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Financial Analysis of Selected Pharmaceutical Companies in India with Special Reference to Gross Profit to Sales Ratio

KEYWORDS: Pharmaceutical, Gross Profit Ratio, F-Test ANOVA Analyis

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ABSTRACT *The Gross Profit Margin is a measurement of company's manufacturing and distribution efficiency during the production process. Gross Profit is the profit in sales after deducting all the trading expenses like the cost of raw materials, the direct expenses on purchases, excise duty, etc. the effect of stock adjustment is also given along with deducting factory overheads at this stage and the result is gross profit here in this research paper I try to make the analysis of gross profit to sales ratio among top ten pharmaceutical companies in India. Where as ANOVA test is used to analyse the efficiency of various companies. Statistical result shows that there is a significance difference between in the gross profit to sales ratio among different companies under study as well as different years of each company.*

INTRODUCTION :

The Indian pharmaceutical industry is the world's second-largest by volume and is likely to lead the manufacturing sector of India. India's bio-tech industry clocked a 17 percent growth with revenues of Rs.137 billion ($3 billion) in the 2009-10 financial year over the previous fiscal. Bio-pharma was the biggest contributor generating 60 percent of the industry's growth at Rs.8,829 crore, followed by bio-services at Rs.2,639 crore and bio-agri at Rs.1,936 crore. The first pharmaceutical company are Bengal Chemicals and Pharmaceutical Works, which still exists today as one of 5 government-owned drug manufacturers, appeared in Calcutta in 1930. For the next 60 years, most of the drugs in India were imported by multinationals either in fully-formulated or bulk form. The government started to encourage the growth of drug manufacturing by Indian companies in the early 1960s, and with the Patents Act in 1970, enabled the industry to become what it is today. This patent act removed composition patents from food and drugs, and though it kept process patents, these were shortened to a period of five to seven years. The lack of patent protection made the Indian market undesirable to the multinational companies that had dominated the market, and while they streamed out, Indian companies started to take their places. They carved a niche in both the Indian and world markets with their expertise in reverse-engineering new processes for manufacturing drugs at low costs. Although some of the larger companies have taken baby steps towards drug innovation, the industry as a whole has been following this business model until the present.

METHODOLOGY : -

The study was based on the secondary data which were obtained from the annual reports of the selected companies as well as publications & journals related with pharmaceutical industries in India. The top ten companies which are included in the analysis is Ranbaxy Ltd., Dr. Reddy's Laborataries Ltd., Cipla Ltd., Sun pharmaceutical Industries Ltd., Lupin Ltd., Aurbindo Pharmaceutical Ltd., Glaxo Smithkline Ltd., Cadila Healthcare Ltd., Aventis Ltd., IPCA Laboratories Ltd. After the data collection processed and analyzed according to the outline Hypothesis are formulated and proved with the use of statistical tools to arrive at certain conclusion.

DATA ANALYSIS & FACTS FIGURES : -

Table 1 : - Gross Profit To Sales Ratio In Pharmaceutical Companies Under Study (In %)

Name Of The Company	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Ranbaxy	57.25	55.21	58.14	60.23	62.28	65.24	68.85
Dr. Reddy	55.89	54.72	53.26	52.27	65.32	68.25	66.23
Cipla	33.28	36.05	40.20	42.29	50.20	52.37	60.25
Sun Pharma.	52.38	47.88	55.38	54.22	60.21	59.27	61.23
Lupin	30.26	37.28	35.27	40.29	37.22	45.22	48.55
Aurobindo	26.16	22.77	35.44	45.22	38.28	50.21	55.26
Glaxo	46.24	44.20	48.25	50.23	48.26	55.28	60.25
Cadila	48.81	51.85	48.25	50.21	55.24	60.25	55.27
Aventis	38.35	35.23	39.27	40.25	45.36	44.28	45.05
IPCA	44.27	47.25	48.55	49.26	50.22	54.25	55.12

There is a consistence change observed between the gross profit margin of the Ranbaxy ltd. It lies in between 55.21 to 68.85 with an average 61.03 higher compared to overall average of 49.37 among the selected companies. Apart from the year 2004-05 the trend shows upward consistence progress in the gross profit margin of the company.

Dr. Reddy's Laborataries shows some slope down wards during the year from 2004-05 to 2006-07 but than from the year it shows consistence upward trend there will be also very fine average of 59.42 comapred with the average 49.37 of selected companies. The company can be reliable and consistence as far as gross profit margin.

Cipla limited shows a consistence upward trend during the entire study period. There will be very balnced increase in the gross profit margin ratio. The ratio lies between 33.28 to 60.25 during the year from 2003-04 to 2009-10. The gap between highest and lowest values shows the absence of any major fluctuations in the gross profit margin of the company.

Sun Pharmaceutical shows a inconsistence trend during the study period with minor fluctuations there will be up and down between the two years but there will be good average of 49.85 slighter more than the overall averege of selected companies in the study have also the averege of 49.37.

Lupin Ltd. Has made a successful attempt to stabilize after few hiccups during the starting few years. This un-stability cause serious concern to the shareholders of the company. the average of 39.16 is quite lower than the overall average of 49.37 of the selected companies in the study period which will create some serious problem to the company in future.

There is no particular trend observed in the gross profit margin of the Aurbindo Pharma Ltd. It lies between 22.77 to 55.26 with an averege of 39.05 which is lower compared to overall average of 49.37 for the selected companies in the study period.

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Glaxo shows a steady and increasing trend during the seven years of the study period. It shows 44.2 to 60.25 gross profit margin during the research period which will be very consistence during the study period and there wan't be major ups and downs shown there. Averege is around 50.39 is quite nearer to the overall averge 49.37 of the selected companies in the study.

Cadila Pharma shows consistence increasing trend except during the third year and last year during the study period. There will be an averege 52.84 which will be very fine average by all standards compared with only 49.37 averege of the selected companies in the study.

Aventis is the only company which shows a continuous incrising trend during the study period. It lies between 35.23 to 45.36 with an average of 41.26 which is quite negative compared with the overall average of 49.37 of the selected companies in the study period.

IPCA Laboratories Shows a continuous increasing trend during the study period. this is the first company which shows clear and upward trend during the study period. This can be possible with the continuous improvement in the financial management of the company.the highest value is at the end in the year 2009-10 55.12 while the lowest value is 44.27 at the beginning of the year. But average is quite good compared with overall average of the selected companies which gives idea that there is more potentialities in the company.

F – TEST (ANOVA) ANALYSIS : -

In order to establish relationship in the ratio of Gross Profit to Sales Ratio among different Pharmaceutical companies under study during the study period and for establishing relationship in the ratio of Gross Profit to Sales Ratio among different years for each company, F – Test (ANOVA) is used. The statements of hypothesis for the comparison among the different companies and for comparison among different years for individual companies during the study period are as under.

Hypothesis for comparison between different companies : -

Null Hypothesis (H0) : - "The Ratio of Gross Profit to Sales between different companies under study during the study period is same."

Alternate Hypothesis (Ha) : - "The Ratio of Gross Profit to Sales between different companies under study during the study period is not same."

Hypothesis for comparison between different years : -

Null Hypothesis (H0) : - "The Ratio of Gross Profit to Sales between different years during the study period in each company study is same."

Alternate Hypothesis (Ha) : - "The Ratio of Gross Profit to Sales between different years during the study period in each company study is not same."

In the following table – 2 the calculation of F –Test (ANOVA) is shown of Gross Profit to Sales Ratio for the Pharmaceutical Companies under study, during the study period.

Table 2 : - Table Showing The Calculation Of F –Test (ANOVA)

sv	d.f.	s.s.	m.s.s.	Fcal.
Between Companies	9	11125.7985	1236.19983	29.9937173
Between Years	6	1442.45	240.408333	5.83298864
Error	54	5050.6258	41.2152926	
Total	69	20522.17		

CONCLUSION : -

The Above Table- 2 shows the F Calculated value of 29.99 at 5 % level of significance and at (9,54) degree of freedom for different pharmaceutical companies under study during the study period which is greater than the table value of 2.06 hence the null hypothesis is rejected and the alternate hypothesis is accepted, which means that there is a significant difference among the different companies under study in the ratio of gross profit to sales.

F Calculated value of 5.83 at 5 % level of significance and at (6,54) degree of freedom is greater than the table value of 2.27 hence the null hypothesis is rejected and the alternate hypothesis is accepted, which means that there is a significant difference amonth the different year's ratio for all the individual companies.

Hence it can be concluded that the gross profit to sales ratio among different companies and among different years under study is not same.

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