

## TREND OF PROFITABILITY RATIOS OF SELECTED FERTILIZER COMPANIES IN GUJARAT: A COMPARATIVE STUDY

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### ABSTRACT

*The purpose of the study is to know the trend of profitability of the selected fertilizer companies and to see how efficiently the operations of the business are carried out. In this study, four companies i.e. Gujarat Narmada Valley Fertilizers and Chemicals Ltd., Gujarat State Fertilizers and Chemicals Ltd., Indian Farmers Fertilizer Cooperative Limited and Krishak Bharati Cooperative Limited are selected. The primary objective of the study is to measure the trend if any in the performance of selected fertilizer companies in terms of Profitability. In this study trend analysis is conducted for Profitability ratios of selected fertilizer companies in Gujarat for the period of 2010-11 to 2019-20. In these Profitability ratios include Gross Profit Ratio, Net Profit Ratio, Return on Assets Ratio, Return on Equity Ratio, Return on Capital Employed Ratio, Dividend per Share, Earnings per Share and Dividend Payout Ratio. From the analysis we conclude that, overall there is a significant difference in trend of Profitability ratios of selected fertilizer companies in Gujarat Overall the performance of GNFC is better among all selected fertilizer companies.*

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**Keywords:** Profitability, Fertilizer Companies, Trend Analysis.

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### Introduction

#### Financial Statement – Meaning

“The end product of financial accounting process is a set of reports which are called financial statements.”

In other words, the statements prepared and presented by a business enterprise at the end of accounting year i.e. balance sheet and profit and loss account are called financial statements.

#### Review of Literature

The review of literature guides the researcher for getting better understanding of methodology used, limitations of various available estimation procedures and interpretation of the conflicting results.

**Patel Vijay S. & Mehta Chandresh B. (2012)<sup>i</sup>** in their study entitled “A Financial Ratio Analysis of Krishak Bharati Co-operative limited” has mainly focused on relationship between gross profit & net sales, net profit & net sales, cost of goods sold & net sales, profit after tax & number of equity shares and EBIT & capital employed for the period of 2000-01 to 2008-09. Coefficient of correlation used to find linear relation and that value is tested by t test and found that there is positive linear relation between gross profit & net sales, net profit & net sales, profit after tax & number of equity shares and EBIT & capital employed and negative relation between cost of goods sold & net sales.

**Kapoor Suri Deepali and Singhal Shilpi (2013)<sup>ii</sup>** in their study on “Comparative Analysis of Financial Performance of Indian Farmers Fertilizer Co-operative Ltd (IFFCO)” tried to identify the financial performance and how the performance is going on for last five years of IFFCO on the basis of establishing relationship between the items of balance sheet and profit and loss account by using various

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types of ratios such as solvency, liquidity, activity and profitability for five years period ending on 2011-12. After analyzed five year data, the researchers concluded that maximum number of financial indicator like Company's return on capital employed, profit before tax to turnover etc of IFFCO were undesirable as compare to previous years whereas operating profit to turnover ratio, fixed assets turnover ratio, debt equity ratio, current ratio, liquidity ratio etc. were at a desirable position.

**Patel Ankit D. (2015)<sup>iii</sup>** has used six Profitability ratios (Operating Profit Margin Ratio, Gross Profit Margin Ratio, Net Profit Margin Ratio, Return on Capital Employed Ratio, Return on Net worth Ratio and Return on Assets Ratio) to analyze financial performance of selected fertilizer companies in India for the period of 2004-05 to 2013-2014. From the analysis, the researcher concluded that there is significant difference in Profitability of selected fertilizer Companies.

- The Operating Profit Ratio of GNFC, GSFC and Deepak fertilizer company was satisfactory because Operating Profit Ratio of these companies was higher than Industry Ratio.
- Gross Profit Margin Ratio of the Industry was 10.76. As compare to all selected companies only three companies are on satisfactory level and other three companies like Rashtriya Fertilizer Ltd., Coromandal International and National Fertilizer Company's Gross Profit Margin Ratio was not satisfactory.
- Deepak Fertilizer's performance regarding Net Profit Ratio was very good because its Net Profit Ratio was 10.55 which was higher than Industry ratio.
- Coromandal International's performance was excellent. Its Return on Capital Employed Ratio was 22.76 which was higher than Industry ratio followed by GSFC that was 22.07. Other selected four company performance was not satisfactory because its Return on Capital Employed Ratio was very poor.
- Return on Net worth Ratio of the Industry was 15.43. In this sense only Deepak Fertilizer Ltd.'s performance was satisfactory and other companies' ratio was very poor.
- Return on Assets Ratio of all selected companies was very good except two companies i.e. Rashtriya Fertilizer Ltd and National Fertilizer Ltd. GSFC performance regarding this ratio was very good that was 212.20. It is very high than the industry Ratio.

**Chavda K. N. and Shah Mehul B. (2015)<sup>iv</sup>** in their study entitled, "A Financial Ratio Analysis of Gujarat Narmada valley Fertilizers & Chemicals Ltd." used two liquidity ratios namely Current ratio and liquid ratio and two profitability ratios namely gross profit ratio and net profit ratio of GNFC Limited for the period 2009-10 to 2013-14. In this study researchers tried to find relation between Gross profit & Net Sales, Net Profit & Net sales, Current assets & Current liability and liquid assets & liquid liabilities and also this relation tested by t test and result came that only gross profit and net sales are related whereas others were not related. Researchers also examined the growth of these ratios and concluded that during these five years gross profit ratio and net profit ratio increased averagely 9.91% and 6.71% respectively. Average of Current ratio and liquid ratio was 1.50 and 1.17 respectively.

#### **Statement of Problem**

A Comparative Study of Trend of Profitability Ratios of Selected Fertilizer Companies in Gujarat

#### **Objectives of the Study**

- To analyze the trend of profitability of the selected fertilizer companies.
- To make inter-firm comparison of trend of profitability of the selected fertilizer companies and measure the significant difference in their financial performance.

#### **Research Methodology**

The present study is based on Secondary Data which are collected through various sources such as websites, annual reports of the selected companies, journals, similar research studies, etc. Trend Analysis is conducted in order to study the trend of profitability in selected fertilizer companies and derive suitable conclusion.

#### **Trend Analysis**

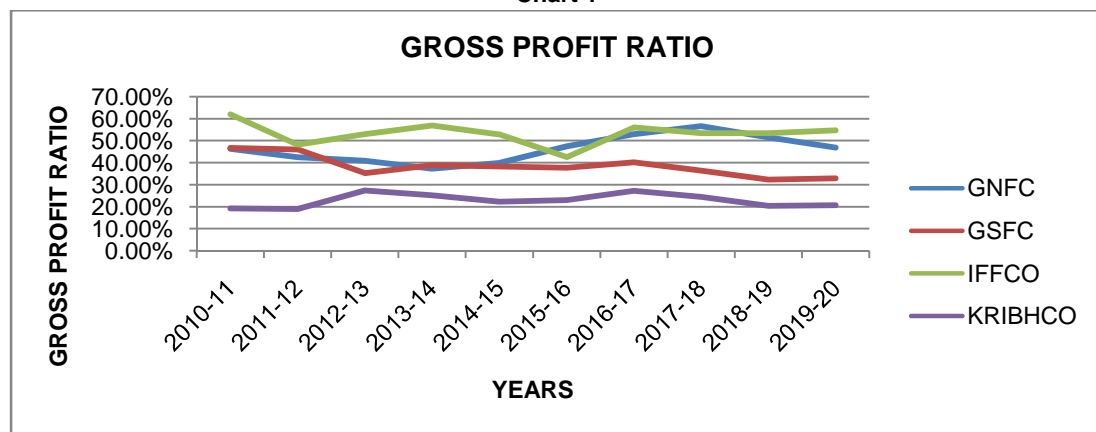
In the present study, trend analysis is conducted to analyze the profitability of the four selected fertilizer companies i.e. Gujarat Narmada Valley Fertilizers and Chemicals Limited; Gujarat State Fertilizers and Chemicals Limited; Indian Farmers Fertilizer cooperative Limited and Krishak Bharati Cooperative Limited for the period of 10 years starting from 2010-11 to 2019-20. Tabulated data and its Chart along with interpretation is discussed below:

- **Gross Profit Ratio**

**Table 1**

Year	GNFC	GSFC	IFFCO	KRIBHCO
2010-11	46.28%	46.82%	62.02%	19.25%
2011-12	42.61%	46.12%	48.25%	18.93%
2012-13	40.98%	35.21%	53.08%	27.37%
2013-14	37.35%	38.92%	56.92%	25.21%
2014-15	40.01%	38.30%	52.87%	22.34%
2015-16	47.49%	37.74%	42.57%	23.00%
2016-17	53.04%	40.25%	56.11%	27.18%
2017-18	56.61%	36.46%	53.50%	24.53%
2018-19	51.48%	32.34%	53.45%	20.36%
2019-20	46.97%	32.88%	54.76%	20.72%

Source: Annual Report of Companies

**Chart 1****Hypothesis Testing**

**H<sub>10</sub>:** There is no significant difference in trend of Gross profit Ratio of selected fertilizer companies

**H<sub>11</sub>:** There is significant difference in trend of Gross profit Ratio of selected fertilizer companies

**Interpretation**

In the above Chart, the trend of Gross Profit to Sales is indicated for four selected companies for the period of ten years from 2010-11 to 2019-20 in which there is downward trend in gross profit ratio of GSFC while there is no trend in in Gross profit Ratio of GNFC, IFFCO and KRIBHCO for the study period. Overall all the selected companies show no trend in Gross profit to sales over the period of ten years except in GSFC, hence we can conclude that the hypothesis that there is significant change in trend of selected companies is partially accepted.

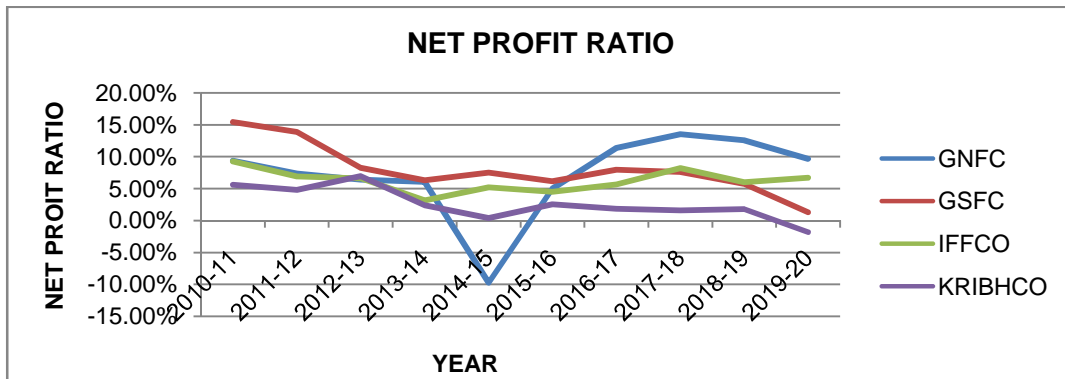
- **Net Profit Ratio**

**Table 2**

Year	GNFC	GSFC	IFFCO	KRIBHCO
2010-11	9.37%	15.43%	9.28%	5.64%
2011-12	7.35%	13.87%	6.93%	4.80%
2012-13	6.42%	8.29%	6.62%	6.97%
2013-14	6.03%	6.32%	3.15%	2.41%
2014-15	-9.74%	7.52%	5.24%	0.42%
2015-16	4.98%	6.15%	4.50%	2.56%
2016-17	11.36%	7.97%	5.67%	1.84%
2017-18	13.53%	7.59%	8.22%	1.60%
2018-19	12.57%	5.76%	5.99%	1.83%
2019-20	9.66%	1.30%	6.74%	-1.80%

Source: Annual Report of Companies

Chart 2



**Hypothesis Testing**

H<sub>20</sub>: There is no significant difference in trend of Net profit Ratio of selected fertilizer companies

H<sub>21</sub>: There is significant difference in trend of Net profit Ratio of selected fertilizer companies

**Interpretation**

In the above Chart, the trend of Net Profit to Sales is indicated for four selected companies for the period of ten years from 2010-11 to 2019-20 in which there is upward trend in net profit ratio of GNFC; downward trend in net profit ratio of GSFC and KRIBHCO while there is no trend in net profit ratio of IFFCO for the study period. Overall all the selected companies show trend of Net Profit to Sales over the period of ten years except IFFCO. hence we can conclude that the hypothesis that there is significant change in trend of selected companies is partially accepted.

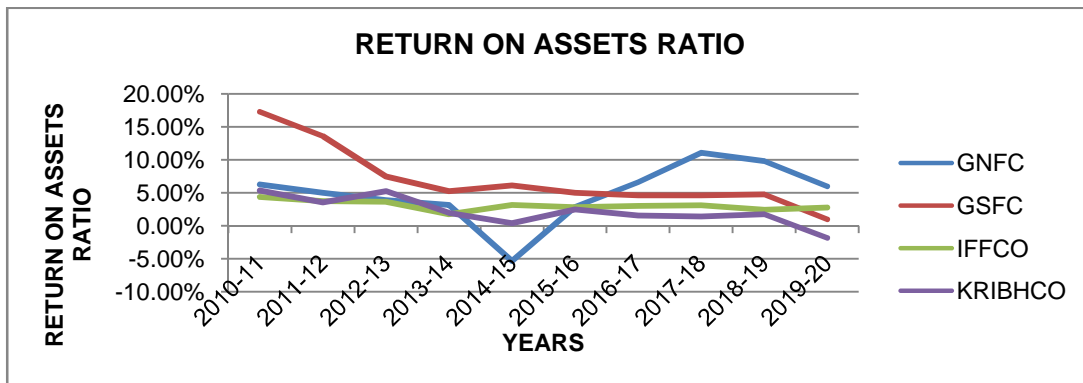
• **Return on Assets Ratio**

Table 3

Year	GNFC	GSFC	IFFCO	KRIBHCO
2010-11	6.25%	17.29%	4.37%	5.35%
2011-12	4.99%	13.61%	3.76%	3.53%
2012-13	3.89%	7.49%	3.63%	5.24%
2013-14	3.15%	5.26%	1.73%	1.92%
2014-15	-5.33%	6.13%	3.14%	0.37%
2015-16	2.85%	4.99%	2.82%	2.47%
2016-17	6.63%	4.65%	3.01%	1.56%
2017-18	11.07%	4.65%	3.10%	1.41%
2018-19	9.83%	4.77%	2.40%	1.73%
2019-20	5.98%	0.98%	2.74%	-1.86%

Source: Annual Report of Companies

Chart 3



**Hypothesis Testing**

**H<sub>30</sub>:** There is no significant difference in trend of Return on Assets Ratio of selected fertilizer companies

**H<sub>31</sub>:** There is significant difference in trend of Return on Assets Ratio of selected fertilizer companies

**Interpretation**

In the above Chart, the trend of Profit After Tax to Total Assets is indicated for four selected companies for the period of ten years from 2010-11 to 2019-20 in which there is upward trend in Return on Assets ratio of GNFC while there is downward trend in Return on Assets ratio of GSFC IFFCO and KRIBHCO. Overall all the selected companies show trend of Profit After Tax to Total Assets over the period of ten years, hence we can conclude that the hypothesis that there is significant change in trend of selected companies is accepted.

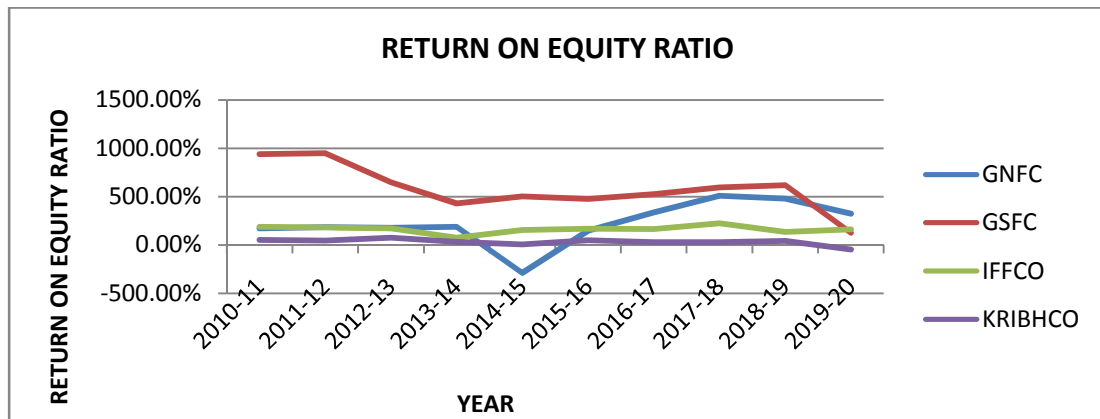
• **Return on Equity Ratio**

**Table 4**

Year	GNFC	GSFC	IFFCO	KRIBHCO
2010-11	171.48%	940.24%	185.82%	51.39%
2011-12	182.61%	950.53%	181.35%	45.29%
2012-13	175.72%	650.06%	171.11%	75.74%
2013-14	188.06%	429.32%	74.88%	31.27%
2014-15	-290.87%	502.52%	152.21%	6.12%
2015-16	145.64%	475.96%	166.24%	48.38%
2016-17	335.41%	526.35%	162.69%	31.16%
2017-18	507.99%	596.91%	222.84%	28.05%
2018-19	476.88%	619.42%	134.10%	43.06%
2019-20	320.97%	123.84%	159.88%	-46.24%

Source: Annual Report of Companies

**Chart 4**



**Hypothesis Testing**

**H<sub>40</sub>:** There is no significant difference in trend of Return on Equity Ratio of selected fertilizer companies

**H<sub>41</sub>:** There is significant difference in trend of Return on Equity Ratio of selected fertilizer companies

**Interpretation**

In the above Chart, the trend of Profit After Tax to Equity Share Capital is indicated for four selected companies for the period of ten years from 2010-11 to 2019-20 in which there is upward trend in Return on Equity ratio of GNFC downward trend in Return on Equity ratio of GSFC and KRIBHCO while there is no trend in Return on Equity ratio of IFFCO for the study period. Overall all the selected companies show trend of Profit after Tax to Equity Share Capital over the period of ten years except IFFCO, hence we can conclude that the hypothesis that there is significant change in trend of selected companies is partially accepted.

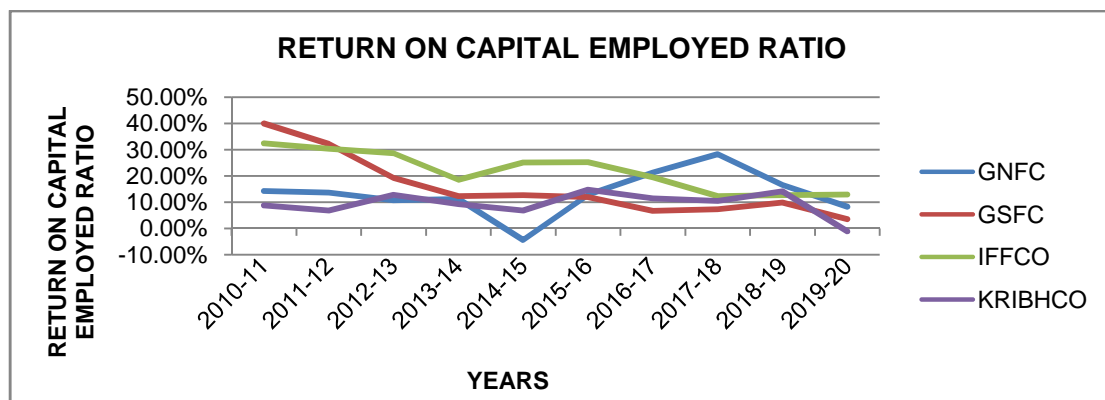
• **Return on Capital Employed Ratio**

**Table 5**

Year	GNFC	GSFC	IFFCO	KRIBHCO
2010-11	14.26%	40.03%	32.39%	8.69%
2011-12	13.66%	32.23%	30.34%	6.78%
2012-13	10.69%	19.23%	28.57%	12.78%
2013-14	11.18%	12.24%	18.50%	9.26%
2014-15	-4.43%	12.71%	25.14%	6.74%
2015-16	12.74%	11.92%	25.16%	14.74%
2016-17	21.19%	6.64%	19.53%	11.45%
2017-18	28.30%	7.27%	12.29%	10.44%
2018-19	16.52%	9.80%	12.65%	14.07%
2019-20	8.23%	3.51%	12.89%	-1.14%

Source: Annual Report of Companies

**Chart 5**



**Hypothesis Testing**

**H<sub>50</sub>:** There is no significant difference in trend of Return on Capital Employed Ratio of selected fertilizer companies

**H<sub>51</sub>:** There is significant difference in trend of Return on Capital Employed Ratio of selected fertilizer companies

**Interpretation**

In the above Chart, the trend of Earnings before Interest and Tax to Capital Employed is indicated for four selected companies for the period of ten years from 2010-11 to 2019-20 in which there is downward trend in Return on Capital Employed Ratio of GSFC and IFFCO while there is no trend in Return on Capital Employed ratio of GNFC and IFFCO for the study period. Overall all the selected companies show trend of Earnings before Interest and Tax to Capital Employed over the period of ten years except GNFC and IFFCO, hence we can conclude that the hypothesis that there is significant change in trend of selected companies is partially accepted.

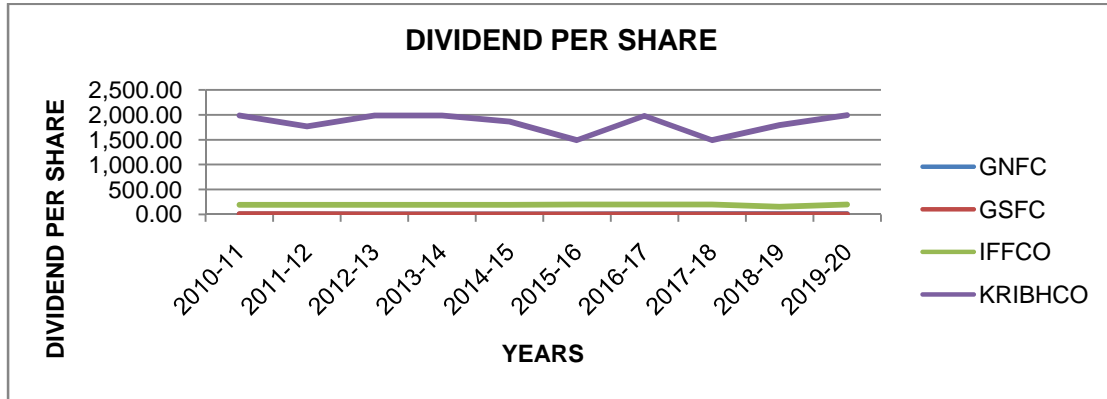
• **Dividend Per Share**

**Table 6**

Year	GNFC	GSFC	IFFCO	KRIBHCO
2010-11	3.25	7	198.09	1984.66
2011-12	3.50	7.5	198.05	1769.57
2012-13	3.50	2	198.05	1985.68
2013-14	3.50	2	198.02	1989.00
2014-15	0.00	2.2	197.65	1866.24
2015-16	2.00	2.2	202.05	1491.56
2016-17	5.00	2.2	200.40	1978.52
2017-18	7.50	2.2	200.26	1493.09
2018-19	7.00	2.2	157.24	1795.89
2019-20	5.00	1.2	199.19	1992.80

Source: Annual Report of Companies

Chart 6



**Hypothesis Testing**

**H<sub>60</sub>:** There is no significant difference in trend of Dividend Per share of selected fertilizer companies

**H<sub>61</sub>:** There is significant difference in trend of Dividend Per Share of selected fertilizer companies

**Interpretation**

In the above Chart, the trend of Dividend Per Share is indicated for four selected companies for the period of ten years from 2010-11 to 2019-20 in which there is upward trend in Dividend Per Share of GNFC; downward trend in Dividend Per Share of GSFC while there is no trend in Dividend Per Share of IFFCO and KRIBHCO for the study period. Overall all the selected companies show trend of Dividend Per Share over the period of ten years except GNFC and IFFCO, hence we can conclude that the hypothesis that there is significant change in trend of selected companies is partially accepted.

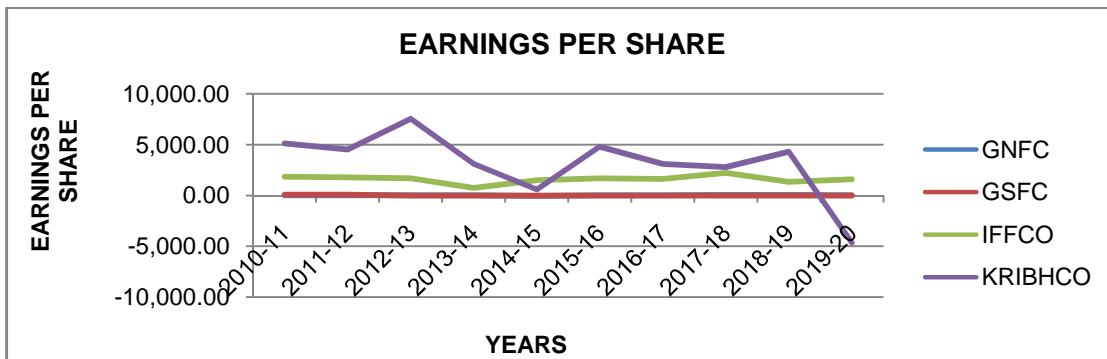
• **Earnings Per Share**

Table 7

Year	GNFC	GSFC	IFFCO	KRIBHCO
2010-11	17.15	94	1,840.67	5127.84
2011-12	18.26	95	1,795.77	4520.46
2012-13	17.57	13	1,694.70	7558.82
2013-14	18.81	9	741.42	3118.16
2014-15	-29.09	10	1,504.35	610.23
2015-16	14.57	10	1,679.76	4817.14
2016-17	33.55	11	1,630.24	3106.91
2017-18	50.81	12	2,231.36	2795.91
2018-19	47.69	12	1,335.84	4307.46
2019-20	32.10	2	1,594.54	-4628.02

Source: Annual Report of Companies

Chart 7



**Hypothesis Testing**

**H<sub>70</sub>:** There is no significant difference in trend of Earnings Per share of selected fertilizer companies

**H<sub>71</sub>:** here is significant difference in trend of Earnings per Share of selected fertilizer companies

**Interpretation**

In the above Chart, the trend of Earnings Per Share is indicated for four selected companies for the period of ten years from 2010-11 to 2019-20 in which there is upward trend in Earnings Per Share of GNFC; downward trend in Earnings Per Share of GSFC and KRIBHCO while there is no trend in Earnings Per Share of IFFCO for the study period. Overall all the selected companies show trend of Earnings Per Share over the period of ten years except IFFCO, hence we can conclude that the hypothesis that there is significant change in trend of selected companies is partially accepted.

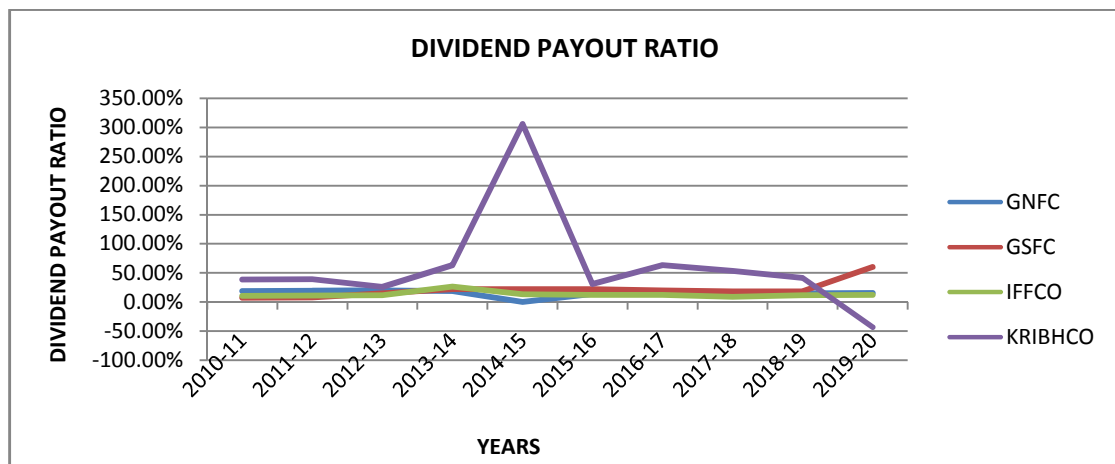
• **Dividend Payout Ratio**

**Table 8**

Year	GNFC	GSFC	IFFCO	KRIBHCO
2010-11	18.95%	7.45%	10.76%	38.70%
2011-12	19.16%	7.89%	11.03%	39.15%
2012-13	19.92%	15.38%	11.69%	26.27%
2013-14	18.61%	22.22%	26.71%	63.79%
2014-15	0.00%	22.00%	13.14%	305.83%
2015-16	13.73%	22.00%	12.03%	30.96%
2016-17	14.91%	20.00%	12.29%	63.68%
2017-18	14.76%	18.33%	8.97%	53.40%
2018-19	14.68%	18.33%	11.77%	41.69%
2019-20	15.58%	60.00%	12.49%	-43.06%

Source: Annual Report of Companies

**Chart 8**



**Hypothesis Testing**

**H<sub>70</sub>:** There is no significant difference in trend of Dividend Payout Ratio of selected fertilizer companies

**H<sub>71</sub>:** There is significant difference in trend of Dividend Payout Ratio of selected fertilizer companies

**Interpretation**

In the above Chart, the trend of Dividend Payout Ratio is indicated for four selected companies for the period of ten years from 2010-11 to 2019-20 in which there is upward trend in Dividend Payout Ratio of GSFC, while there is no trend in Dividend Payout Ratio of GNFC; IFFCO and KRIBHCO for the study period. Overall all the selected companies show no trend of Dividend Payout Ratio over the period of ten years except GSFC, hence we can conclude that the hypothesis that there is significant change in trend of selected companies is partially accepted.



## Findings and Conclusion

### Findings

**Table 9: Table Showing Summary of Findings of Trend of Profitability of Selected Fertilizer Companies**

Sr. No.	Name of Ratio	GNFC	GSFC	IFFCO	KRIBHCO
1	Gross Profit Ratio	No Trend	Downward Trend	No Trend	No Trend
2	Net Profit Ratio	Upward Trend	Downward Trend	No Trend	Downward Trend
3	Return on Assets Ratio	Upward Trend	Downward Trend	Downward Trend	Downward Trend
4	Return on Equity Ratio	Upward Trend	Downward Trend	No Trend	Downward Trend
5	Return on Capital Employed Ratio	No Trend	Downward Trend	Downward Trend	No Trend
6	Dividend Per Share	Upward Trend	Downward Trend	No Trend	No Trend
7	Earnings Per Share	Upward Trend	Downward Trend	No Trend	Downward Trend
8	Dividend Payout Ratio	No Trend	Upward Trend	No Trend	No Trend

From the Trend analysis of profitability ratios for selected fertilizer companies we observe that

- The overall trend of profitability of GNFC is showing upward trend except Gross Profit Ratio and Dividend Payout Ratio which shows No Trend.
- The overall trend of profitability of GSFC is showing downward trend except Dividend Payout Ratio which shows Upward Trend.
- The overall trend of Profitability of IFFCO is showing no trend except in Return on Assets Ratios and Return on Capital Employed Ratios which shows downward trend.
- The overall trend of Profitability of KRIBHCO is showing mix trend means fours ratios out of total eight ratios shows downward trend while remaining four ratios shows no trend in profitability.

### Conclusions

From the analysis we conclude that, overall there is a significant difference in trend of Profitability ratios of selected fertilizer companies in Gujarat But in certain Ratios namely Gross Profit Ratio and Dividend Payout Ratio there is no trend except in GSFC. Overall the performance of GNFC is better among all selected fertilizer companies because there is upward trend in almost all ratios except two ratios as mention earlier and there is no downward trend in any of the parameter of profitability ratios.

### References

- i Patel Vijay S. & Mehta Chandresh B.(2012), " A Financial Ratio Analysis of Krishak Bharati Co-operative limited", International Journal of Marketing, Financial Services & Management Research, Volume:1 Issue: 10(October), pp 186-199
- ii Kapoor Suri Deepali and Singhal Shilpi (2013), "Comparative Analysis of Financial Performance of Indian Farmers Fertilizer Co-operative Ltd (IFFCO)" VSDR International Journal of Business and management Research Volume: 3, Issue: 6 E ISSN 2231-248X pp. 141-152
- iii Patel Ankit D. (2015), "To Measure Significant Difference in Financial performance of Selected Fertilizer Companies in India Based on Profitability Ratios", International Journal of Research in Commerce, IT & Management, Volume: 5 , Issue: 3, MARCH 2015, pp 4-7
- iv Chavda K. N. and Shah Mehul B.(2015). "A Financial Ratio Analysis of Gujarat Narmada valley fertilizer & Chemicals Ltd." RESEARCH HUB – International Multidisciplinary Research Journal, (RHIMRJ, April), Volume: 2, Issue: 5, pp 1-5.
- v Annual Reports of GNFC, GSFC IFFCO and KRIBHCO.

