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8.1 Prelude Of The Study

A highest academic degree and the biggest formal research project; this is what a Ph.D. means in a very concise form. If I try to define Philosophy in my words it also refers to some unique and fresh knowledge which is brought into world for the very first time. Interestingly this is not out-of-the-blue thoughts, but are the results of some concrete work in a particular direction using some appropriate way or method.

The following research, which is although a post-mortem of things happened with selected units, but the new flow of conclusions that are derived from this work are showing a way ahead and hence can be futuristic.

The operationalization of the new patent regime in 2005 is likely to bring about fundamental changes in the composition of the pharmaceutical industry for the coming times especially the next decade. The reintroduction of product patent would mean that companies would not be able to copy drugs patented after 1995. In other words, most Indian companies may face an acute decline in market opportunities after 2005. It is also pointed out that a shift to a product patent regime would demand that basic capabilities of indigenous research be developed. Big companies have started preparing themselves for improving their R&D standard as well as R&D budget and also making tie-ups with the leaders for the R&D, but the real test is for the small units because they not only lack financial resources but also lack trained manpower and accessible testing facilities. In the light of the above status of Pharmaceutical Industry of India with reference to the Patent regime, the present research is objected to study and observe that: “How the Industry is poised to face this change in the Patent laws” And for that purpose it was essential to study the working of the industry before the patent law comes into force, i.e. 1st April 2005.

In order to study the status of industry, sample units were selected on
some criteria which nearly reflected the population. The sample is a good representation of the population and the period for which study is undertaken is as big as 7 Years.

After making a detailed analysis of the research work this chapter brings the gist or essence of the entire work. Even a humble endeavor has been done to present some suggestions to the companies under study to improve the present state of affairs and financial performance.

8.2 Findings

CHAPTER 1: A STUDY OF PHARMACEUTICAL INDUSTRY IN INDIA

In order to arrive at exact conclusions and observations and for finding out something new from a given set of things, one needs to go into the details of the things. Going into detail does not only mean intensive study but also extensive study. Similarly, for going into the detail of the financial performance of the selected pharmaceutical companies of India it was required to work intensively and extensively on the profits and profitability of these companies.

Several relational dimensions of profit margin, several dimensions of sales volume and finally several dimensions of profitability needs to be used to do an in-depth study of profit and profit earning capacity of the companies. Finally using all the above described ways an effort has been made to measure the profitability of the selected companies under study for a specified period.

CHAPTER 2: HISTORY OF PHARMACEUTICAL INDUSTRIES

2.1 Ranbaxy Laboratories Limited

2.2 Dr. Reddy's Laboratories Ltd.

Dr. Reddy's Laboratories Ltd. founded in 1984 by Dr. K. Anji Reddy, has become India's second biggest pharmaceutical company. Dr. Anji Reddy had worked in the publicly-owned Indian Drugs and Pharmaceuticals Ltd. Reddy's manufactures and markets a wide range of pharmaceuticals in India and overseas. The company has over 190 medications, 60 active pharmaceutical ingredients for drug manufacture, diagnostic kits, critical care, and biotechnology products.

2.3 Cipla Limited

Cipla Limited is a prominent Indian pharmaceutical company, best-known outside its home country for manufacturing low-cost anti-AIDS drugs for HIV-positive patients in developing countries. Founded by Khwaja Abdul Hamied as The Chemical, Industrial & Pharmaceutical Laboratories in 1935, Cipla makes drugs to treat cardiovascular disease, arthritis, diabetes, weight control, depression and many other health conditions, and its products are distributed in more than 180 countries worldwide.

2.4 Sun Pharmaceutical

Sun Pharmaceutical (or Sun Pharmaceutical Industries Limited) is an international pharmaceutical company based in Mumbai, India. It should not be confused with Sun Pharmaceuticals Corp, which is a manufacturer of sun care products, owned by the Playtex branch of Energizer Holdings.

2.5 Lupin Ltd.

Lupin Ltd. is world's largest manufacturer of the anti-TB drugs based in Mumbai, Maharashtra, India. The company production contains the Cardiovascular (prils and statins), Diabetology, Asthma, Pediatrics, CNS, GI, Anti-Infectives and NSAIDs therapy and world largest manufacturer of Anti-TB and Cephalosporins segments. It is also India' fifth largest drug maker by revenue. India is the first Asian country where the company has launched the
A new prescription drug after launching first anti TB drugs in single tablet.

2.6 Aurobindo Pharma

Aurobindo Pharma was born of a vision. Founded in 1986 by Mr. P.V.Ramaprasad Reddy, Mr. K.Nityananda Reddy and a small, highly committed group of professionals, the company became a public venture in 1992. It commenced operations in 1988-89 with a single unit manufacturing semi synthetic penicillins (SSPs) at Pondicherry.

2.7 GlaxoSmithKline Pharmaceuticals Ltd.

GlaxoSmithKline Pharmaceuticals Ltd. is a Indian subsidiary of GlaxoSmithKline plc, one of the world’s leading research based pharmaceutical and healthcare companies. It is one of the oldest pharmaceuticals company in India. Its product portfolio includes prescription medicines and vaccines. Its prescription medicines range across therapeutic areas such as anti-infectives, dermatology, gynaecology, diabetes, oncology, cardiovascular disease and respiratory diseases. It also offers a range of vaccines, for the prevention of hepatitis A, hepatitis B, invasive disease caused by H, influenzae, chickenpox, diphtheria, pertussis, tetanus, rotavirus, cervical cancer and others.

2.8 Cadila Healthcare

'Cadila Healthcare' is an Indian pharmaceutical company head quartered at Ahmedabad in Gujarat state of western India. The company is the fifth largest pharmaceutical company in India, with US$290m in turnover in 2004. It is a significant manufacturer of generic drugs. Cadila Pharma have developed a drug named Roserin which has reduced the cost of curing TB by 33%.
2.9 Aventis Pharma Limited

Aventis Pharma Limited headquartered in Mumbai, is a part of Sanofi-Aventis group. Sanofi-Aventis and its 100% subsidiary Hoechst AG, are the major shareholders of Aventis Pharma Limited. Its manufacturing portfolio contains medicines for several therapeutic areas including cardiovascular, thrombotic, metabolic disorders, oncology, disorders of the central nervous system, internal medicine. Its primarily business is medicines in the dosage forms of liquid injectibles, tablets, capsules, ointments, drops and syrup. In July 2003, company launched Lantus, the world's first and only once a day insulin.

2.10 Ipca Laboratories

Ipca Laboratories is an international pharmaceutical company based in Mumbai, India. It is also one of the largest suppliers of these APIs and their intermediates world over. It produces more than 150 formulations that include oral liquids, tablets, drypowders, and capsules. The various kinds of drug intermediates that the company manufactures include Theo bromine, Acetylthiophene, and P- Bromo Toluene and promotes over 36 countries of Asia, Africa, CIS, and South America, including Cambodia, Kazakhstan, Kenya, Mauritius, Myanmar, Nigeria, Oman, Russia, Sri Lanka, Sudan, Tanzania, Ukraine, Vietnam and Yemen. The main activities of company are to produce and market pharmaceuticals and drugs. The various products of the company include formulations, drug intermediates, and active pharmaceutical ingredients (API).

CHAPTER 3: RESEARCH METHODOLOGY

For genuine decision making genuine informational base is essential. Same applies to research oriented projects wherein the major objective is to find out some sort of new identity of things which have happened in past.
In this research work an effort has been made to check the dual relationship establishing profit and profitability base among selected pharmaceutical companies for the study period. First aspect was to find out the relation between several companies during the period of study on the front of their performance, taking several performance measurement criteria. Second aspect was to find out the relationship or trend between several years of study of the same company on the front of their performance, taking several performance measurement criteria.

In the best of the knowledge of the researcher and the informational knowledge collected from various sources, it was believed that F-Test should be used to check the dual relationship establishing profit and profitability base among selected pharmaceutical companies for the study period.

Ten companies are selected for the purpose of research and their seven years’ data are collected, analyzed and applied statistical tools on those data. And finally from the statistical analysis some conclusions can be drawn for the profit and profitability of the selected companies for the study period.

CHAPTER 4: SURVEY OF THE EXISTING LITERATURE

The Financial Analysis of selected pharma companies in India is a particular area of work hence not a very popular matter to write on. There are number of articles and research papers published for Financial Analysis and for Pharmaceutical Industry of India but nothing is specifically of relevance for the present study.
The present study is a unique work of research which is for selected companies under study and for a specified period. There are some technical points included apart from the financial research. These are TRIPS, WTO, Patent Regime, various national and international pharmaceutical manufactures’ association.

CHAPTER 5: COST TREND ANALYSIS

Trend analysis is the tool which analyses the financial statements by comparing the figures of several years and examining their trend. As per the dictionary meaning of the word “Trend”, it means, “a general tendency or direction”

As such no conclusion can be reliable if they are drawn from the figures of a particular year or two. But if figures of same items for a number of years are methodically arranged and if some analysis is made, then that analysis would definitely give some very authentic and reliable conclusive piece of information.

Trend analysis can be carried out with the help of several methods:

1. Year to Year Comparison
2. Index Number
3. Trend Series
4. Trend Ratio

CHAPTER 6: ANALYSIS OF PROFIT MARGIN

Profit is the guiding light for so many managerial decisions. Almost all the major business decisions are directly or indirectly dependent on profit and profitability. For example, dividend payments, bonus to employees, expansion of business, raising of
additional finance, etc. Apart from manager there are other parties also who are interested in profit and profitability like the shareholders, general public, government, creditors, bankers, financial institutions, etc. The shareholder has to make decision regarding holding or selling the shares, creditors have to decide regarding the credit policy and further credit to the firm, etc. Hence profit can be considered as an important criterion for various business decisions making by the internal and external parties. But profit when seen and observed individually fails to convey any significant message, and can be meaningful when compared with other figures. These other figures may be profits of other companies in the same industry, average industry profits figures, or the profit compared with the average investment made in the firm.

Fulfilling the social responsibility towards various classes of society would also be not possible without the surplus funds which can be collected only if the company is earning profit. Social responsibilities can be fulfilled by offering the goods or services at lower rates in times of natural calamities or provide the assistance to government and other non-government organizations (NGOs) in their relief work, constructing and maintaining public schools, public hospitals, public libraries, etc. Profit earning can also be viewed as a cushion for the future unexpected situation of market. A negative change in demand or negative change in the prices of inputs or the resources may be balanced by the sufficient profit earned in the earlier years. Sudden decision with regard to the above situation can be taken if the company is earning profit regularly.

Profitability is the ability to earn profit but any firm can be termed profitable only when compared with someone. Hence profitability is definitely a relative term. A simple example will explain the difference between profit and profitability: two similar amounts of profits for two different firms may be referred to as two firms having similar amounts of profits but in no case can be stated to have similar profitability; profitability
can only be known when the operating profit margins are compared with the investment.

Return on Investment (ROI) is one of the key profitability ratio. ROI is the percentage of profit to capital employed and is the product of two ratios: (i) Percentage of profit to sales and (ii) Sales to capital employed, i.e. the rate of asset turnover. Thus

\[
\text{R.O.I.} = \frac{\text{Profit}}{\text{Capital Employed}}
\]

Return on Investment can be considered as the ultimate measure of profitability; as such it uses profit margin as well as the productivity to measure the real profitability of any business enterprise. Hence for the present study this measure will be the most important to measure the profitability situation of the companies of pharmaceutical industry of India.

Hence we can conclude that Return on Investment is the factor of Profit Margin as well as Asset Turnover. Hence if there is any change in Return on Investment it may be either due to the change in the proportion of profit to sales or the proportion of sales to capital employed.

The gross profit margin is a measurement of a 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. In other words when manufacturing cost of goods sold is deducted from the sales the resultant profit are referred to as Gross Profit. The gross profit margin informs an investor about the percentage of revenue / sales left after subtracting the manufacturing cost of goods
A company that boasts a higher gross profit margin than its competitors and industry is more efficient.

Among the various measures of profitability, this ratio has got its own importance. Operating profit margin is calculated in order to find the operating efficiency of the company. When total operating costs are deducted from total operating or business income the result is Operating Profit or Operating Loss. The name itself suggests that the result which is obtained from the operations of the business is the Operating Profit Margin. In this study we have tried to calculate the Operating Profit Margin by adjusting all the operating expenses against operating income.

The final step of profit is the calculation of net profit margin. Gross profit was the profit in sales after deducting manufacturing cost of goods sold, whereas the operating profit is the profit after deducting the employees cost, administrative overheads and selling overheads from the gross profit. Finally the Net Profit margin is arrived after the gross profit margin and operating profit margin. Net Profit is arrived at after making adjustments on both the sides, i.e. income as well as expenses side. All other income except the operating income and all other expenses other than operating expenses including depreciation are adjusted to arrive at the final profit which we refer to as Net Profit.

**CHAPTER 7: ANALYSIS OF RETURN ON INVESTMENT**

Return on the investment made in the business gives an idea regarding the utilization of the resources employed. This also measures the efficiency of management along with the quality of resources and the marketability of the business.

This chapter is totally designed and prepared for emphasizing and proving the
importance of this measure and also for deriving some genuine findings and making serious observations for the present study. As a measure of profitability it can be considered as a superior most ratio as it is made up of two important ratios of profit margin and productivity. Return on Investment is a mixture of profit margin ratio and the asset turnover ratio, the former one is the ratio of profit percentage in sales while the later is a measure of productivity. Hence ROI can be considered as a complete ratio for analyzing the profitability of any firm.

As the present study is entirely devoted to the analysis of profitability of companies of Indian Pharmaceutical Industry, this ratio can be considered as the theme ratio which will be primarily used for the pure analysis of the profitability. Now going into the details of the calculation of the ratio, we find basically two things, i.e. profit and investment, which are essential for this ratio.

For the present study as discussed earlier we have chosen Return on Investment measure as a prime measure of profitability. For the calculation of Return on Investment for the present study of selected Indian Pharmaceutical companies under study, the operating profits before interest and taxes are used and the gross capital employed in the business as per the previous discussion in this chapter.

Gross Capital employed refers to the investment in total assets which includes the fixed assets and the current assets. When gross capital is compared with the operating profits before interest and taxes it gives a clear indication of the return on the total assets invested. We have already discussed the operating margin in the Chapter-6 "Analysis of Profit Margin" and we have also discussed the details of Gross Capital Employed earlier in this same chapter. Now here an attempt has been made to calculate the Return on Gross capital employed for the selected companies. This ratio will measure the returns received on overall investment in the individual companies and will
also reveal the overall efficiency which will be shown by the return received on the total investment. The ratio is as under:

**R.O.G.C.E. = Profit Before Interest & Taxes / Gross Capital Employed**

Net capital employed refers to the total assets less the current liabilities, in other words net capital employed refers to the fixed assets plus current assets minus current liabilities. This ratio can be described as one of the significant measure of profitability as the current liabilities are deducted with a logic that the part of total assets which would be utilized to pay to current liabilities will not be permanently invested in the business. Hence the amount of total assets equaling to current liabilities is deducted from the gross capital employed and thus remaining part of total assets or gross capital employed is the amount which is referred as net capital employed. The concept of net capital employed has been discussed in depth earlier in this chapter and the profit margin used here i.e. the operating profits before interest and taxes has also been discussed in the Chapter-6th “Analysis of Profit Margin”. The ratio is as under:

**R.O.N.C.E. = Profit Before Interest &Taxes / Net Capital Employed**

This ratio is also referred as return on net worth. This is another profitability measuring ratio which would compare the profit with the amount of investment. Here investment refers only ownership capital. For the objective of profitability in relation to investment, this is another ratio which is used. Every company has a mixture of ownership capital and borrowed capital in their capital structure, but in general the
higher the share of proprietors in the total capital of the company (either in the form of share capital or retained earnings), less is the likelihood of insolvency in future. This ratio carries importance especially for the current and prospective investors; as the shareholders are the real owners and it is quite important to find out how much they are earning in relation to their investment.

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\text{R.O.P.N.C.E.} = \frac{\text{Net Profit After Tax}}{\text{Proprietor’s Net Capital Employed}}
\]

8.3 Suggestions

There are no trends identified in the ratio of individual cost to total cost which states that company is not consistent in its procuring prices of materials and the use of materials. As such either of them are fluctuating and hence they are having not having any standard proportion to total costs. All the companies can have standardization in the type of material, prices at which they are available and also other expenses which are incurred needs to make standardized.

Despite being an essential commodity, excise duty for the pharma sector remains at 16%. The industry was expecting a reduction in excise duty to 8%, especially now that the excise duty is MRP based. Hence excise duty need to be reduced to less than 10%. Extension of deduction of 150% of R&D expenses. This would encourage more and more companies to invest in R&D.

An academic–industrial relationship need to be further explored, like the U.S., where the universities innovate and the industry commercialize the product. The universities are permitted to own the Intellectual Property Rights (IPR) and get a share of the profits. Academic institutions will then become the engines of entrepreneurship. This
also requires setting up of greater number of centers of academic excellence throughout India in different states, so that people from across the country can avail of such education and make their contributions without feeling the need to look beyond India for achieving academic excellence.

Income tax exemptions should be given on clinical trials and contract research done outside the company and abroad. This is because India is seen as emerging as a major center for outsourcing of clinical trials for the Pharmaceutical MNCs. The government should encourage setting up of USFDA-compliant plants by providing tax holidays for a specified period (as given in regions like Baddi), so that the Indian companies can exploit the opportunity arising out of patented drugs and take up marketing of generics in the developed countries like USA.

Raw materials consist the major portion of total cost for all the companies, which means that this cost should be checked to improve margins. Even backward integration of value chain can be a good idea if it is a feasible one. There have been a number of instances of mergers and acquisition in Pharmaceutical Industry in India in recent times. For decreasing the input cost and for better marketing and other advantages, the companies can strengthen itself by acquiring strategic pharma units.

If government can be instrumental in providing the raw materials at subsidized rates to the companies, the companies can reduce their prices of drugs which can provide relief to the general public and would increase the competitiveness of Indian firms in global markets.

Proper equilibrium must be maintained between the pays and performances of work-force, this would provide twin benefit. Firstly would check the increasing salary and wages cost and secondly it would improve the qualitative work from the workers.
Promotional activity must be carried out with the objective of disease awareness and disease prevention messages in association with NGOs. Government can boost the exports by giving extra benefits to the export oriented units. Extra incentives can be awarded to the companies working for the social causes in rural area. Government can procure drugs in bulk for its various medical programmes in rural areas.

8.4 Conclusions

(1) Raw Material Cost to Total Cost ratio among different companies and among different years under study is not same.

(2) Factory Overheads to Total Cost ratio among different companies is not same and among different years under study is same.

(3) Administrative Overheads to Total Cost ratio among different companies and among different years under study is not same.

(4) Selling & Distribution Overheads to Total Cost ratio among different companies is not same and among different years under study is same.

(5) Gross Profit to Sales ratio among different companies and among different years under study is not same.

(6) Operating Profit to Sales ratio among different companies is not same and among different years under study is same.

(7) Net Profit to Sales ratio among different companies is not same and among different years under study is same.

(8) Return On Investment ratio among different companies and among different years under study is same.
(9) Return On Gross Capital Employed ratio among different companies is not same and among different years under study is same.

(10) Return On Net Capital Employed among different companies and among different years under study is same.

(11) Return On Proprietors’ Net Capital Employed among different companies and among different years under study is same.

8.5 Limitations Of The Study

The present study is based on data taken from the annual reports of the company and all the conclusions and suggestions are given from the statistical analysis of the several ratios calculated.

The basic inherent limitations of figures, calculations, statistical analysis and human error are the limitations of the study. Much care and diligence have been exercised in making all the calculations, calculating various ratios for various companies for various years, statistical analysis and deriving conclusions from it but then also there can be some human error, which will make the study weaker to that extent.

The study is carried out for limited number of companies only. But it is difficult to draw conclusions from sample. Hence although much care has been taken to have a nice representation of population in the sample but then also a sample survey is not as good as a population survey. Hence the limitations of sample survey apply to this research also.

The study is carried out for a period of 7 (Seven) years to derive conclusions
about the performance of the companies and industry as a whole. But this number of years is not enough for a thorough understanding of business movements and their reactions to the Changes of the economy.

8.6 Scope for future research

This study is specially focuses on the financial analysis of the selected pharma companies in India. For that purpose various financial tools like cost, profit, return on investment is used. So I can say that there will be further scope of research on pharmaceutical industries using other financial tools like value added statement, common size statement can be used and other financial aspects can be derived.

There will be also limited period of time span like from 2003 to 2010 is used so more years can be taken to make in depth analysis.

Here in this research work statistical tools like Arithmetic Mean, Standard Deviation, Index Number, F – Test Two –Way ANOVA is used for the analytical purpose. But various other tools like T test Chi – Square Test can also be used for future course on analysis.