Chapter-3

RESEARCH METHODOLOGY
Chapter - 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION
3.2 IDENTIFICATION OF RESEARCH PROBLEM
3.3 REVIEW OF THE LITERATURE
3.4 OBJECTIVES OF THE STUDY
3.5 HYPOTHESIS OF THE STUDY
3.6 SCOPE OF THE STUDY
3.7 PERIOD OF THE STUDY
3.8 SAMPLE OF THE STUDY
3.9 SOURCES OF DATA
3.10 METHODS OF ANALYSIS AND INTERPRETATION OF DATA
3.11 SIGNIFICANCE OF THE STUDY
3.12 CHAPTER PLAN OF THE STUDY
3.13 LIMITATIONS OF THE STUDY
3.14 CONCLUSION
3.15 REFERENCES
Chapter - 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Shareholder’s investment is purely relates with the benefit attraction supposed to availed from a company. Individual shareholders and institutional investor, both of them expect better return and capital appreciation from corporate unit. It becomes a fundamental duty of any company to pay regular and sustainable return to their shareholder as well as stakeholders. So before taking a decision to invest money in securities of a company, investors always considered about the financial performance of a company. For measuring financial performance, there are:

1. Accounting profitability measures: It includes Earning per Share (EPS), Return on Investment (ROI), Return on Capital Employed (ROCE), and Dividend per Share (DPS) etc.

2. Shareholders value based measures: It includes Shareholders Value Analysis (SVA), Market Value Added (MVA), Economic Value Added (EVA) etc.

It becomes main objective of all kind of business, to maximize value or wealth of their investors. All eyes of management should be focused on the betterment of their shareholders and stakeholders of a company, because they are real and genuine owner of a company. Corporate which gave least preference to their shareholders, are now bestowing the utmost inclination to it. So, now corporate world should accept and adopt concept of shareholders value creation and Value Based Management. Maximizing shareholders wealth is becoming the new corporate standard in India.

Shareholders wealth is measured in terms of the return they receive on the investment. The returns can either be in the form of dividend or in the form of capital appreciation or both. Capital appreciation is a market value of shares of a company. In value base management (VBM), many tools have been developed to measure financial performance. Shareholders Value Analysis (SVA), Market Value Added (MVA), and Economic Value Added (EVA), are most popular and widely used to measure financial performance of a corporate. The researcher has selected SVA, MVA and EVA concept in his research work.
3.2 IDENTIFICATION OF RESEARCH PROBLEM

India is a fast-growing country, value-based management is developing concept in India. Value added concept is comparatively new but is gaining considerable importance. A growing number of companies in India have started to include a value added statement (VAS) on the lines of the companies in Western countries, as a part of their published annual reports and accounts. The concept of wealth creation is a performance measure and it reports the wealth generated by a business over a period of time. Such measurement tools are as follows:

1. Value Added Analysis
2. Market Value Added
3. Economic Value Added

After adoption of economic reforms in the year 1991, Indian economy has been receiving a superior result in all sectors. The growth rate of economy was 3.6% in the year 1991, which is at about 7% now. The growth of pharmaceutical sector was around 8% in the year 2015. Some Indian pharmaceuticals companies now have become multi-nationals. The Pharmaceutical market touched Moving Annual Turnover of Rupees one lac crores during the year 2015.(BSE).

The Government of India recently passed a patent (Amendment) bill on March 22, 2005. The passing of bill means that India has kept its commitment to the WTO to have a product patent regime in place. The fear is that a new bill would lead to an increase in the cost of life-saving drugs. The pharmaceutical companies in India have started facing challenges in the domestic market due to increase in competition from multi-national companies. The expenditure on R & D is 1.9% is also low in comparison with 10.16% in MNC.

Basing the changes in macro-factors and economic growth in the country, this situation brought a very interesting and exciting research scope to know shareholders’ value creation for some selected companies of Indian pharmaceutical Industry. So researcher has framed the study entitled:

“SHAREHOLDERS’ VALUE CREATION: A STUDY OF INDIAN PHARMACEUTICAL INDUSTRY”
3.3 REVIEW OF THE LITERATURE

Review of the Literature divided in two sections by the researcher.

(1) Theoretical study:

In this section researcher use various books of financial management and shareholders’ value creation written by Indian as well as abroad authors.

(2) Research studied:

Value Added concept is developing concept. Some studies conducted to measure financial performance through value creation of shareholders’ in the corporate sector. The researcher has studied those works which are as follows:

- **KPMG-BS Study (1998)** assessed top companies on EVA, sales, PAT (Profit after Tax), and MVA criteria. The survey has used the BS 1000 list of companies using a composite index comprising sales, profitability and compounded annual growth rate of those companies covering the period year 1996-97. Sixty companies have been found able to create positive shareholder value whereas 38 companies have been found to destroy it. Accounting numbers have failed to capture shareholder value creation or destruction as per the findings of the study. 24 companies have destroyed shareholder value by reporting negative MVA.

- **Anand, et.al. (1999)** revealed that EVA, REVA (Refined Economic Value Added) and MVA are better measures of business performance than NOPAT and EPS in terms of shareholders’ value creation and competitive advantage of a firm. Since conventional management compensation systems emphasize sales / asset growth at expense of profitability and shareholders’ value. Thus, EVA is a measure that shifts focus on an organizational culture of concern for value.

- **Banerjee and Jain (1999)** examined the relationship between shareholder wealth and certain financial variables. This study was conducted with a sample of top 50 companies from Drugs and Pharmaceutical industry. This study concluded that out of select independent variables, EVA has proved to be the most explanatory variable and the capital productivity is a predictor of shareholder wealth.
Madhu Malik (2004) examined the relationship between shareholder wealth and certain financial variables like EPS, RNOW and ROCE. By using correlation analysis, it was found that there was positive and high correlation between EVA and RONW, ROCE. There was a positive but low correlation between EVA and EPS. By using coefficient of determination ($r^2$), EVA was compared with traditional performance measures and it was found that not a single traditional performance measure explains to the fullest extent variation in shareholder wealth.

Panigrahi (2005) examined how the Economic Value Added (EVA) is superior to Market Value Added (MVA). This has been examined by financial performance of ITC Ltd, which has adopted the EVA as its performance measurement. This study found that by increasing Economic Value Added (EVA), Shareholder Wealth is created and established the fact that the Economic Value Added (EVA) is superior to the Market Value Added (MVA).

Bhayani (2006) studied economic value added of Cholamandalam Investment and Finance Co. Ltd for the period of year 1998-99 to 2002-03. The company has been successfully able to create value for its shareholders. The company’s earnings are much higher than the overall cost of capital. The traditional performance indicators are showing quite high values of ROCE, EPS growth as compared to EVAECE. It is observed that the traditional parameters indicated quite a rosy and healthy picture of the company during all five years of the study.

Kaur and Narang (2009) in this study an attempt has been made to explain the application of EVA for selected companies. The sample for the study was top 205 companies has been selected form BT-500 India’s most valuable companies. The study period was of 12 years (from the year 1995-96 to 2006-07). The results of the study indicate negative EVA for eight years consecutively.

Chauhan and Bhayani, (2010) has examined the impact of mergers on shareholders’ value creation in Indian industry. This study included companies which had undergone merger during the period 1st April, 1999 to 31st March, 2000. There were about 196 merged companies in India during above period and...
we have selected 56 firms for the research to examine pre and post merger performance of firms covered under the study. The result suggests that firm’s shareholders value creation is highly dependent on Operating expenses, Profit margin, ROCE and Expense ratio. The inter company and inter industry analysis results indicate there is no positive impact of mergers on shareholder value creation.

[ Khatik and Singh, (2010) studied economic valued added in 10 selected companies of India for the period of year 1998-99 to 2007-08. The results of the study indicate there are no any uniform EVA trends in selected firms.]

[ Sharma and Kumar (2010) have analyzed effectiveness of Economic Value Added in selected companies for the period of year 2001-02 to 2008-09. Researcher has used traditional measures along with EVA to measure effectiveness of the firm. The result of statistical tools reveals that except few majorities of the sample companies are able to continuously create value for their shareholders during the study period. The study finds that EVA is gaining popularity in India as important measures of firm performance.]

[ Sakthivel (2011) analyzed shareholder’s value in Indian pharmaceutical industry for the period of year 1997-98 to 2006-07. It is concluded that the companies under pharmaceutical industry has succeeded to meet public expectations in terms of shareholders’ value creation through EVA either by increasing operating income from assets in place through reducing cost of production or increasing sales, or reducing the cost of capital by changing the financing mix in capital structure. This study showed that shareholders’ value creation tend to go up every year for pharmaceutical industry since year 2001.]

[ The study made by Dr. Mohana Rao who published a book in “Value Added Reporting - in Theory, Practice and Research”. He has studied concept of value added, value added-computation formula. Value added ratios analysis and value added reporting has been examined in the united states in forms of its relevance to capital market. He studied analysis of value added statement of SAIL (Steel]
Authority of India Ltd.) part of creation of value added and disposal of value added. He made several suggestions for the strengthening the financial soundness.

- **Kaushal A. Bhatt** has done his M.phil under guidance of **Dr. Prof. S. J. Parmar, Saurashtra Uni.** His Thesis was on “**Value Added As A Performance Measurement Tool.** (A combative study of GSFC & GNFC) for the period from the year 2001-02 to 2005-06. He had made an attempt to analysis of value added statement of GSFC & GNFC. He had studied distributed to net value added towards Employees, Government, Capital Providers and Owner (Retained in Business). He had also analyzed value added ratios between comparatively studies on GSFC & GNFC. He also suggested to GNFC better performance compare to GNFC through analyzed value added ratios.


- **Dr. Pradeep Singh**, has written an article on “**The Management Accountant, August, 2008.**” On the value added reporting with the title “**Social Performance Through Value Added Reporting**”-- An Empirical study of Lupin Lab. Ltd. In this article, he has analyzed to explain performance volution by Lupin Ltd by the value added reporting from the year 1995-96 to 2004-05. He has suggested to analysis and interpretation of Value Added Statement and Value Added Ratios could be concluded that the management of Lupin Lab. Ltd. Has served to the society vary well as total value added has been distributed among the employees, government, financial Institutions, banker & shareholders, on the other hand it also contributed of value added forwards the growth and development of the company retained in the business.

- The study made by **Dr. N .P. Agrawal** who published a book “**Analysis and Interpretation of Value Added Statement.**” He has studied methods of calculating value added forms of value added statement & various types of value added ratios and covered more than 7 various types of statically tools used
Chapter-3 Research Methodology

through net value added & gross value added towards, stakeholder, owner (retained), government, employees. He made several suggestions for the strengthening performance through value added reporting.

- **Anthony T. Barbera** has written an article “Performance Results in Value Added Reporting” *Mid-Atlantic Journal of Business*, State University of New York, College at Old Westbury, (March 1, 1997). He has tremendous exchange of business and management ideas and techniques amongst companies in different countries. Perhaps one of the most publicized examples of this exchange of ideas is the growing adoption by U.S. businesses of the Japanese concept of Just-in-Time inventory. Worldwide accounting and financial reporting has not been immune to this exchange of influences. An idea which is growing in and used by foreign multinational firms is that of value added reporting.

- **Pong, Chris; Mitchell, Falconer** has published article titled “Accounting for a disappearance: a contribution to the history of the value added statement in the UK.” *Accounting Historians Journal* (December 1, 2005). There has been an empirical study of the information in the VASs of UK companies show that they were unlikely to give support to the economic interests of the employee user group who had been promoted as an important beneficiary of the VAS. The study demonstrates that the social and economic nature of accounting means that change analyses which take account of both aspects of the discipline's character are likely to be more convincing than those which focus solely on one or the other.

- **Arumugam Subramanian** has written research paper titled “Value Added Reporting: A Case Study of Abans Listed Manufacturing Company Limited in Sri Lanka” *published by* University of Thriunelvely, Jaffna, Sri Lanka. He has studied a business enterprise specifically. A company is a conscious, deliberate and purposeful creation for satisfying the domain of aspiration of the society at large. It is an independent and a separate legal entity. The survival stability and growth of such entity within society largely depends on the wealth created by it through the collective efforts of all the stakeholders-shareholders, providers of loan capital, employees and the government. All these stakeholders are the parties to whom the result of operations of business is communicated. He has attempted to show how and to what extent the Value Added Statement (VAS)
can supplement additional financial information to satisfy all the stakeholders of the enterprise.

- Andrew C. Worthington & Tracey West has written articles “Value-Added Reporting: A Review of the Theoretical and Empirical Literature” They have renewed emphasis on devising measures of corporate financial performance and incentive compensation plans that encourage managers to increase shareholder wealth. One professedly recent innovation in the field of internal and external performance measurement is a trade-marked variant of residual income known as value-added reporting. This paper attempts to provide a synoptic survey of VAR’s conceptual underpinnings and the comparatively few empirical analyses.

- C. J. van Staden has written thesis titled “The Value Added Statement: Bastion of Social Reporting or Dinosaur of Financial Reporting?” 31 March 2000. Department of Accountancy and Business Law College of Business, Massey University, Palmerstone North, New Zealand. South Africa was experiencing the highest incidence of publication of the value added statement reported anywhere in the world to date. In addition research investigating the predictive ability of value added information has been conducted in the USA since the year 1990, even though the value added statement has not been published there.

- Suvarun Goswami, (The university of burdwad) has written research articles titled as “Value added Statement (VAS) – a critical study” (A case study of Bharat Heavy Electronics Limited) Vol.2 no.2 In this paper he has tried to show how and what to extent, the VAS can supplement addition financial information to satisfy all stakeholders of enterprise.

- Ahmed Riahi- Belkaoui has published book titled as “Value added reporting” (lessons for the United States) - Greenwood Publishing Group, 1992 - Business & Economics. A new form of accounting statement--the value added statement--is gaining popularity in the corporate annual reports of the largest companies in the United Kingdom. This new statement can be viewed as a modified version of the income statement.
Ahmed Riahi-Belkaoui has written book on “Value added reporting and research” (state of the art) Greenwood Publishing Group, 1999 - Business & Economics - 185 pages. It is clear that value added methods provide relevant, useful information for financial analysis, market valuation, and financial decision making in corporate settings. Value added methods can be used in ratio analysis, in the determination of earnings as management tools, and can be substituted for earnings in equity valuation. When included in a wealth measurement it can vastly improve the quality of decision making. Riahi-Belkaoui covers these topics and more. His book is essential examination of what the latest value added methods are and what they can do, not only for accounting professionals but for academics and top corporate management as well. Value added reporting is popular in most European countries and in New Zealand, South Africa, and Australia. Most emerging countries are using it too, or considering it. Riahi-Belkaoui explicates latest developments in value-added practice and research, first covering the meaning of the concept, the history behind value added development and its implied advantages and disadvantages. He then covers the derivation of a value added report, using a fictional case and the resulting data, before moving to an overview of the empirical literature most concerned with value added in the United States. Documenting the overall behavior of the net value added earnings policy model, he lays the foundation for more contextually specific approaches and investigates the usefulness of the substitution of net-value added in equity valuation. The book concludes with an examination of whether accounting knowledge is associated with a decision maker's tendency to ignore value added in wealth measurement in favor of the profit concept. He draws heavily on his own important writings, to further illustrate and explain the methods and benefits of value added approaches in accounting and other forms of financial decision making.

The detailed review of literature indicates that very few studies have been conducted in India to study the shareholders value creation. It is very clear from the above literature in India that no industry specific study has been conducted to examine the trend of shareholders value creation. At present, India is the fastest developing economy in the world. So, researcher has conducted present research on Indian Pharmaceutical Industry and tried to study the shareholders value creation in it
Chapter-3 Research Methodology

3.4 OBJECTIVES OF THE STUDY

The main objectives of the study is to know the Shareholders’ Value Creation of Indian Pharmaceutical Industry. This objectives are sub-divided as under:

- To examine the concept of shareholders’ value creation and value based management.
- To analyze the trend and growth of shareholders value in Indian pharmaceutical industry in terms of EVA (Economic Value Added) and MVA (Market Value Added).
- To measure the trends of Accounting Value Added.
- To assess shareholders value addition by financial ratios.
- To make suggestions for improvement of shareholders value creation.

3.5 HYPOTHESIS OF THE STUDY

Null Hypothesis:-

The random selection of the samples from the given population makes the tests of significance valid for the researchers. For applying any test of significance researcher first set up a null hypothesis. “Null hypothesis is the hypothesis which is tested for possible rejection under the assumption that is true”. It is usually denoted by \( H_0 \).

For the analysis of the Shareholders’ Value Creation trends of selected companies of Indian Pharmaceutical Industry, the following null hypothesis is tested. The broader hypothesis of the study is as under:

**Null Hypothesis (\( H_0 \))**

- The shareholders’ value addition trends are uniform in term of MVA, EVA and in Accounting Value Addition in the Indian Pharmaceutical Industry.

**Alternative Hypothesis (\( H_1 \))**

- The shareholders’ value addition trends are not uniform in term of MVA, EVA and in Accounting Value Addition in the Indian Pharmaceutical Industry.
- There is also other hypothesis tested in the relevant chapters.
3.6 SCOPE OF THE STUDY

The current research is for Indian Pharmaceutical Industry. The researcher has selected ten companies from Indian pharmaceutical industry for the study. The selection is made by statistical sampling method. There is further classification in the public limited companies as those are into business of:

1. Bulk Drugs
2. Formulations
3. Bulk Drugs & Formulations

The selection of the companies made from the listed companies from National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) of India.

The researcher selected those companies which are having the highest market share in term of volumes. The researcher has attempted to analyze the trend and growth of Shareholders’ Value Creation in terms of Market Value Added (MVA) and Economic Value Added (EVA) in selected companies of Indian Pharmaceutical Industry.

- Separate and specific study can be carried out for each aspects of Shareholders’ Value creation.
- The present study is only for seven years. This can be increased in order to broaden up the scope of the study.
- The present study can be further compared with others companies of Pharmaceutical industry or any other industry.

3.7 PERIOD OF THE STUDY

The present study was undertaken by the researcher for the period of seven (7) Accounting years from the year 2005-2006 to 2011-12. The researcher had selected the base year 2005-2006 because this year was normal for the present research of analysis and evaluation.
3.8 SAMPLE OF THE STUDY

Following companies have been selected by the researcher for the purpose of the present research.
1. Aurbindo Pharma Limited
2. Cipla Limited
3. Divi’s Laboratories Limited
4. IPCA Laboratories Limited
5. NATCO Pharma Limited
6. Ranbaxy Laboratories Limited
7. STRIDES Arco Lab Ltd
8. Sun Pharmaceutical Industries Limited
9. Torrent Pharmaceuticals Ltd
10. Wockhardt Limited

3.9 SOURCES OF DATA

The study is based on secondary data. To analyze the trend and growth of value addition in terms of MVA, EVA and Accounting Value Added in Indian Pharmaceutical Industry, Required financial data of sample companies has been collected through:

- Annual reports published by the companies.
- Financial reports published by the companies.
- Data related to the calculation of shareholder value creation from published annual accounts of the selected companies.
- From “Prowess” Database of Centre for Monitoring Indian Economy (C.M.I.E.).
- Published annual reports of companies collected from the corporate offices of respective pharmaceutical companies.
- The information related to Indian Pharmaceutical Industry has been collected from websites, magazines, and from the Government of India Publication.
3.10 METHODS OF ANALYSIS AND INTERPRETATION OF DATA

In order to analyze the present research work on “SHAREHOLDERS’ VALUE CREATION: A STUDY OF INDIAN PHARMACEUTICAL INDUSTRY” various techniques of financial management like as ratio analysis and various statistical techniques are used by the researcher as under:

3.10.1 USE OF FINANCIAL RATIO ANALYSIS

The relationship between two accounting figure, expressed mathematically is known as financial ratio. A ratio helps the analyst to make qualitative judgment about financial position and performance of selected pharmaceuticals companies. Financial ratio could be classified in the following group as under:

- Liquidity ratios
- Leverage ratios
- Activity ratio
- Profitability ratio

In this research, various ratios are calculated in order to analyze the trends of value added concept. It is explained in the seventh chapter of the research.

3.10.2 ARITHMETIC MEAN

Arithmetic mean gives a single value to describe the whole data. Simple arithmetic mean of each series of different ratio shall be obtained by adding the values of observations and dividing it by the number of observations.

3.10.3 THE STANDARD DEVIATION

The standard deviation concept was introduced by ‘Karl Pearson’ in the year 1823. Standard deviation is most widely used measure of dispersion of a series and is commonly denoted by the symbol ‘σ’ (pronounced as ‘sigma’). Standard deviation is calculated as the square root of the average of squares of deviations, when such deviations for the values of individual items in series are obtained from the arithmetic average.
3.10.4 COEFFICIENT OF VARIATION

Coefficient of variation is a relative measure of dispersion. Among different measures of relative variation, one developed by Karl Pearson is the most common in use. Coefficient of variation is used in problems where we want to compare the variability of two or more than two series. That series (or group) for which the coefficient of variation is greater is said to be more variable or conversely less consistent, less uniform, less stable or less homogeneous. On the other hand, the series for which coefficient of variation is less is said to be less variable or more consistent, more uniform, more stable or more homogeneous. In ratio analysis of financial data, lower coefficient of variation in a ratio is taken as relatively better control of the management on that ratio. Coefficient of variation is denoted by C.V. and obtained as follows:

\[
C.V = \frac{\sigma}{\bar{x}} \times 100
\]

Where, \( \bar{x} \) = mean, \( \sigma \) = standard deviation,

However, in this study, while computing the coefficient of variation, the standard deviation(\( \sigma \)) is calculated for (n-1) number of observations.

3.10.5 F-TEST (Analysis of Variance)

F-test is based on F-distribution and is used to compare the variance of the one way single factor. This test is also used in the context of analysis of various (ANOVA) for judging the significance of more than two sample means at one and the same time. It is also used for judging the significances of multiple correlated coefficient test statistic F-test is calculated and compared with its probable value for accepting or rejecting the null hypothesis.

Professor Fisher was the first person who used the term “VARIANCE” and in fact. It was who developed a very elaborate theory concerning. ANOVA explaining it’s usefulness in practical field. ANOVA is essentially a procedure for testing the difference among different groups of data for homogeneity.

“The essence of ANOVA is that the total amount of variation is a set of data is broken down in to two types, that amount which can be attributed to chance and that amount which can be attributed to specified causes.”
Thus, through ANOVA technique one can in general, investigate any number of factors which are hypothesized or said to influence the dependent variable one may as well investigate the difference amongst various categories with in each of these factors. Which may a large number of possible values? If we take only one factors and investigates the difference amongst. Its various categories having numerous possible values. We are said to one way ANOVA.

In the present study the researcher used ANOVA technique for the testing of hypothesis.

3.10.6 ANALYSIS OF TIME SERIES

The time series is an arrangement of statistical data in accordance with time of its occurrence. Such series are of particular importance in the field of population, bank deposits, outputs, sales, profits etc. Time series analysis is used to detect patterns of change in statistical information over regular intervals of time. We project these patterns to arrive at an estimate for the future.

Levin has defined that:-

“Time series analysis is the quantitative method we use to determine patterns in data collected overtime.”

“A time series” as observed by Greenwalad:-

“A time series is a temporal sequence or distribution with the observations chronologically arranged. Since time is present explicitly as a variable time series analysis often is considered a study of dynamic variability.”

According to Wessel, Willet and Simone:-

The variation of time series is usually broken down into four component element: secular trend, seasonal variation, cyclical variation and random or irregular influences. The change in the data is the result of the combined impact of these four components.

For the analysis of working capital of Pharmaceutical the secular trend values are proposed to be computed by the method of least squares at relevant places.

The technique of least square is proposed to apply in chapter -5.

3.10.7 Chi-SQUARE TEST

The chi-square test is the simplest and most widely used non-parametric test in statistical work. The chi-square is frequently used in testing of hypothesis concerning
Chapter-3 Research Methodology

the difference between a set of observed frequencies of a sample and a corresponding set of expected or theoretical frequencies.

**S.P. Gupta holds the view that:**

“The quantity chi-square describes the magnitude of the discrepancy between theory and observation.

Symbolically:

\[
\text{Statistic chi-square} = \sum \frac{(O - E)^2}{E}
\]

Where \(O\) refers to the observed frequencies and \(E\) refers to the expected frequencies.

The calculated value of chi-square is compared with the table value of chi-square for given degrees of freedom at a certain specified level of significance. If at the stated level (generally 5% level is selected) the calculated value of chi-square is more than the table value of chi-square, the difference between expected and observed value is considered to be significant, i.e., it could not have arisen due to chance factor. On the other hand, if the calculated value of chi-square is less than the table value, the difference between expected and observed values, is not considered as significant, i.e., it is regarded as due to fluctuations of random sampling and hence ignored.

### 3.11 SIGNIFICANCE OF THE STUDY

Value Added concept is new concept in Indian corporate environment to evaluate the performance of corporate sector. Its significance not only for external purpose it is equally important for internal purpose also. Significance of value added concept is explained with following views:

1) **Comparison of Performance**

Value Added is an alternative performance measurement tools. Value Added is superior performance measure because it bounces attention on inputs controllable by the management changes in material prices are usually not controllable by the management and Value added by doubting material costs allows attention to be directed at more comparable items.
Chapter-3 Research Methodology

2) **Productivity Measurement**

For the measurement of productivity, value added provides better information e.g. Value Added per rupees of performance of capital employed, Value Added for rupees of employee: etc. to measure various type of ratio analysis denote productivity measurement.

3) **Resources Allocation**

Recourses allocation decisions are normally based on the concept of rewards to the employees as well as to providers of capital fund. For profit maximization ranking insure the allocation are based in contribution per units of the limiting factors and for value added maximization, ranking would be a value added per units limiting factors.

4) **Incentive schemes for the employee**

The value added concept is found useful for employees. The value added concept of operating profit is often an motivating and employees may well defined the concept of creating wealth or adding value. One of the significant uses of the concept is that it incorporate in companies incentives schemes.

3.12 **CHAPTER PALN OF THE STUDY**

The present study is divided into eight chapters, which are as under:-

1) Value based management and Shareholders' Value Creation
2) Pharmaceutical Industry of India
3) Research Methodology
4) Analysis of Market Value Added and Shareholders' Value Added
5) Analysis of Economic Value Added
6) Analysis of Accounting Value added Statement
7) Ratio analysis
8) Summary, Findings and Suggestions
3.13 LIMITATIONS OF THE STUDY

There are some limitations of the study which restrict the usability of the research work. The main limitation of the study is as under:

- This study is carried out for a period of seven years only from 2005-06 to 2011-12. So finding can not be applicable for a very long period of time.
- The study is carried out for selected ten companies only. Hence, the limitations of sample survey also apply to this research.
- The data has taken from the secondary sources from published annual reports of the selected units and secondary data has its own limitations which may affect the study.
- The present study is based on value added statement and value added has its own limitations which also affect the study.
- Statistical test have their own limitations which might affect the conclusions.
- The ratio analysis has its own limitation. The same also applies to the present study.

3.14 CONCLUSION

This chapter gives the details regarding the research methodology used in this study. It also gives information about the research problem, main objectives, sub-objectives, hypothesis and limitations of the study, financial and statistical tools used for the study. It also includes sample, population, research data, source of the data and the overview of the chapter planning.
3.15 REFERENCES

BOOKS AND JOURNALS

1. Dr. Vijay Upagade And Dr. Arvind Shende, Research Methodology, 2nd Editions, S. Chand & Company Ltd. New Delhi – 2011


Chapter-3 Research Methodology


82