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References.
2 RESEARCH DESIGN

2.1 PROBLEM IDENTIFICATION:
India is growing rapidly since the implementation of ‘LPG’ policy from 1991. It was announced by the then finance minister and current Prime Minister Dr. Manmohan Singh. Liberalization is simplification & Delicensing, that allows free trade & hassle-free business environment from state controls. It allows free outflow & inflow of technology, capital, man-power to & from the entire world.

Due to liberalization policy radical changes have come in all industries and system of transporting. This revolution brought drastic reformed in the system of production & selling. The business that can compete with today’s cut throat competition be able to survive in the market and earn profits. The organizations which are having more flexible capital structure and strong financial position be able to compete with the market changes.

Each and every form of business requires fund to meet their long term and short term financial needs. On the other hand there are some individuals, corporate bodies and other organizations are willing to invest their funds either for shorter period or longer period. Financial market is a place where such trading of financial instruments takes place. Depending on the nature of financial requirements, financial market is broadly divided into money market and capital market.

Money market is a place for short term lending and borrowings typically for a year or less. It deals in short term debt financing and investments. On the other hand, capital market refers to stock market, trading in shares, bonds of companies & securities including mutual funds on recognized stock exchanges. In capital market anybody can make investment through a proper channel Different types of financial instruments attracts the risk with different levels.

For stock investors, that favor companies with good fundamentals, a ‘strong’ balance sheet is an important consideration. The strength of a company’s balance sheet can be evaluated by three broad categories of investment quality measurement:

i) Working capital adequacy.
ii) Asset performance.
iii) Capital structure.
A company’s capital structure is a composition of company’s permanent or long term capital which consists of a combination of debt and equity. A healthy proportion of equity capital as opposed to debt capital in a company’s capital structure is an indication of financial fitness. This decision has been recognized as the most important decision, a firm has to take because the capital structure affects the cost of capital, net profit, earning per share, and dividend power and liquidity position of the company. These factors along with a number of other factors, determine the value of a firm. If a firm entirely relies on internal funds or equity than growth may be restricted due to unavailability of a large amount of finance and if firm goes for external finance than chances of risk increases as the liability of firm enhances. Thus, a firm has to manage lots of objectives so that liquidity of the firm remains at maximum. So capital structure is considered to be a very vital determinant of the value of the firm.

Here the study is based on the two-wheeler automobile companies, where numbers of changes have come in after adopting liberalization policy. If we think of the two-wheeler industry in India, the first two names that come to our mind are Hero Honda Motors Limited & Bajaj Auto Limited.

Looking to the importance of capital structure as fundamental concept to evaluate company’s strength, the topic “Capital Structure Analysis of Selected Automobile Two Wheeler Companies” has been selected. For the thesis purpose, I have selected two companies namely Hero Honda Motors Ltd and Bajaj Auto Ltd as case studies and tried to analyze their capital structure. These two companies are selected as sample study because of its prominence in automobile two wheeler segment.

2.2 SURVEY OF THE EXISTING LITERATURE:
There is wide range of literature available on capital structure analysis of different companies in conforming to its dynamic value and significance of intuitive nature. A good dealing in analytical part of literature exists at broad levels like size and technology, problem associated with productivity, financial performance, and capacity utilization. Relevant existing literature and studied have been clipped below. A researcher has studied of this literature for gaining insight into the problem.

The Investment Information and Credit Rating Agency of India (ICRA, 2003) studies the Competitiveness of the Indian auto industry, by global comparisons of macro environment, Policies and cost structure. This has a detailed account on the evolution of the global auto industry. ICRA (2004a) analyses the implications of the India-ASEAN Free Trade Agreements for the Indian automotive industry. ASEAN economies are globally more integrated than India. The current size of Indian and ASEAN market for automobiles is more or less the same but the Indian market has a larger growth potential than the ASEAN market due to the low level of penetration.
The study notes that there is a huge excess capacity in ASEAN countries, in comparison with that in India, which will help them to tackle the excess demand that may arise in future. The study finds a 20-30 per cent cost disadvantage for Indian companies on account of taxation and infrastructure. ICRA (2004b) analyses the impact of Preferential Trade Agreement (PTA) with MERCOSUR on the automobile sector in India. This study finds a significant threat of imports in sub-compact and compact cars and certain auto-components. There is huge excess capacity and intense competition in MERCOSUR countries, propelling them to look for export opportunities. ICRA (2005) studies the possible impact of FTA with South Africa on the Indian automobile industry. The study finds that there are a few policies in South Africa that indirectly subsidize the auto industry, unlike India, in terms of financial grants.

Hence it is suggested that India could minimize losses only if it goes for inclusion of certain auto components, which involve huge logistic costs of imports, creating a natural protection (for example, stampings, glass, seats, plastics and tyres) and those in which India enjoys economies of scale and is cost-competitive (e.g. castings and forgings) in this FTA. The Indian auto industry and its evolution over the years have been reviewed.

Pingle (2000) reviews the policy framework of India’s automobile industry and its impact on its growth. While the ties between bureaucrats and the managers of state-owned enterprises played a positive role especially since the late 1980s, ties between politicians and industrialists and between politicians and labour leaders have impeded the growth. Pingle argues that state intervention and ownership need not imply poor results and performance, as demonstrated by Maruti Udyog Limited (MUL). Further, the no contractual relations between bureaucrats and MUL dictated most of the policies in the 1980s, which were biased towards passenger cars and MUL in particular.

However, D’Costa (2002) argues that MUL’s success is not particularly attributable to the support from bureaucrats. Rather, any firm that is as good as MUL in terms of scale economies, first-comer advantage, affordability, product novelty, consumer choice, financing schemes and extensive servicing networks would have performed as well, even in the absence of bureaucratic support. D’Costa has other criticisms about Pingle (2000). Narayanan (2004) analyses the determinants of growth of Indian automobile firms during three different policy regimes, namely, licensing (1980-81 to 1984-85), deregulation (1985-86 to 1990-91) and liberalization (1991-92 to 1995-96). Unlike the prediction by Narayanan (1998), this study finds that vertical integration is detrimental for growth in a liberalised regime as it potentially limits
diversification. Narayanan (2006) also finds that vertical integration plays a positive role in a regulated regime, while it is not conducive for export competitiveness in a liberal regime.

Kathuria (1995) notes that the time-bound indigenization programme for commercial vehicles in the 1980s facilitated the upgradation of vendor skills and modifying vehicles to suit local conditions, which demand functional efficiency, overloading capabilities, fuel economy, frequent changes in speed and easy repair and maintenance. Kathuria also mentions that the choice between vertical integration and subcontracting crucially depends on the policy regime: In a liberal regime, vertical integration may not work. Empirical supports for the relationship between capital structure and firm performance from the agency perspective are many and in support of negative relationship. Zeitun and Tian (2007), using 167 Jordanian companies over fifteen year period (1989-2003), found that a firm’s capital structure has a significant negative impact on the firm’s performance indicators, in both the accounting and market measures.

Majumdar and Chhibber (1997) and Rao, M-Yahyaee and Syed (2007) also confirm negative relationship between financial leverage and performance. Their results further suggest that liquidity, age and capital intensity have significant influences on financial performance. Modigliani and Miller (1958) have a theory of “capital structure irrelevance” where argue that financial leverage does not affect the firm’s market value with assumptions related to homogenous expectations, perfect capital markets and no taxes.

Sarkar and Zapatero (2003) find a positive relationship between leverage and profitability. Myers and Majluf (1984) find firms that are profitable and generate high earnings are expected to use less debt capital comparing with equity than those that do not generate high earnings.

Sheel (1994) showed that all leverage determinants factors studied, excepting firm size, are significant to explain debt behavior variations. Gleason (2000) Using data from retailers in 14 European countries, which are grouped into 4 cultural clusters, it is shown that capital structures for retailers vary by cultural clusters. This result holds in the presence of control variables. Using both financial and operational measures of performance, it is shown that capital structure influences financial performance, although not exclusively. A negative relationship between capital structure and performance suggests that agency issues may lead to use of higher than appropriate levels of debt in the capital structure, thereby producing lower performance.
Hennessy and Whited (2005) develop a dynamic trade-off model with endogenous choice of leverage, distributions, and real investment in the presence of a graduated corporate income tax, individual taxes on interest and corporate distributions, financial distress costs, and equity flotation costs. The study explains several empirical findings inconsistent with the static trade-off theory and show that there is no target leverage ratio, firms can be savers or heavily levered, leverage is path dependent, leverage is decreasing in lagged liquidity, and leverage varies negatively with an external finance weighted average. Using estimates of structural parameters, they find also that simulated model moments match data moments. Chiang (2002) results show that profitability and capital structure are inter relate, the study sample includes 35 companies listed in Hong Kong. Raheman (2007) find a significant capital structure effect on the profitability for non-financial firms listed on Islamabad Stock Exchange. Mendell (2006) investigates financing practices across firms in the forest products industry by studying the relationship between debt and taxes hypothesized in finance theory. In testing the theoretical relationship between taxes and capital structure for 20 publicly traded forest industry firms for the years 1994-2003, the study find a negative relationship between profitability and debt, a positive relationship between non-debt tax shields and debt, and a negative relationship between firm size and debt.

Abor (2005) seeks to investigate the relationship between capital structure and profitability of listed firms on the Ghana Stock Exchange and find a significantly positive relation between the ratio of short-term debt to total assets and ROE and negative relationship between the ratio of long-term debt to total assets and ROE.

Gill, et al., (2011) seeks to extend Abor’s (2005) findings regarding the effect of capital structure on profitability by examining the effect of capital structure on profitability of the American service and manufacturing firms. A sample of 272 American firms listed on New York Stock Exchange for a period of 3 years from 2005 – 2007 was selected. The correlations and regression analyses were used to estimate the functions relating to profitability (measured by return on equity) with measures of capital structure. Empirical results show a positive relationship between short-term debt to total assets and profitability and between total debt to total assets and profitability in the service industry. The findings of this paper show also a positive relationship between short-term debt to total assets and profitability, long-term debt to total assets and profitability, and between total debt to total assets and profitability in the manufacturing industry.

2.3 TITLE OF THE PROBLEM:
The title of the problem is “Capital Structure Analysis of Selected Automobile Two Wheeler Companies”. This study is based on the secondary data drawn from published annual reports of selected automobile two wheeler companies under study.

2.4 SCOPE OF THE STUDY:
Rail, road, marine & air are the main sources of transportation. Rail in our country is heavily being subsidized by the central budget, and it runs in loss. To cater the transportation facility to 120 crore people through-out the country is not possible hence we depend on road & air. But again air transportation is very costly looking to the Per Capita Income & the Leaving Standard. Heavy & Light Motor vehicles directly effect the manufacturing & supply and two wheelers effects the movement of man power, is the ultimate key factor.

The automobile industry has gone through tremendous changes after 1991. Transportation is one of the most effective infrastructure industries, which has direct impact on GDP and the growth of a country. A two-wheeler industry was completely deregulated after adoption of liberalization policy.

We can classify the automobile industry in the following way:-

```
Automobile industry
  ↓
Light Motor Vehicle
  ↓
Two Wheeler Three Wheeler Four Wheeler
  ↓
Heavy Motor Vehicle
  ↓
More than four wheeler
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1. Hero Honda Motors Limited
2. Bajaj Auto limited (2 & 3 wheeler)
3. T.V.S. Motors Limited (2 & 3 wheeler)
4. Suzuki Limited
5. Honda Motors Limited
6. Mahindra Limited

The no of units & the amount of sales of 3 wheelers of BAL are less than 15 % of the total, I have ignored the impact as separate data is not available. A two-wheeler industry is an oligopolistic industry, selection of two companies for the comparative study as sample will be sufficiently considered for research as their market share is more than 80 % and are the leaders in the country & in the world also. I.e. Hero Honda Motors Limited & Bajaj auto Limited. From different methods of sampling, purposive method of sampling will be used.
2.5 OBJECTIVES OF THE STUDY:

The analysis of capital structure of the manufacturing company with reference to the Hero Honda Motors Limited & Bajaj Auto Limited in two-wheeler segment, the objectives of the study are:

1. To know the impact of the capital structure on company’s profitability and liquidity.
2. To know the trends and their impact.
3. To know the different ratios and their impacts.
4. To examine the influence of various factors affecting the capital structure decisions of automobile two wheeler manufacturer companies in India.
5. To scrutinize the overall performance and contribution of the automotive industry.
6. To study the financial pattern adopted by sample companies.
7. To find out the conditions prevailing in the capital market of auto industry.
8. To understand the concepts of optimum or balanced Capital Structure.
9. To analyze & interpret financial statements of sample companies regarding its liquidity & solvency.
10. To understand the relationship between profitability & capital Structure.
11. To understand the overall earning power and financial strength of the companies with reference to capital structure.

2.6 HYPOTHESIS:

“A hypothesis is a special proposition, formulated to be tested in a certain given situation as a part of research which states what the researcher is looking for.” In the research study, two hypotheses have been tested;
   a) Null hypothesis
   b) Alternate hypothesis.

2.6.1 HYPOTHESIS FOR CAPITAL STRUCTURE ANALYSIS:

1. There is/no any significant difference in Debt-Equity Ratio of selected automobile two wheeler companies under study.
2. There is/no any significant difference in Total Debt-Equity Ratio of selected automobile two wheeler companies under study.
3. There is/no any significant difference in Debt-Total Funds Ratio of selected automobile two wheeler companies under study.
4. There is/no any significant difference in Proprietary Ratio of selected automobile two wheeler companies under study.
5. There is/no any significant difference in Interest Coverage Ratio of selected automobile two wheeler companies under study.
6. There is/no any significant difference in Long Term Fund to Fixed Assets Ratio of selected automobile two wheeler companies under study.
(7) There is/no any significant difference in Net Worth to Net Fixed Assets Ratio of selected automobile two wheeler companies under study.
(8) There is/no any significant difference in Net Fixed Assets to Current Assets Ratio of selected automobile two wheeler companies under study.
(9) There is/no any significant difference in Reserves to Capital Ratio of selected automobile two wheeler companies under study.
(10) There is/no any significant difference in Net Current Assets to Net Worth Ratio of selected automobile two wheeler companies under study.

2.6.2 HYPOTHESIS FOR PROFITABILITY ANALYSIS:

(1) There is/no any significant difference in Net Profit Ratio of selected automobile two wheeler companies under study.
(2) There is/no any significant difference in Return on Total Assets Ratio of selected automobile two wheeler companies under study.
(3) There is/no any significant difference in Return on capital employed Ratio of selected automobile two wheeler companies under study.
(4) There is/no any significant difference in Return on shareholders’ funds Ratio of selected automobile two wheeler companies under study.
(5) There is/no any significant difference in Return on equity shareholders’ funds Ratio of selected automobile two wheeler companies under study.
(6) There is/no any significant difference in Earning Per Share of selected automobile two wheeler companies under study.
(7) There is/no any significant difference in Dividend Payout Ratio of selected automobile two wheeler companies under study.

2.6.3 HYPOTHESIS FOR LIQUIDITY & SOLVENCY ANALYSIS:

(1) There is/no any significant difference in Current Ratio of selected automobile two wheeler companies under study.
(2) There is/no any significant difference in Quick Ratio of selected automobile two wheeler companies under study.
(3) There is/no any significant difference in Fixed Turnover Ratio of selected automobile two wheeler companies under study.
(4) There is/no any significant difference in Inventory Turnover Ratio of selected automobile two wheeler companies under study.
(5) There is/no any significant difference in Capital Turnover Ratio of selected automobile two wheeler companies under study.
(6) There is/no any significant difference in Net Assets Turnover Ratio of selected automobile two wheeler companies under study.
(7) There is/no any significant difference in Current Turnover Ratio of selected automobile two wheeler companies under study.
2.7 PERIOD OF THE STUDY:

The study of “Capital Structure Analysis of Selected Automobile Two Wheeler Companies” is made for the period of five years from accounting year 2005-06 to 2009-10.

2.8 DATA COLLECTION AND DATA ANALYSIS:

Data for the study is collected through following secondary sources:
- Journals
- Books
- Published annual reports
- Internet

Techniques used for data analysis:
- Trend analysis techniques for components of capital structure and profitability are used.
- Ratio analysis techniques for analyzing capital structure, profitability, liquidity and solvency are used.
- EBIT – EPS approach has been used to select the ideal mode of financing.
- The relationship between DER, DPS and EPS has also been worked out.
- To examine the influence of Debt-Equity Ratio and Return on Capital Employed on the Capital structure of selected sample companies, Karl Pearson’s simple Correlation Coefficient Analysis has been used.
- Mean, standard of deviation and coefficient of variations also have been worked out for analyzing the data.
- The composition of funds has been worked out (the proportion of owners’ fund and debt) to know whether sample companies have taken the benefit of ‘Trading on Equity’ or not.
- Composition of net worth of companies also has been worked out to get an idea about the proportion of share capital and reserves.
- For the evaluation of earning power of the selected sample companies ‘operating efficiency, financial efficiency and dividend policy’ have been worked out.
- Multiple Discriminate Analysis (Edward Altman’s Z-score) has been worked out to know the future strength of the sample companies.
- Paired T-test is used for judging the significance of a sample mean or for judging the significance of the difference between the means of two samples in case of small sample/s.

2.9 SIGNIFICANCE OF THE STUDY:
Both the sample companies are the leaders in the market, HHML has a collaboration (50:50) with the World’s most advanced technology owner Honda Motors, Japan & BAL has an indigenous technology. Joint venture with an international leader, certainly influence the production, managerial and financial decisions of the company. They may adopt the world’s most modern manufacturing, managerial & financial technology and share the experience also.

As the India has adopted the LPG model, Multi-National Automobile Companies have planned to enter in to the Indian market and some existing Indian Automobile Companies have planned to enter in to the two wheeler segment. The research may be helpful to the new players to decide their capital structure.

The scientific research may help the sample companies to re-plan their financial structure and may expand their wings by using strong liquid position (if it is so) to have an edge over the competitors and may serve the expectations of the stakeholders.

The findings may be used to compare it with the data of the same or related segment / industry / size / national & international level. The two wheeler market shows the near future of keen competition particularly in relatively long recession period, may help the sample & entrants to finalize the capital structure.

As per the academic point of view, such type of research helps the students to learn the subject thoroughly and teach the actual use of the tools in decision making. Such an activity may bring good amount of improvement among the subject lovers.

2.10 LIMITATION OF THE STUDY:

(1) The information in this study is based on secondary data only and the time period of study is limited to only 5 years i.e. 2005-06 to 2009-10.
(2) The study is confined to only one industry i.e. an Automobile Industry & that only in two-wheeler segment.
(3) The study is confined to only two companies i.e. Hero Honda Motors Limited & Bajaj Auto Limited, and the size of both the companies were nearly the same.
2.11 OUTLINE OF THE CHAPTER PLAN:

Chapter-1. Introduction To Automobile Industry In India.
This chapter deals with the origin of Wheel and Engine – Definition of Automobile – History of Automobile Industry – Modern Global Automobile Industry – Two Wheelers in India – Profile of the Sample Companies – Concept of Capital Structure, Its components, Importance, Various Approaches, Factors, Theories and Capitalization – Conclusion – References.

Chapter-2. Research Design.
Details of this chapter is - Problem Identification – Survey of Existing Literature- Title of Problem – Scope of the study- Objectives of the study - Hypothesis –Period of the study- Data collection and data analysis - Tools and techniques for Data analysis – Significance of the study-Limitations of the study-Outline of the chapter plan- References.

Chapter-3. Data Analysis PART-1 Capital Structure Analysis.
This chapter deals with the Capital Structure Analysis of the selected Automobile Two wheeler companies. This has been done with the help of different analytical tools like Trend Analysis- Ratio Analysis – Mean - Standard Deviation - Coefficient of Variation - Paired T-Test.

Chapter-4. Data Analysis PART-2 Financial Strength.
This chapter covers the concept of Financial Strength with reference to Profit and Profitability - its importance - analysis of financial strength through various financial tools (Trends and Ratios) & statistical tools (Mean, Std. deviation, Coefficient of variance and T-Test) – The Karl Pearson’s correlation Coefficient is computed to understand the Relationship between DER and ROCE - The relationship between DER, DPS and EPS - Composition of Fund – Composition of Net Worth – Evaluation of Earning Power with reference to Operating Efficiency, Financial Efficiency, and Dividend Policy – Multiple Discriminate Analysis(Z-Score) for future strength – Conclusion – References.

Chapter-5. Data Analysis PART-3 Liquidity & Solvency.
This chapter deals with the Concept of Liquidity and Solvency – Analysis of Liquidity & Solvency with the help of Ratios – Mean - Standard Deviation - Coefficient of Variation - Paired T-Test – Conclusion – References.

Chapter-6. Findings, Conclusions & Suggestions.
This chapter deals with the findings and conclusions based on the analysis carried out and points out the variations if any from the literature. Besides, it also gives concrete suggestions for enhancing profitability, for ideal pattern of Capital Structure, for financial soundness, for cost reduction and control, liquidity and Solvency position – References.
References:
2. Centre for Science and Environment, Mileage: Environmental Rating of Indian Automobile Sector, *Green Rating Project*, New Delhi, 2001