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A Study on Impact of Cost Structure on Financial Performance of Selected Pharmaceutical Companies in India

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Abstract
In a competitive business world cost plays an important part in the profits. The Manufacturing companies should concentrate on cutting cost to improve profitability. Since the financial performance of a company is directly measured by Profitability of a firm, financial analysis is an important for every business organisation to enhance their performance, competitive strength, to reduce the cost and to access their financial stability and profitability of the firm. The firm can have high profits by increasing their sales and having economical cost of production or minimize the cost of production. The Indian Pharmaceutical industries are developing drastically. Hence, an attempt is made to identify several costs that influence the financial performance of the selected pharmaceutical industries by applying descriptive statistics i.e. mean, standard deviation, co-effficient of variation, minimum and maximum value.
Keywords: Cost Components, Financial Performance, Pharmaceutical Industry

1. INTRODUCTION

The Indian pharmaceutical industry, the most respected amongst the emerging nations, is one of the most sought after sectors from a global collaboration point of view. Having a strong macro and socio economic foundation, the "driving" factors are intrinsically deep-rooted in the Indian pharmaceutical sector and have not been deterred by recent speed breakers like quality issues faced by a few Indian companies. India's pharmaceutical sector will touch US$ 45 billion by 2020, according to a major study by global management and consulting firm, McKinsey & Company.

According to India Brand Equity Foundation, the Indian pharmaceutical market is likely to grow at a compound annual growth rate (CAGR) of 14-17 per cent in between 2012-16. India is now among the top five pharmaceutical emerging markets of the world.

The Indian pharmaceutical sector offers a lot to be optimistic about. The sector which was only $ six billion in 2005, has zoomed to $18 billion market in 2012, clocking a CAGR of 17 per cent. The sector is expected to grow to $45 billion by 2020. Even in the most pessimistic scenario, the sector is expected to be the sixth largest in the world in terms of absolute size by 2020.

2. NEED FOR THE STUDY

Even after the increased investment, market leaders such as Ranbaxy and Dr. Reddy's Laboratories spent only 5–10% of their revenues on R&D, lagging behind Western pharmaceuticals like Pfizer, whose research budget last year was greater than the combined revenues of the entire Indian pharmaceutical industry. This disparity is too great to be explained by cost differentials, and it comes when advances in genomics have made research equipment more expensive than ever. The drug discovery process is further hindered by a dearth of qualified molecular biologists. Successful operations of any of the business depend to a large extent on the availability of goods and services of the right quality in the right quantity at the right time, from the right source at the right prices. Cost analysis is a significant tool in cost management. Analysis of cost is necessary for comparison over the years for cost control and cost planning.

Several challenges are faced by the Indian Pharmaceutical industries such as Drug Price control, Regulatory reforms, Quality management, conformance to global standards etc. Only sound financial performance of the industries can meet all those challenges by effective cost management techniques to increase the profitability. In this paper an attempt has made to analyze the financial performance of selected Indian pharmaceutical companies to understand how reduction in cost plays a crucial growth in profitability.

3. REVIEW OF LITERATURE

Barthwal, R.R. (1976) in his research work applied various explanatory variables such as size of the firm, age of the firm, past profitability, past growth, capital-output ratio and changes in the average cost of production to study the "The Determinants of profitability in Indian Textile Industry". He found that among the variables applied only cost of production was significant determinants of profitability of the firms in the industry in different regions of the country. The other factors were insignificant and had explained less than 25% of the variation in the profitability.

Indrasena Reddy, P. (1998) has examined the performance appraisal in public enterprises for a period

of 5 years from 1988-89 to 1992-93 through value added approach. He observed that the reduction in material cost due to application of effective cost control method and minimizing the wastages of material will lead to increase in total value added. He also found that the overall performance of Bharat Heavy Electrical Limited (BHEL) has been improving.

Mohammad Rafiqul Islam (2000) in his study on "Profitability of Fertilizer Industry in Bangladesh', on a sample of five fertile enterprises in Bangladesh under the control of Bangladesh Chemical Industries Corporation. The study was made for a period 10 years from 1985-86 to 1994-95. He has applied ratio analysis and found that none of the selected units under study has consistent returns and all the units were overwhelmed with reducing profits. He founds that this uneven situation was due to the various reasons like higher cost of production, poor investment policy, imperfect capital structure and recurrent distraction of production process due to power failure

Ganesan, P. (2001) conducted a study on selected 8 units of state bank group and 19 private sector banks as sample to identify the determinants of profits and profitability. He founds that the Banking sector reforms and individual bank's policies towards directed investments and direct credit programmes have played a major role in improving the profits of the banking sector. The empirical analysis shows that deposits per branch, credit to total assets, interest income and interest cost are the important factors that determines the profitability position of public sector banks.

Padmaja Manoharan (2002) in her research on "Profitability of Cement Industry in India" has revealed that the profitability of firms depends on age, size and region. She has identified that the factors like Cost management, asset management and leverage management influences the quality of earnings and proved that liquidity influences the profitability and earning capacity of a firm.

Sanjay, J. Bhayani (2006) made an attempt to study the cost component of top five cement companies of India, viz, Gujarat Aumbuja Cements Ltd (GALL), Dalmia Cement Ltd (DCL), Madras Cements Ltd (MCL), Indian Cements Ltd (ICL), and Shree Cements ltd (SCL). For analysing the components of cost, the entire cost component has been calculated as percentage of net sales. He categorized the total cost under the different heads such as Raw materials and stores consumed salaries and wages, indirect taxes, power and fuel, depreciation, administrative selling and distribution and other expenses and financial charges and found the power and fuel cost highly influences the cost structure of cement industry. It was found that the average cost of GACL was closer to the industry average. 21% of the total cost was occupied by power and fuel cost, whereas 19.27% and 16.69% of total cost was the portion of raw materials cost and selling and distribution and other cost.

4. OBJECTIVES OF THE STUDY

To examine the financial performance of the select pharmaceutical companies in India through cost structure analysis.

5. RESEARCH METHODOLOGY

5.1 Sources of data

Secondary data are used in this study, which were collected from the PROWESS of the Centre for Monitoring Indian Economy and Capitaline plus corporate database. Variables pertaining to behaviour of cost were selected from the Profit and Loss account of the selected pharmaceutical companies for a period of 5 years from 2009 – 2014. . The supporting data was collected from money control.com, BSE websites and annual reports of concern pharmaceutical industries

5.2 Sample Design

The present study focuses on top 5 players in the Indian Pharmaceutical industry based on NET SALES.

5.3 Period of the study

The present study covers a period of 5 years from 2009 – 10 to 2013 – 14.

5.4 Statistical tools used

The operational efficiency of particular pharmaceutical companies are analyzed by applying summary statistics such as mean, standard deviation, co-efficient of variation and analysis of variances

5.5 Scope of the study

The scope is basically controlled to companies that are listed in National Stock Exchange and Bombay Stock Exchange. Top 5 companies based on net sales has been taken up for the study. The study has taken financial and accounting data covering a period of 5 years. By identifying the important key variables namely raw material consumed cost, employee cost, selling and distribution expenses are paid more attention to examine the performance. The ratios computed for the cost analysis are:

a. Ratio of Raw material Consumed to Net Sales
b. Ratio of Power and Fuel cost to Net Sales
c. Ratio of Wages and Salaries to Net Sales
d. Ratio of Manufacturing Cost to Net Sales
e. Ratio of Selling and Administration Cost to Net Sales
f. Ratio of Depreciation cost to Net Sales
g. Ratio of Financial Charges to Net Sales

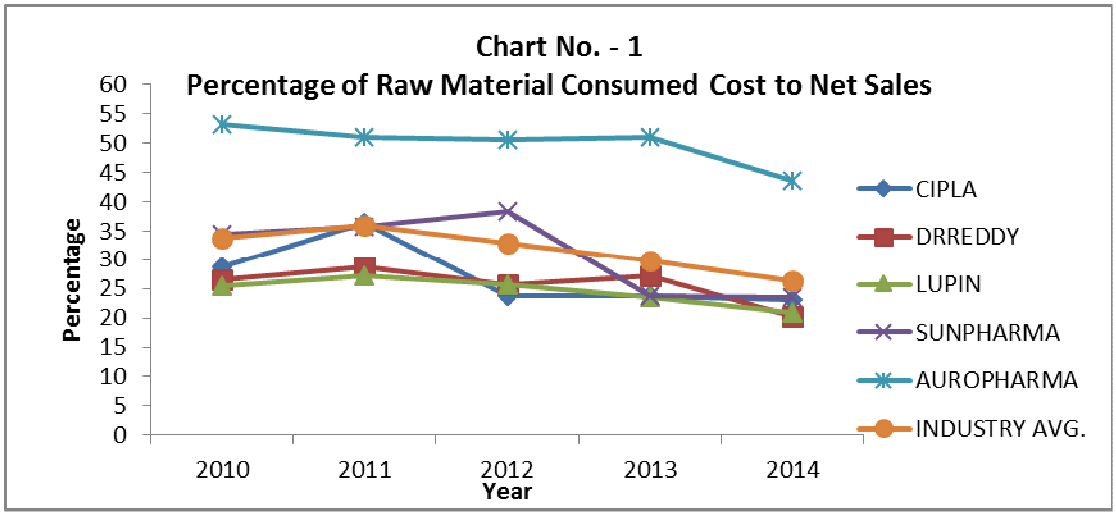
ABBREVIATION

COMPANY'S NAME	SYMBOL
Aurobindo Pharma Ltd.	AUROPHARMA
Cipla Ltd.	CIPLA
Dr. Reddy's Laboratories Ltd.	DRREDDY
Lupin ltd.	LUPIN
Sun Pharmaceutical Industries Ltd.	SUNPHARMA

6. ANALYSIS AND INTERPRETATION

TABLE – 1
Descriptive statistics of Raw Material Consumed to Net sales

CO. SYM	Mean	S.D	C.V	Min	Max
CIPLA	27.14	5.63	20.75	23.18	36.37
DRREDDY	25.66	3.27	12.73	20.21	28.85
LUPIN	24.62	2.47	10.03	20.86	27.25
SUNPHARMA	31.21	6.97	22.33	23.62	38.25
AUROPHARMA	49.82	3.67	7.37	43.50	53.10
INDUS. AVG.	31.69	3.72	11.73	26.27	35.86

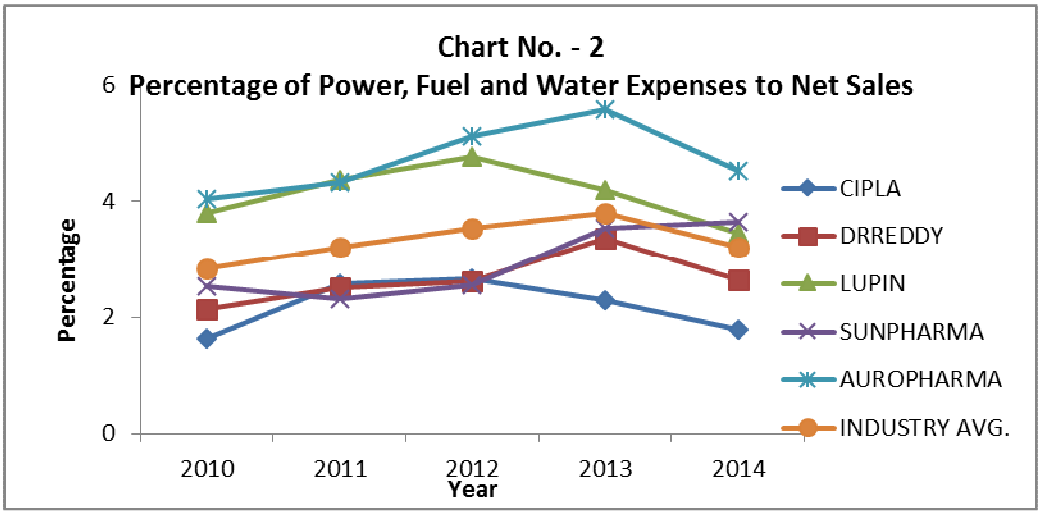


It is interpreted from the table 1, the mean ratio of raw material consumed to net sales ranges from 24.62% to 49.82% with an industry average of 31.69%. The AUROPHARMA's has the highest average raw material consumed to net sales ratio of 49.82% and the LUPIN has the lowest average of 24.62%. The SUNPHARMA has the highest standard deviation of 6.97%. The LUPIN with lowest standard deviation of raw material consumed to net sales ratio of 2.47%, it is found to be stable in raw material cost.

The SUNPHARMA has the highest covariance of raw material consumed to net sales ratio of 22.33%. The AUROPHARMA has the lowest co-efficient of variance of 7.37% and it is found that there is a consistency in the cost of raw material than the other pharmaceutical companies.

TABLE – 2
Descriptive statistics of Power, Fuel and Water Expenses to net sales

CO. SYM	Mean	S.D	C.V	Min	Max
CIPLA	2.19	0.46	21.23	1.62	2.66
DRREDDY	2.65	0.45	16.93	2.13	3.37
LUPIN	4.11	0.51	12.31	3.45	4.75
SUNPHARMA	2.91	0.63	21.70	2.30	3.65
AUROPHARMA	4.72	0.62	13.14	4.05	5.58
INDUSTRY AVG.	3.23	0.53	16.98	2.83	3.79



The ratio of Power, Fuel and Water expenses to Net Sales has been presented in the table 2. The average Power, Fuel and Water expenses to Net Sales ratio of the entire study was 3.79 percent, whereas the average Power, Fuel and Water expenses of AUROPHARMA was 4.72 percent, which was the highest ratio among the units under the study. While the Power, Fuel and Water expenses of CIPLA was 2.19 percent, which was the lowest ratio among all units study.

The co-efficient of variation of SUNPHAMA was 21.23% which was the highest variation among the units under the study, while the AUROPHARMA has the lowest co-efficient of variation among the sample units.

TABLE – 3
Descriptive statistics of Employee Wages to net sales

YEAR / CO. SYM	Mean	S.D	C.V	Min	Max
CIPLA	9.79	3.20	32.71	5.10	13.44
DRREDDY	12.60	1.67	13.28	10.05	14.47
LUPIN	10.16	0.67	6.63	9.40	10.91
SUNPHARMA	10.76	1.94	18.02	9.14	13.02
AUROPHARMA	7.44	0.58	7.78	6.91	8.32
INDUSTRY AVG.	9.74	1.06	10.87	7.87	10.50

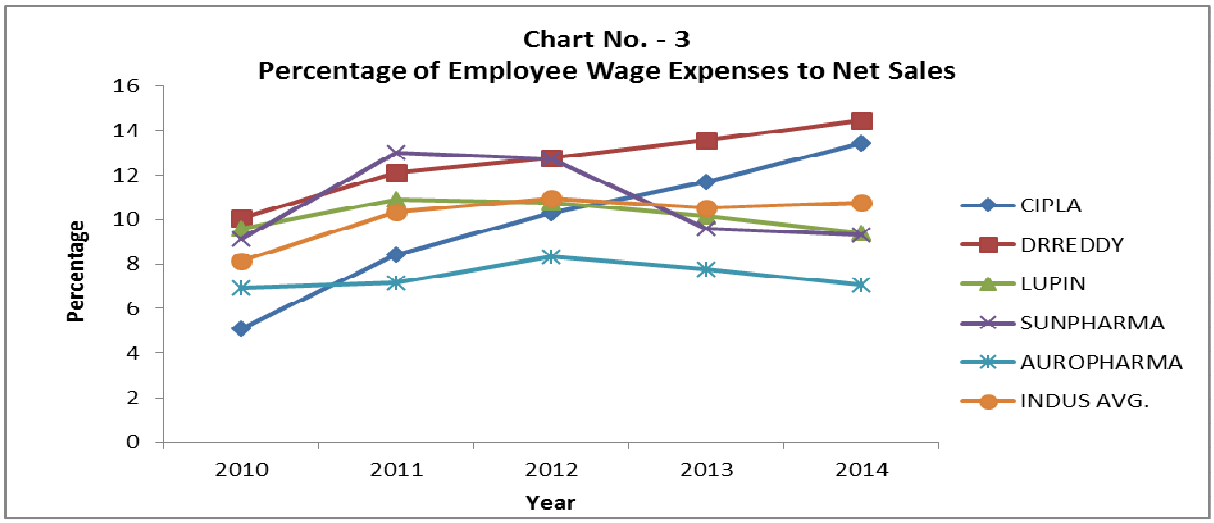


Table 3, reveals the mean ratio of Employee wages cost to net sales. The DRREDDY has the highest average Employee Wages cost to net sales ratio of 12.60% and the AUROPHARMA has the lowest average of7.44%. The CIPLA has the highest standard deviation of 3.20%. The LUPIN with lowest standard deviation of 0.67% and it is found to be stable in employee cost.

The co-efficient of variation of CIPLA was 32.71% which was the highest ratio among the sample units under study. The LUPIN has the lowest co-efficient of variation of 6.63% and it is found that there is a consistency in the cost of Employee wages than the other pharmaceutical companies.

TABLE – 4

Descriptive statistics of Manufacturing Expenses to net sales

YEAR / CO. SYM	Mean	S.D	C.V	Min	Max
CIPLA	7.20	1.64	22.72	5.28	9.27
DRREDDY	6.26	2.53	40.37	3.56	9.65
LUPIN	6.34	0.50	7.95	5.53	6.85
SUNPHARMA	9.38	2.76	29.39	5.08	12.09
AUROPHARMA	5.37	0.57	10.58	4.54	5.98
INDUSTRY AVG.	6.91	0.20	2.90	6.64	7.13

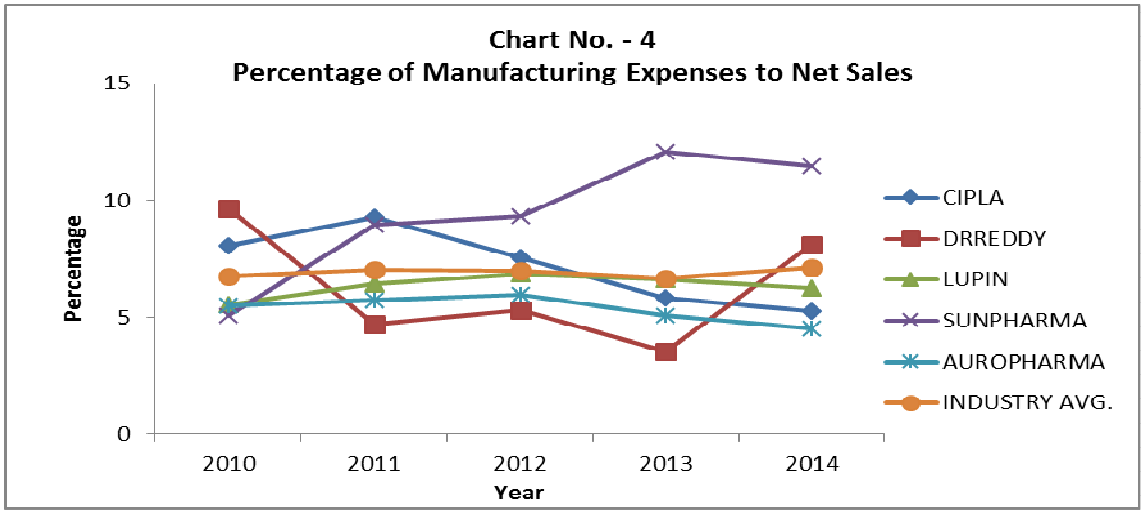


Table 4, shows the mean ratio of manufacturing expenses to net sales, ranges from 5.37% to 9.38%. The SUNPHARMA has the highest average manufacturing expenses to net sales ratio of 9.38% and the AUROPHARMA has the lowest average of 5.37%. The SUNPHARMA has the highest standard deviation of 2.76% followed by DRREDDY with deviation of 2.53%. The LUPIN has the lowest standard deviation of 0.50% and it is found to be stable in manufacturing expenses.

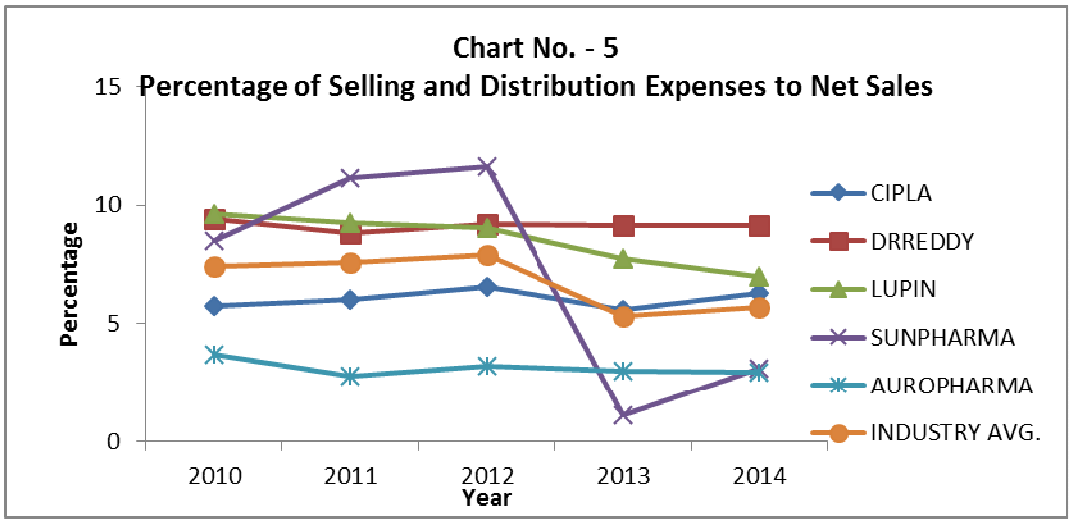
The co-efficient of variation of DRREDDY was 40.37% which was the highest ratio and the LUPIN has

the lowest co-efficient of variation of 7.95% among the sample units under study.

TABLE – 5

Descriptive statistics of Selling and Distribution Expenses to net sales

CO. SYM	Mean	S.D	C.V	Min	Max
CIPLA	6.04	0.40	6.59	5.57	6.57
DRREDDY	9.16	0.22	2.42	8.82	9.44
LUPIN	8.53	1.12	13.18	6.98	9.63
SUNPHARMA	7.09	4.76	67.10	1.11	11.62
AUROPHARMA	3.13	0.35	11.23	2.76	3.68
INDUSTRY AVG.	6.79	1.20	17.62	5.31	7.93



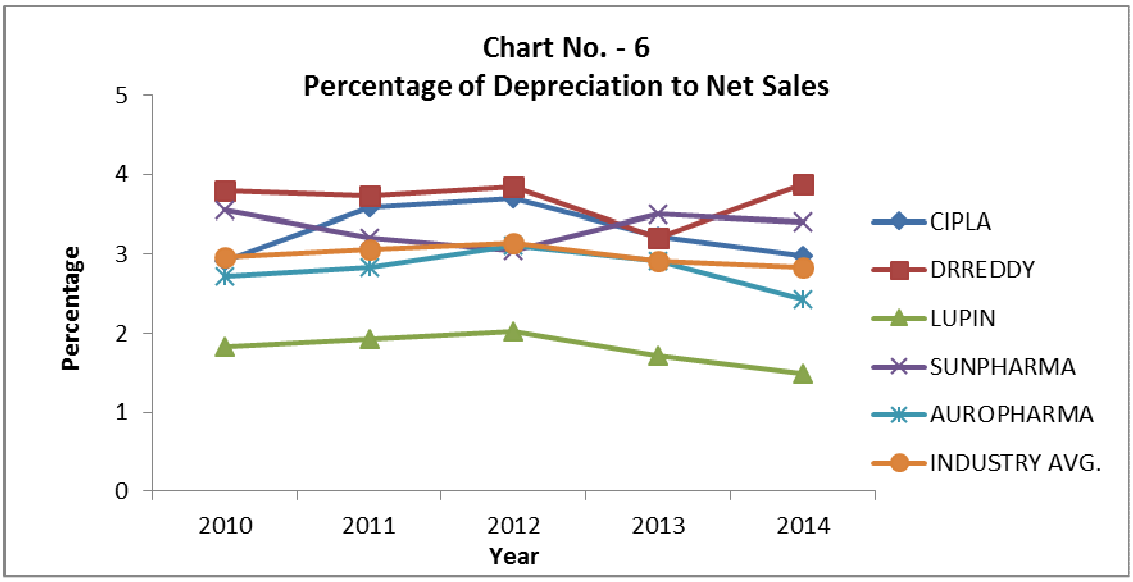
From the table 5, it is interpreted that the mean ratio of Selling and Distribution expenses to net sales, ranges from 3.13% to 9.16%. DRREDDY has the highest average selling and distribution expenses to net sales ratio of 9.16% and the AUROPHARMA has the lowest average of 3.13%. The SUNPHARMA has the highest standard deviation of 4.76% among the sample units. The LUPIN with lowest standard deviation of 0.50% it is found to be stable in manufacturing expenses.

The co-efficient of variation of DRREDDY was 40.37% which was the highest ratio and the LUPIN has the lowest co-efficient of variation of 7.95% among the sample units under study.

TABLE – 6

Descriptive statistics of Depreciation to Net Sales Ratio

CO. SYM	Mean	S.D	C.V	Min	Max
CIPLA	3.28	0.35	10.66	2.91	3.69
DRREDDY	3.69	0.28	7.48	3.20	3.88
LUPIN	1.80	0.21	11.81	1.48	2.03
SUNPHARMA	3.34	0.21	6.37	3.04	3.55
AUROPHARMA	2.80	0.25	9.06	2.43	3.11
INDUSTRY AVG.	2.98	0.12	4.06	2.83	3.14



The ratio of Depreciation to Net Sales has been presented in the table 6. The average Depreciation to Net Sales ratio of the entire study was 3.14 percent, whereas the average Depreciation expenses of DRREDDY was 3.69 percent, which was the highest ratio among the units under the study. It was found that LUPIN has the average ratio of 1.80 percent, which was the lowest ratio among all units study.

The co-efficient of variation of LUPIN was 11.81% which was the highest variation among the units under the study, while the SUNPHARMA has the lowest co-efficient of variation of 6.37%. It was found that there is no high deviation in the depreciation cost and it ranges from 0.21% to 0.35%.

TABLE – 7

Descriptive statistics of Financial Charges to Net Sales Ratio

YEAR / CO. SYM	Mean	S.D	C.V	Min	Max
CIPLA	0.79	0.64	81.77	0.20	1.62
DRREDDY	1.29	1.07	83.00	0.17	2.57
LUPIN	0.66	0.41	62.44	0.23	1.33
SUNPHARMA	2.95	2.97	100.56	0.03	7.97
AUROPHARMA	3.79	1.96	51.72	1.89	6.60
IND AVG.	1.89	0.98	51.82	0.60	3.22

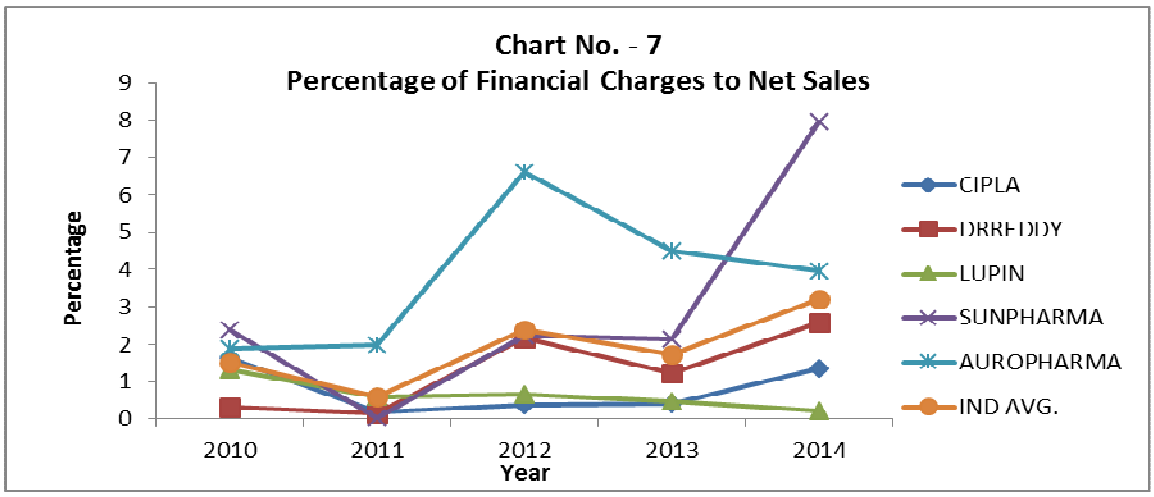


Table 7 depicts the mean ratio of financial charges to Net Sales. The average financial charges to Net Sales ratio of the entire study was 3.22 percent, whereas the average financial charges of AUROPHARMA was 3.79% percent, which was the highest ratio among the units under the study which states that the company is using high debt. LUPIN has the average ratio of 0.66 percent, which was the lowest ratio among all units study.

The co-efficient of variation of SUNPHAMA was 100.56% which was the highest variation among the units under the study, while the AUROPHARMA has the lowest co-efficient of variation of 51.72%.

7. CONCLUSIONS

From this analysis it is concluded that the cost structure were not identical and diverse from company to company among the sample companies during the study period. The mean ratio of raw material cost, power and fuel cost, financial charges as percentage of net sales in AUROPHARMA as percentage of net sales in AUROPHARMA were very high. The percentage of employee wages cost, selling and administration cost, depreciation cost as percentage of net sales in DRREDDY, was above the industry average.

Manufacturing expenses as percentage of net sales in SUNPHARMA was above the industry average. Hence, these companies should take at most effect to cut down the cost by adopting new strategies and technologies which reduces the cost of production. Finally this study concludes that the expenses of AUROPHARMA and DRREDDY were very high and the management should take necessary steps to reduce the cost by application of effective cost control techniques and minimization of material wastage.

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