughout the year. Presently this sector is highly fragmented with more than 20,000 registered units. The Pharmaceutical and Chemical Industry in India is an extremely fragmented market with severe price competition and government price control.

**Table 1. Investment Ceiling for Plant, Machinery or Equipment<sup>\*@</sup>**

Fertilizers	Chemicals and Pharmaceuticals
Brahmaputra Valley Fertilizer Corporation Ltd.	Bengal Chemicals and Pharmaceuticals Ltd.
Fertilizer Corporation of India Ltd.	Bharat Immunological and Biologicals Corporation Ltd.
Fertilizers and Chemicals (Travancore) Ltd.	Hindustan Antibiotics Ltd.
Hindustan Fertilizer Corporation Ltd.	Hindustan Fluorocarbons Ltd.
Madras Fertilizers Ltd.	Hindustan Insecticides Ltd.
National Fertilizers Ltd.	Hindustan Organic Chemicals Ltd.
Rashtriya Chemicals and Fertilizers Ltd.	Indian Drugs and Pharmaceuticals Ltd.
	Indian Medicines and Pharmaceuticals Corporation Ltd.
	Karnataka Antibiotics and Pharmaceuticals Ltd.
	Orissa Drugs & Chemicals Ltd.
	Rajasthan Drugs and Pharmaceuticals Ltd.

*Source: Public Sector Enterprises, 2010-11, Volume II.*

### Disinvestment

Disinvestment is a process whereby the Government withdraws a portion or the total of its equity in Public Sector Enterprises (PSEs). Disenchantment with public sector started in 1970's. Huge amount of public resources are blocked in several non-strategic PSEs giving meager return. Government is forced to commit further resources for sustenance of many non viable PSEs in absence of exit route. Disinvestments by the Thatcher government in the UK in the early '80s set the precedent for disinvestments. These divestments helped bridge fiscal deficits and the stimulus from competition led to radical improvements in customer service in the short and medium term. For the divested company, a change in ownership influenced the quality of management and increased the

agility in decision-making. Disinvestment by the government should lead to substantial results in India as long as the process is executed effectively. Huge amount of public resources are blocked in several non-strategic PSEs giving meager return. Government is forced to commit further resources for sustenance of many non viable PSEs in absence of exit route. All these Government economic woes led to an obviously straight forward action of disinvestment of Government stake in PSEs. Disinvestment or privatization would help in Releasing huge amounts of scarce public resources locked up in non strategic PSEs for deployment in areas much higher on social priority such as, public health, family welfare, education and social and essential infrastructure (Dave, 2004).

The present research is divided into four sections. The present section deals with introduction and following section describes the research methodology of the study. The third section makes the analysis of the data and interpretation thereof and the last section gives the concluding remarks.

## II. REVIEW OF LITERATURE

Rao (1985) conducted a study on "Evaluation of Profitability Performance in Public Sector Enterprises (PSEs)". The author find out that public enterprises significantly influence the economic development of our country. While their performance can be judged either qualitatively or quantitatively, the author makes a quantitative assessment of Public Sector Enterprises (PSEs) through profitability criterion and examples the factors in flouncing it. It is observed that profitability in Public Sector Enterprises (PSEs) is far low, the reasons being lack of uniformity in pricing practices, emphasis on socio-economic goals, low capacity utilization, lack of cost consciousness etc.

Rath (2001) conducted a study on disinvestment in Central Public Sector Enterprises in India. According to the author in developing countries the national policy initiative like liberalization, privatization and globalization are significant innovations in the recent history of economic policy aimed at faster development of the economy. He also emphasized that almost all economies of the world are undergoing reforms towards liberalization, privatization and globalization.

Joshi and Goel (2003) analyzed in his study "management of Disinvestment in India: A case study of BALCO" that Govt. initiated disinvestment process with the expectation that it will encourage efficiency and foster competition and to divert the resources blocked in PSUs towards more desirable activities such as education, health, infrastructure development. According to them not only financial resources will be effectively and efficiently utilized but other tangible and intangible resources will also be released from the PSU's for optimum use in above mentioned areas.

**Table 2. Government Share after Disinvestment in the Public Sector Enterprises of India**

<b>Cognate Group</b>	<b>Percentage of Disinvestment</b>	<b>Percentage of Total Govt. Holding After Disinvestment</b>
<b>Enterprises Manufacturing/Producing Goods</b>		
<b>1. Steel</b>		
(a) Steel Authority of India Ltd.	14.18	85.82
<b>2. Minerals &amp; Metals</b>		
(a) Hindustan Copper Ltd.	1.24	98.76
(b) Hindustan Zinc Ltd.	24.08	75.92
(c) Kudermukh Iron & Ore Co. Ltd.	1.00	99.00
(d) National Aluminum Co. Ltd.	12.85	78.38*
(e) National Mineral Development Co.	1.62	96.36*
<b>3. Petroleum</b>		
(a) Bharat Petroleum Corporation Ltd.	33.80	66.20
(b) Bongaingaon Refinery and Petro Chemical Ltd.	25.54	74.46
(c) Cochin Refinery Ltd.	6.12	55.04*
(d) Gas Authority of India Ltd.	17.03	82.97
(e) Hindustan Petroleum Corporation Ltd.	48.94	51.06
(f) Indian Oil Corporation Ltd.	18.74	81.14*
(g) Madras Refineries Ltd.	16.92	53.80*
(h) Oil and Natural Gas Corporation	16.38	83.62
<b>4. Fertilizers</b>		
(a) Fertilizers & Chemicals Ltd.	1.70	97.30
(b) National Fertilizers Ltd.	2.35	97.65
(c) Rashtriya Chemcials & Fertilizers Ltd.	7.50	92.50
<b>5. Chemical &amp; Pharmaceuticals</b>		
(a) Hindustan Organic Chemical Ltd.	41.39	58.61
(b) Indian Petrochemicals Corporation Ltd.	40.05	59.95
<b>6. Heavy Engineering</b>		
(a) Bharat Heavy Electrical Ltd.	32.28	67.72

<b>7. Medium and Light Engineering</b>		
(a) Bharat Electronics Ltd.	24.14	75.86
(b) Andrew Yule	9.60	62.84*
(c) Hindustan Machine Tolls Ltd.	8.44	91.56
(d) Indian Telephone Industries	22.98	76.67*
<b>8. Transport Equipment</b>		
(a) Bharat Earth Movers Ltd.	39.19	60.81
<b>Enterprises Rendering Services</b>		
<b>9. Transport Services</b>		
(a) Container Corporation of India Ltd.	36.92	63.08
(b) Dredging Corporation of India Ltd.	1.44	98.56
(c) Shipping Corporation of India Ltd.	19.88	80.12
<b>10. Telecommunication Services</b>		
(a) Mahanagar Telephone Nigam Ltd.	43.80	56.20
(b) Videsh Sanchar Nigam Ltd.	47.00	53.00

\*The balance equity is held by state Governments/other collaborators.

**Table 3. Recent and Forthcoming Disinvestments of Indian Public Sector Enterprises**

S.N.	Disinvestments of Indian Public Sector Enterprises	
	Recent (April, 2009 Onwards)	Forthcoming
1	NBCC	Tyre Corporation of India Ltd
2	ONGC	Hindustan Copper Ltd.
3	Moil Ltd.	Steel Authority of India Ltd.
4	Coal India Ltd.	Rastriya Ispat Nigam Ltd.
5	Power Grid Corp. of India Ltd.	Bharat Heavy Electricals Ltd.
6	Engineers India Ltd.	
7	SJVN Ltd.	
8	NMDC Ltd.	
9	Rural Electrification Corp. Ltd.	
10	NTPC Ltd.	
11	Oil India Ltd.	
12	NHPC Ltd.	
13	The Shipping Corp. of India Ltd.	
14	Power Finance Corp. Ltd.	

There are 16 sectors of Indian public sector enterprises in which Government has undertaken disinvestment April 2009 onwards, there are fourteen enterprises in which government has undertaken disinvestment and enterprises in which decided to undertake disinvestment are Tyre Corporation of India Ltd., Rastriya Ispat Nigam Ltd., Steel Authority of India Ltd., Bharat Heavy Electricals Ltd. and Hindustan Copper Ltd.

### Need and Scope of Study

Public sector enterprises have been set up to serve the broad macro-economic objectives of higher economic growth, self-sufficiency in production of goods and services, long term equilibrium in balance of payments and low and stable prices. The CPSEs play a critical role in the Indian economy. They influence the growth in the economy and are affected by the overall growth in the economy. Public Sector Undertakings (PSUs) have laid a strong foundation for the industrial development of the country. The public sector is less concerned with making profits. Hence, they play a key role in nation building activities, which take the economy in the right direction.

In the present study an attempt has been made to examine the impact of disinvestment on the performance of selected units of fertilizers and chemical & pharmaceutical sector. This will throw light on whether the envisaged goal of improvement in performance was in fact achieved. In fertilizers sector 02 public sector enterprises and in chemical & pharmaceutical sector 03 public sector enterprises have been selected for the present study.

### III. OBJECTIVES OF THE STUDY

The following objectives have been visualized for the present study: to study the impact of disinvestment on the financial performance of fertilizers and chemical & pharmaceutical sectors in terms of financial strength and corporate liquidity; and to study the impact of disinvestment on the operating performance of fertilizers and chemical & pharmaceutical sectors based on sales, investment, employment and asset usage.

**Hypothesis**

To achieve these objectives the following hypothesis has been tested: there is no significant impact of disinvestment on the financial and operating performance of the fertilizers and chemical & pharmaceutical sectors.

**IV. METHODOLOGY**

The above objectives have been studied through the use of secondary data. The secondary data has been collected from published reports of selected Indian public sector enterprises and records of Government of India. The data drawn from various sources has been analyzed with the help of statistical test and various accounting tools and techniques ratio analysis, mean, standard deviation, co-efficient of variation and student 't' test are used to analyze the sample data. There are 16 Indian public sector enterprises in which government has undertaken disinvestment. In order to study the impact of disinvestment on public sector enterprises, fertilizers and chemical & pharmaceutical sectors have

been selected. Impact of disinvestment on the financial and operating performance of the fertilizers and chemical & pharmaceutical sectors have been examined with the help of various ratios based on sales, investment, employment, financial strength corporate liquidity and asset usage.

**Data Analysis**

Arithmetic mean has been used to find out the average of various financial ratios of the selected Indian public sector enterprises. Standard Deviation was used in order to find out the absolute dispersion in the various financial ratios, standard deviation has been applied on the data collected through various surveys of Public Sector Enterprises (PSE's). Co-efficient of variation has been used to study the fluctuation in various financial and operating ratios over the study period. T-test has been used to test the difference between the mean of financial and operating performance based on different ratios of Indian public sector enterprises before and after disinvestment.

**Table 4. Financial and Operating Performance of Chemical and Pharmaceutical Sector**

Ratio	Pre-disinvestment Era			Post-disinvestment Era			t-value	P
	Mean	S.D.	C.V.	Mean	S.D.	C.V.		
<b>OPERATING PERFORMANCE BASED ON SALES</b>								
Gross Profit Ratio	15.84	3.28	20.71	10.89	13.51	124.06	-1.34	0.188
Net Profit Ratio	8.98	3.06	34.08	4.22	12.72	301.42	-1.37	0.178
Operating Profit Ratio	15.92	3.24	20.35	10.46	13.04	124.67	-1.53	0.134
Material Cost/Net Sales	49.64	3.01	6.06	49.04	9.93	20.25	-0.21	0.829
Manpower Cost/Net Sales	6.63	1.71	25.79	10.35	3.2	30.92	3.99	0*
R&D Expenditure/Net Sales	0.32	0.21	65.63	0.24	0.19	79.17	-1.1	0.278
Excise Duty/Net Sales	9.98	9.28	92.99	18.34	7.17	39.09	3.16	0.003*
<b>OPERATING PERFORMANCE BASED ON INVESTMENT</b>								
Return on Total Assets	10.34	4.83	46.71	6.27	7.27	115.95	-1.87	0.068
Return on Net Capital Employed	20.13	8.24	40.93	9.49	12.51	131.82	-2.85	0.007*
<b>OPERATING PERFORMANCE BASED ON EMPLOYMENT</b>								
Net Profit Per Employee	82.52	38.1	46.17	1.61	416.46	25867.08	-0.67	0.51
Gross Profit Per Employee	152.87	59.14	38.69	220.15	353.66	160.65	0.65	0.521
Net Sales Per Employee	934.29	266.16	28.49	1926.66	850.14	44.13	3.91	0*
<b>FINANCIAL STRENGTH</b>								
Debt Equity Ratio	1.36	0.91	66.91	1.15	2.78	241.74	-0.27	0.784
Proprietary Ratio	47.46	14.74	31.05	50.67	18.35	36.21	2.19	0.035**
Solvency Ratio	52.54	14.69	27.96	49.33	12.87	26.08	-1.51	0.138
Fixed Assets to Net Worth	154.15	80.43	52.18	140.16	192.01	136.99	-0.25	0.797
Interest Coverage Ratio	6.13	4.61	75.20	2.42	2.96	122.31	-3.09	0.004*
<b>CORPORATE LIQUIDITY</b>								
Current Ratio	2.05	0.74	36.10	1.86	0.46	24.73	-0.97	0.335
Liquid Ratio	1.17	0.5	42.74	1.28	0.42	32.81	0.73	0.469

ASSET USAGE								
Inventory Turnover Ratio	4.48	1.01	22.54	6.05	2.12	35.04	2.6	0.013**
Inventory Conversion Ratio	86.68	26.48	30.55	65.54	16.98	25.91	-3.07	0.004*
Debtors Turnover Ratio	13.96	4.72	33.81	8.11	4.28	52.77	-3.97	0*
Average Collection Period	29.66	12.01	40.49	55.44	22.9	41.31	3.92	0*
Fixed Assets Turnover Ratio	1.1	0.51	46.36	0.97	0.39	40.21	-0.88	0.384
Working Capital Turnover Ratio	5.81	5.25	90.36	13.61	34.05	250.18	0.85	0.402
Capital Turnover Ratio	126.56	47.44	37.48	90.1	38.23	42.43	-2.64	0.012**

\* Significant at 0.01 level

\*\* Significant at 0.05 level

Source: Public Sector Enterprises (PSEs) Survey, Various Issues

Table 5. Financial and Operating Performance of Fertilizer Sector

Ratio	Pre-disinvestment Era			Post-disinvestment Era			t-value	P
	Mean	S.D.	C.V.	Mean	S.D.	C.V.		
<b>OPERATING PERFORMANCE BASED ON SALES</b>								
Gross Profit Ratio	9.56	4.82	50.42	7.22	8.76	121.33	-1.13	0.263
Net Profit Ratio	4.75	3.19	67.16	2.31	8.65	374.46	-1.25	0.213
Operating Profit Ratio	9.58	4.84	50.52	7.38	8.69	117.75	-1.07	0.287
Material Cost/Net Sales	43.62	11.91	27.30	44.65	11.54	25.85	0.31	0.758
Manpower Cost/Net Sales	5.66	2.59	45.76	6.94	2.38	34.29	1.84	0.07
R&D Expenditure/Net Sales	0.05	0.03	60.00	0.05	0.21	420.00	0.01	0.988
Excise Duty/Net Sales	0.79	0.59	74.68	1.52	1.11	73.03	2.37	0.023**
<b>OPERATING PERFORMANCE BASED ON INVESTMENT</b>								
Return on Total Assets	6	2.77	46.17	6.67	7.37	110.49	0.39	0.692
Return on Net Capital Employed	9.35	4.21	45.03	9.28	10.99	118.43	-0.02	0.979
<b>OPERATING PERFORMANCE BASED ON EMPLOYMENT</b>								
Net Profit Per Employee					216.5			
	47.56	37.3	78.43	82.17	4	263.53	0.67	0.505
Gross Profit Per Employee					255.7			
	106.05	69.07	65.13	222.12	9	115.16	1.89	0.065
Net Sales Per Employee					1706.			
	1084.44	567.8	52.36	3020.65	65	56.50	4.67	0*
<b>FINANCIAL STRENGTH</b>								
Debt Equity Ratio	0.75	0.26	34.67	2.43	9.05	372.43	0.84	0.399
Proprietary Ratio	34.60	9.34	26.99	28.87	17.08	59.16	-2.98	0.004*
Solvency Ratio	65.40	40.59	62.06	71.13	35.18	49.46	0.57	0.571
Fixed Assets to Net Worth					530.5			
	89.83	19.21	21.38	178.97	3	296.44	0.76	0.446
Interest Coverage Ratio	3.56	2.71	76.12	4.88	6.76	138.52	0.85	0.398
<b>CORPORATE LIQUIDITY</b>								
Current Ratio	2.91	0.73	25.09	2.52	0.74	29.37	-1.92	0.06
Liquid Ratio	1.47	0.54	36.73	1.49	0.54	36.24	0.18	0.853
<b>ASSET USAGE</b>								
Inventory Turnover Ratio	3.12	1.32	42.31	4.44	1.52	34.23	3.33	0.002*
Inventory Conversion Ratio	147.15	83.1	56.47	89.66	24.75	27.60	-4.03	0*
Debtors Turnover Ratio	5.28	2.81	53.22	5.31	1.89	35.59	0.04	0.961
Average Collection Period	84.18	32.76	38.92	77.6	28.89	37.23	-0.8	0.425
Fixed Assets Turnover Ratio	1.42	0.61	42.96	2.06	0.55	26.70	4.12	0*
Working Capital Turnover Ratio	2.33	0.93	39.91	3.43	1.87	54.52	2.52	0.014**
Capital Turnover Ratio	117.1	59.31	50.65	128.48	31.26	24.33	0.96	0.337

\* Significant at 0.01 level

\*\* Significant at 0.05 level

Source: Public Sector Enterprises (PSEs) Survey, Various Issues.

## V. RESULTS AND DISCUSSION

To what extent the envisaged goal of improvement in the performance of public sector enterprises was in fact achieved. Keeping this in mind, Fertilizers and chemical & pharmaceutical sectors are selected to study the impact of disinvestment on the financial and operating performance of Indian public sector enterprises.

### Operating Performance Based on Sales

**Fertilizers Sector:** It is obvious from the Table 4 that the operating performance of fertilizers sector based on sales has shown decline in the mean scores of gross profit, net profit and operating profit ratios during the post-disinvestment period. It shows that the profitability of this sector has declined due to its increased expenditure. The improvement in the mean scores of R & D expenditure in relation to sales ratios shows that the management of this sector has been spending more on their R & D programmes in the post-disinvestment. In order to improve its profitability there should be proper control on their various expenditures in the long-run.

**Chemical & Pharmaceutical Sector:** Table 5 reveals that the operating performance of chemicals and pharmaceuticals sector based on sales has shown decline in the profitability of this sector during the post-disinvestment period. It has been recorded in HOCL. The increased mean score of manpower cost to net sales ratio shows that the management of this sector has been spending more on the development and welfare of their manpower. But the decline in the mean score of R & D expenditure to net sales ratio is a matter of great concern and it will lead to inefficient cost control, quality control, financial control, etc. in the long-run. On applying t-test, it is found that the change is significant at 1 percent level of significance in the cases of manpower cost to net sales and excise duty to net sales ratios.

### Operating Performance Based on Investment

**Fertilizers Sector:** The examination of the operating performance based on investment reveals that the units engaged in fertilizers sector failed in the efficient utilisation of their resources. But in the case of their return on total assets, there is an improvement during the post-disinvestment period. It shows that due to the failure of the management of this sector in the efficient utilisation of their resources, they are not in position to provide fair rate of return to their investors.

**Chemical & Pharmaceutical Sector:** Studying the operating performance based on investment reveals that there is a decline in the mean scores of return on total assets and return on net capital employed ratios in the post-disinvestment period as compared to the pre-disinvestment period. It has been recorded in the HOCL unit of chemicals and pharmaceuticals taken in the present study. It shows the inefficiency of the management of this sector in the utilization of their resources. The change is significant at 1 percent level of significance only in the case of return on net capital employed ratio.

### Operating Performance Based on Employment

**Fertilizers Sector:** As regards the operating performance of fertilizers sector based on employment, it has been found that there is an upward movement in the mean scores of net profit, gross profit and net sales in relation to per employee ratios in the post-disinvestment period as compared to the pre-disinvestment period. It shows that after spending more on the development of their manpower and due to the increasing competition in this sector, the efficiency of the employees of this sector has increased and they are contributing more in the profitability of this sector during the post-disinvestment period.

**Chemical & Pharmaceutical Sector:** The examination of the operating performance based on employment reveals that the contribution of the employees in the net profit of this sector has declined during the post-disinvestment period. But in the cases of gross profit and net sales there is a significant improvement in the contribution of the employees during the post-disinvestment period. The decline in the contribution of the employees in the case of net profit may be possible due to their uncontrollable expenditure in relation to their sales during the post-disinvestment period.

### Financial Strength

**Fertilizers Sector:** Studying the financial strength of this sector reveals that the dependence on the outsiders' funds has increased during the post-disinvestment period. It has been recorded in NFL and HFCL. The examination of the fixed assets to net worth ratio reveals that the shareholders' funds of these units have not been sufficient in financing their fixed assets during the post-disinvestment period. But the profit of these units has been sufficient in order to meet out their fixed interest charges in both the pre and post-disinvestment periods. The change is significant at 1

percent level of significance only in the case of proprietary ratio.

**Chemical & Pharmaceutical Sector:** As regards the financial strength of this sector, it has been found that there is a decline in the mean score of debt equity ratio during the post-disinvestment period. But the proportion of their debt has been more than their shareholders' funds in both the pre and post-disinvestment periods. The excessive use of debt in their financial plans is not been good for its long-term financial position. The change is significant at 1 percent level of significance in the case of interest coverage ratio and significant at 5 percent in the case of proprietary ratio.

#### Corporate Liquidity

**Fertilizers Sector:** As far as their corporate liquidity is concerned, it has been found that there is a decline in the mean score of current ratio but there is an improvement in the mean score of liquid ratio during the post-disinvestment period. It shows that the management of this sector efficiently managed their liquid assets but failed in the case of current assets.

**Chemical & Pharmaceutical Sector:** Studying the corporate liquidity of this sector reveals that the management of chemicals and pharmaceuticals managed their liquid assets efficiently but failed in the case of current assets. The mean score of the current ratio in the post-disinvestment period has been less than the standard norms. It has not been good for its short-term solvency position. In order to improve their short-term solvency position and to compete in this global competition, there should be efficient management of their working capital.

#### Asset Usage

**Fertilizers Sector:** Studying the assets usage of fertilizers sector reveals that the management of this sector is efficient in the management of their debtors and inventory during the post-disinvestment period. It has been recorded in RCFL and NFL. As far as their fixed assets turnover, working capital turnover and capital turnover ratios are concerned, it has been found that there is an improvement in the mean scores of these ratios during the post-disinvestment period. On applying t-test, it is found that the change is significant at 1 percent level of significance in all the above mentioned ratios except in the cases of debtors turnover and average collection period ratios.

**Chemical & Pharmaceutical Sector:** As far as their asset usage is concerned, it has been found that there is a significant improvement in the mean score of inventory turnover ratio and significant decline in the

mean score of inventory conversion period ratio in the post-disinvestment period as compared to the pre-disinvestment period. It shows their efficiency in the efficient utilization of their inventory and conversion of stock into sales. On the other hand, the significant decline in the mean score of debtors turnover ratio and improvement in the mean score of average collection period ratio indicates their inefficiency in the utilization of their debtors and early collection of their debts during the post-disinvestment period. On applying t-test, it is found that the change is significant at 1 percent level of significance in the cases of inventory turnover, inventory conversion period, debtors turnover, average collection period and capital turnover ratios.

#### VI. CONCLUSION

Public sector undertakings in India were viewed as a mechanism for structural transformation of the economy and for growth with equity and social justice. These were also required as private initiative was not forthcoming in vital sectors. Eventually, the perception that public sector should acquire the commanding heights of the economy led to Government involvement in diverse areas of economic activity, many of which could have been performed by the private sector. India, for almost four decades was pursuing a path of development in which public sector was expected to be the engine of growth. But by mid-eighties their short comings and weaknesses started manifesting the form of low capacity utilization, low efficiency, lack of motivation, over-mining, huge time and cost overrun, inability to innovate and take quick decision, large scale political and bureaucratic interference in decision making etc.

The operating performance of the fertilizers and chemical & pharmaceutical sectors has been decline during the post disinvestment period. The management of these sectors has also failed in the efficient utilization of their resources. Studying the financial strength of this sector reveals that the dependence on the outsiders' funds has increased during the post-disinvestment period in both the sectors of fertilizers and chemical & pharmaceutical. It has been recorded in NFL and HFCL. As far as their asset usage is concerned, it has been found that there is a significant improvement in the mean score of inventory turnover ratio and significant decline in the mean score of inventory conversion period ratio in the post-disinvestment period as compared to the pre-disinvestment period.

- PSUs should be given professional management and full autonomy in the matter of pricing, investment and employment.

- Chronically sick PSUs should be closed down and their assets should be transferred to the asset management companies to get a right price for the assets.
- There should be more efforts for the efficient utilization and management of their assets. In this way management of these firms can make effective check on the wastages of their resources.
- The policymakers need to understand that how resources should be allocated between different sectors, and what kind of structural changes are affecting their economic development.
- There should be check on the excessive use of debt/outside funds and public sector enterprises should arrange the funds from their internal resources.
- To compete in this global market and improve their efficiency in financial control, cost control and quality control, etc., there should be more provision for the research and development programmes of these sectors.

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