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A Comparative Evaluation of Corporate Performance of Selected Fertilizers in India

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ABSTRACT:

The fertilizer industry is one of the core sectors in India. Fertilizer is a crucial factor of present agriculture. Comparative analysis of Public and Private Units of Fertilizers in India will give insight into the financial position and which will be helpful to the stakeholders. Hence in the present research, comparative evaluation of selected Public and Private sector fertilizers is performed during five years from 2015-16 to 2019-20 by the use of ratio analysis, average and t -test .

KEY WORDS: Comparative, Fertilizers, t – test, India

INTRODUCTION:

Agriculture is the prevalent segment of economic activity in India, which imparts, raw materials and food most of all remarkably, the employment to a very huge section of population. The fertilizer industry in India, during the past fifty years has expanded in terms of volume and position since it ranks third in the world. Appropriately, corporate performance analysis of such industry would be helpful for knowing in what area it needs to give more emphasis; moreover the comparison will highlight selected fertilizers' ability of facing challenging in this continuously developing world.

INDIAN FERTILIZERS:

In India fertilizer industry began work earlier in 1906. Principally India is an agrarian economy, which primarily depends upon its agricultural produce. Fertilizer is defined as any substance which is natural/ artificial, inorganic/ organic, supplies one or more of the chemical factor vital for growth of plant. Consequently Indian Fertilizer Industry is one of the imperative industries for the Indian economy. Indian fertilizer industry is divided into 3 part public sector, private sector and co-operative societies.

REVIEW OF LITERATURE:

Ekta P. (2019)[1]. has carry out a examination on " Financial Performance Analysis of Fertilizers Industry In Gujarat." In this direction for research purpose the researcher has selected four fertilizers companies holding major market share, moreover study comprises 5 years from 2010-2011 to 2014-2015. In order to analyze secondary data were collected and financial performance was measured through ANOVA test.

Shobhan S. and Atul K.P. (2018)[2]. made an attempt of analyzing "Working Capital Management in Indian Fertilizer Industry: A Comparative Study." For which two fertilizer companies were selected and study on

their financial performance through working capital, cash flow and ratio analysis were carried out for the five years from 2013-14 to 2017-18. At the end researchers found out that there is need for effective working capital management in the selected units.

Yogesh K. S. (2017)[3]. conducted a research entitled "Performance Analysis Of Indian Farmers Fertilizers Cooperative Limited (IFFCO)." In this research for analysis researcher had used ten different financial ratios and this was evaluated from 2011-12 to 2015-16 for five respective years. After analysis researcher concluded that most of the selected financial ratios indicated that IFFCO are not at a very good point.

OBJECTIVES OF THE STUDY:

- To compare corporate performance of selected Public sector and Private sector Fertilizers in India
- To evaluate corporate performance through selected profitability, liquidity and management efficiency ratios of selected Public sector and Private sector Fertilizers in India

HYPOTHESE:

Ho = There is no significant difference in mean of Operating Profit Margin(%) of selected Public Sector and Private Sector Fertilizers during the study period.

Ho = There is no significant difference in mean of Return On Capital Employed(%) of selected Public Sector and Private Sector Fertilizers during the study period.

Ho = There is no significant difference in mean of Current Ratio of selected Public Sector and Private Sector Fertilizers during the study period.

Ho = There is no significant difference in mean of Debt Equity Ratio of selected Public Sector and Private Sector Fertilizers during the study period.

Ho = There is no significant difference in mean of Investments Turnover Ratio of selected Public Sector and Private Sector Fertilizers during the study period.

Ho = There is no significant difference in mean of Asset Turnover Ratio of selected Public Sector and Private Sector Fertilizers during the study period.

SCOPE FOR THE FUTURE RESEARCH:

Current research confine to the companies listed in Bombay Stock exchange. Study is limited to the five years starting from 2015-16 to 2019-20. Hence, there are spacious scopes existing for advance research.

LIMITATION OF THE STUDY:

Present study completely based on secondary data and Study covers only five years starting from 2015-16 to 2019-20. In research, only 3 public and 3 private Fertilizers are selected. Analysis in the present research carried out taking into account various ratios.

RESEARCH METHODOLOGY:

NATURE OF THE STUDY:

The present research is comparative and quantitative in nature since here the comparison of the selected Fertilizers of India is to be carried out through quantitative data.

SAMPLE SELECTION:

The researcher had selected three public and three private Fertilizers listed in Bombay Stock Exchange.

SAMPLE OF THE STUDY:

Public Sector	Private Sector
• Gujarat Narmada Valley Fertilizers & Chemicals Ltd. (GNVFCL)	• Tata Chemicals Ltd. (TCL)
• Gujarat State Fertilizers & Chemicals Ltd. (GSFC)	• Chambal Fertilizers and Chemicals Ltd. (CFCL)
• National Fertilizers Ltd. (NFL)	• Coromandel International Ltd. (CIL)

COLLECTION OF DATA:

The pertinent data in the present study is collected through secondary data sources.

PERIOD OF THE STUDY:

The existing research embraces study period of five years starting from 2015-16 to 2019-20.

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TOOLS AND TECHNIQUES:

In order to comparatively analyze corporate performance of selected Public and Private sector Fertilizers researcher has employ t – test.

ANALYSIS OF DATA:

Table: 1 Operating Profit Margin (%)

Year	Fertilizers							
	Public Sector				Private Sector			
	GNVFC	GSFC	NI	Mean	CIL	CFCL	TCL	Mean
2015-16	12.05	10.73	7.01	9.93	6.67	8.1	11.81	8.86
2016-17	14.22	9.24	7.3	10.25333	9.79	10.06	23.77	14.54
2017-18	23.82	9.03	5.62	12.82333	11.15	10.46	26.6	16.07
2018-19	14.72	8.71	6.73	10.05333	10.88	12.01	21.99	14.96
2019-20	10.49	3.97	6.54	7	13.16	15.58	24.58	17.77333
Average	15.06	8.336	6.64	10.012	10.33	11.242	21.75	14.44067

The above table demonstrates Operating Profit Margin (%). The mean value of public sector is higher in 2017-18 on other hand of private sector is higher in 2019-20. The mean value of public sector is lower in 2019-20 on other hand of private sector is lower in 2015-16. The highest average is of GNVFC in public sector and TCL in private sector. The lowest average is of NI in public sector and CIL in private sector. Overall Operating Profit Margin of private sector is higher as compare to public sector.

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Table: 1.1 t-Test: Two-Sample Assuming Equal Variances		
	Public Sector	**Private Sector**
Mean	10.012	14.44066667
Variance	4.260603333	11.29620222
Observations	5	5
Pooled Variance	7.778402778	
Hypothesized Mean Difference	0	
DF	8	
t Stat	-2.510717119	
P(T<=t) one-tail	0.018165161	
t Critical one-tail	1.859548033	
P(T<=t) two-tail	0.036330323	
t Critical two-tail	2.306004133	

Here, t-cal is lower than t-tab, consequently the null hypothesis is accepted which signifies that There is no significant difference in mean of Operating Profit Margin(%) of selected Public Sector and Private Sector Fertilizers during the study period.

Table: 2 Returns On Capital Employed (%)

Year	Fertilizers							
	Public Sector				Private Sector			
	GNVFC	GSFC	NI	Mean	CIL	CFCL	TCL	Mean
2015-16	7.61	9.31	5.07	7.33	14.13	11.34	8.77	11.41333
2016-17	11.57	6	9.98	9.183333	18.55	12.89	8.64	13.36
2017-18	26.91	6.52	10.51	14.64667	20	10.22	8.24	12.82
2018-19	15.86	8.77	9.04	11.22333	21.28	10.8	7.64	13.24
2019-20	7.06	2.91	5.49	5.153333	26.7	13.99	7.32	16.00333
Average	13.802	6.702	8.018	9.507333	20.132	11.848	8.122	13.36733

The above table demonstrates Returns on Capital Employed (%). The mean value of public sector is higher in 2017-18 on other hand of private sector is higher in 2019-20. The mean value of public sector is lower in 2019-20 on other hand of private sector is lower in 2015-16. The highest average is of GNVFC in public sector and CIL in private sector. The lowest average is of GSFC in public sector and TCL in private sector.

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Overall Returns on Capital Employed of private sector is higher as compare to public sector.

Table: 2.1 t-Test: Two-Sample Assuming Equal Variances		
	Public Sector	**Private Sector**
Mean	9.507333333	13.36733333
Variance	13.29011889	2.770613333
Observations	5	5
Pooled Variance	8.030366111	
Hypothesized Mean Difference	0	
DF	8	
t Stat	-2.15372196	
P(T<=t) one-tail	0.031703286	
t Critical one-tail	1.859548033	
P(T<=t) two-tail	0.063406573	
t Critical two-tail	2.306004133	

Here, t-cal is lower than t-tab, consequently the null hypothesis is accepted which signifies that There is no significant difference in mean of Return On Capital Employed(%) of selected Public Sector and Private Sector Fertilizers during the study period.

Table: 3 Current Ratio

Year	Fertilizers							
	Public Sector				Private Sector			
	GNVFC	GSFC	NI	Mean	CIL	CFCL	TCL	Mean
2015-16	0.84	1.56	0.87	1.09	1	0.67	1.41	1.026667
2016-17	0.58	1.37	0.52	0.823333	1.02	0.85	1.63	1.166667
2017-18	0.77	1.28	0.51	0.853333	0.87	0.82	2.85	1.513333
2018-19	1.03	1.32	0.54	0.963333	0.87	0.61	1.41	0.963333
2019-20	0.97	1.1	0.51	0.86	1.05	0.65	1.93	1.21
Average	0.838	1.326	0.59	0.918	0.962	0.72	1.846	1.176

The above table demonstrates Current Ratio. The mean value of public sector is higher in 2015-16 on other hand of private sector is higher in 2017-18. The mean value of public sector is lower in 2016-17 on other hand of private sector is lower in 2018-19. The highest average is of GSFC in public sector and TCL in

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private sector. The lowest average is of NI in public sector and CFCL in private sector. Overall Current Ratio of private sector is higher as compare to public sector.

Table: 3.1 t-Test: Two-Sample Assuming Equal Variances

	Public Sector	Private Sector
Mean	0.918	1.176
Variance	0.012037	0.045641
Observations	5	5
Pooled Variance	0.028839	
Hypothesized Mean Difference	0	
DF	8	
t Stat	-2.40215	
P(T<=t) one-tail	0.021516	
t Critical one-tail	1.859548	
P(T<=t) two-tail	0.043032	
t Critical two-tail	2.306004	

Here, t-cal is lower than t-tab, consequently the null hypothesis is accepted which signifies that There is no significant difference in mean of Current Ratio of selected Public Sector and Private Sector Fertilizers during the study period.

Table: 4 Debt Equity Ratio

Year	Fertilizers							
	Public Sector				Private Sector			
	GNVFC	GSFC	NI	Mean	CIL	CFCL	TCL	Mean
2015-16	1.32	0.22	5.27	2.27	1.05	2.03	0.38	1.153333
2016-17	0.42	0.11	1.82	0.783333	0.79	1.64	0.18	0.87
2017-18	0.05	0.14	1.51	0.566667	0.86	1.94	0.06	0.953333
2018-19	0.04	0.14	2.88	1.02	0.86	2.53	--	1.695
2019-20	0.16	0.22	4.13	1.503333	0.37	2.28	--	1.325
Average	0.398	0.166	3.122	1.228667	0.786	2.084	0.206667	1.199333

The above table demonstrates Debt Equity Ratio. The mean value of public sector is higher in 2015-16 on other hand of private sector is higher in 2018-19. The mean value of public sector is lower in 2017-18 on

other hand of private sector is lower in 2016-17. The highest average is of NI in public sector and CFCL in private sector. The lowest average is of GNVFC in public sector and CIL in private sector. Overall Debt Equity Ratio of public sector is higher as compare to private sector.

Table: 4.1 t-Test: Two-Sample Assuming Equal Variances		
	Public Sector	**Private Sector**
Mean	1.228667	1.199333
Variance	0.459981	0.108143
Observations	5	5
Pooled Variance	0.284062	
Hypothesized Mean Difference	0	
DF	8	
t Stat	0.087021	
P(T<=t) one-tail	0.466397	
t Critical one-tail	1.859548	
P(T<=t) two-tail	0.932793	
t Critical two-tail	2.306004	

Here, t-cal is lower than t-tab, consequently the null hypothesis is accepted which signifies that There is no significant difference in mean of Debt Equity Ratio of selected Public Sector and Private Sector Fertilizers during the study period.

Table: 5 Investments Turnover Ratio

Year	Fertilizers							
	Public Sector				Private Sector			
	GNVFC	GSFC	NI	Mean	CIL	CFCL	TCL	Mean
2015-16	6.62	10.82	15.5	10.98	4.96	10.2	7.73	7.63
2016-17	7.47	7.79	1.47	5.576667	5.91	8.75	0.34	5
2017-18	8.69	7.82	16.98	11.16333	4.93	9.39	0.29	4.87
2018-19	7.11	6	1.42	4.843333	2.07	0.88	0.25	1.066667
2019-20	0.85	0.92	1.33	1.033333	2.18	0.95	0.24	1.123333
Average	6.148	6.67	7.34	6.719333	4.01	6.034	1.77	3.938

The above table demonstrates Investments Turnover Ratio. The mean value of public sector is higher in 2017-18 on other hand of private sector is higher in 2015-16. The mean value of public sector is lower in 2019-20 on other hand of private sector is lower in 2018-19. The highest average is of NI in public sector

and CFCL in private sector. The lowest average is of GNVFC in public sector and TCL in private sector. Overall Investments Turnover Ratio of public sector is higher as compare to private sector.

Table: 5.1 t-Test: Two-Sample Assuming Equal Variances

	Public Sector	Private Sector
Mean	6.719333	3.938
Variance	18.76452	7.948559
Observations	5	5
Pooled Variance	13.35654	
Hypothesized Mean Difference	0	
DF	8	
t Stat	1.203306	
P(T<=t) one-tail	0.131628	
t Critical one-tail	1.859548	
P(T<=t) two-tail	0.263255	
t Critical two-tail	2.306004	

Here, t-cal is lower than t-tab, consequently the null hypothesis is accepted which signifies that There is no significant difference in mean of Investments Turnover Ratio of selected Public Sector and Private Sector Fertilizers during the study period.

Table: 6 Asset Turnover Ratio

Year	Fertilizers							
	Public Sector				Private Sector			
	GNVFC	GSFC	NI	Mean	CIL	CFCL	TCL	Mean
2015-16	0.7	1.03	0.72	0.816667	2.24	1.38	0.82	1.48
2016-17	0.79	0.75	1	0.846667	1.99	1.11	0.33	1.143333
2017-18	1.16	0.8	1.76	1.24	1.86	0.98	0.31	1.05
2018-19	1.19	1.03	1.8	1.34	2.07	1.01	0.26	1.113333
2019-20	0.91	0.92	1.42	1.083333	2.18	1.01	0.24	1.143333
Average	0.95	0.906	1.34	1.065333	2.068	1.098	0.392	1.186

The above table demonstrates Asset Turnover Ratio. The mean value of public sector is higher in 2018-19 on other hand of private sector is higher in 2015-16. The mean value of public sector is lower in 2015-16 on other hand of private sector is lower in 2018-19. The highest average is of NI in public sector and CIL in private sector. The lowest average is of GSFC in public sector and TCL in private sector. Overall Asset

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Turnover Ratio of private sector is higher as compare to public sector.

Table: 6.1 t-Test: Two-Sample Assuming Equal Variances		
	Public Sector	**Private Sector**
Mean	1.065333	1.186
Variance	0.053981	0.028463
Observations	5	5
Pooled Variance	0.041222	
Hypothesized Mean Difference	0	
DF	8	
t Stat	-0.93971	
P(T<=t) one-tail	0.187436	
t Critical one-tail	1.859548	
P(T<=t) two-tail	0.374871	
t Critical two-tail	2.306004	

Here, t-cal is lower than t-tab, consequently the null hypothesis is accepted which signifies that There is no significant difference in mean of Asset Turnover Ratio of selected Public Sector and Private Sector Fertilizers during the study period.

FINDINGS OF THE STUDY:

Table: 7 FINDINGS OF THE STUDY				
Variables	**t Statistics**	**t Critical**	**Significance**	**Ho Accepted / Rejected**
Operating Profit Margin (%)	-2.510717119	2.306004	No	Accepted
Return On Capital Employed (%)	-2.15372196	2.306004	No	Accepted
Current Ratio	-2.4021518	2.306004	No	Accepted
Debt Equity Ratio	0.087021186	2.306004	No	Accepted
Investments Turnover Ratio	1.20330599	2.306004	No	Accepted
Asset Turnover Ratio	-0.939705178	2.306004	No	Accepted

CONCLUSION:

In case of Operating Profit Margin, Returns on Capital Employed, Current Ratio, Asset Turnover Ratio private sector' overall performance is superior as compared to public sector while in case of Debt Equity Ratio, Investments Turnover Ratio public sector's overall performance is superior as compared to private sector.

In view of the fact that Higher the operating profit margin ratio returns on capital employed indicates that the company having competent profitability position, higher the asset turnover ratio indicates that company optimally utilizes its assets portfolio. Further higher current ratio indicates company's ability of meeting its current liabilities in timely manner but beyond some limit high current ratio is not beneficial for the long duration of time as there will be increase in the idle funds with the company hence current ratios must be in adequate proportion.

Likewise a high degree of total debt-to-equity ratio signifies that a business might not be capable to make an adequate amount of cash to accomplish its commitment towards creditors hence company must have debt equity ratio in optimal proportion Higher investment turnover ratio indicates that the company is resourcefully turning over stockholders invested portion in rising its value.

Overall financial position of private sector fertilizers is better as compared to the public sector. The study will be helpful to all the stakeholders of Indian Fertilizer and to the researchers for carrying out additional research

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