



A STUDY ON OPERATING LEVERAGE OF AUTOMOBILE COMPANIES FROM NIFTY-50



Dr. Dhara Jethwa¹

*¹Assistant Professor,
Department of Business
Management, Saurashtra
University, Rajkot, Gujarat,
India*

ABSTRACT

Automobile sector in India accounts for 22% of the country's manufacturing Gross Domestic Product. It is one of the biggest job creators both directly and indirectly. As the market is expanding for automobile sector due to increasing standard of living, diversified market, young population etc., it becomes important to see what is the level of business risk companies in this sector runs with. This paper is emphasizing on operating leverage, as an indicator of business risk by taking automobile companies from Nifty-50. An effort has been made to see that, is there any pattern of operating leverage followed by companies in automobile sector or not. It has been found from the study that companies year on year basis do follow pattern but there is no similarity found between these companies and this is because companies differ in age, size and its presence in the international market which affects the level of operating leverage.

KEY WORDS: *Operating Leverage, Business Risk, Contribution, Operating Profit*

INTRODUCTION

Automobile sector in India is considered being promising sector for the growth of an Indian economy. Indian market provides ample of opportunities for automobile industry in terms of increasing standard of living, diversified market, young population, availability of car loans, large pool of skill manpower and growing technology. To take the opportunities available and increasing demand, companies should be having operating efficiency in hand. It has been seen that manufacturing industry is having high level of operating leverage as it basically require high level of fix investment in comparison to service industry. This paper is showing the level of operating leverage of automobile companies falling in Nifty-50.

Automobile industry

Automobile sector in India accounts for 22% of the country's manufacturing Gross Domestic Product. It is one of the biggest job creators both directly and indirectly. Currently India is seventh

largest automobile producer in the world with an average annual production in the world with an average production of 17.5 million vehicle including different categories such as two wheeler, passenger vehicle, commercial vehicle and three wheelers, and is on the way to become fourth largest automotive market by volume by 2015. With increasing size of market, favourable economic and political environment,

OBJECTIVE OF THE STUDY

The primary objective of this study is to know the level of operating leverage of automobile companies falling in the list of Nifty-50. The paper also gives a basic idea about automobile industry and operating leverage.

RESEARCH METHODOLOGY

This is an empirical study based on secondary data collated from the company websites and annual reports, newspapers and reference books.



The sample here is selected from the Nifty-50 list as on 1st April, 2013. To fulfill the objective of the study, degree of operating leverage is calculated and studied for the period of eight years starting from 2004-05 to 2011-12. Further the Two-Way ANOVA test used to know whether is there any pattern followed by companies in a particular sector or not.

OPERATING LEVERAGE AND BUSINESS RISK

Operating leverage measures a firm’s fixed versus variable costs. The greater proportion of fixed costs, the greater the operating leverage; which means in the difficult situation when the sales declining many of the costs cannot be scaled down. On the contrarily when the sales is growing higher level of leverage results in to increase in revenue as the fixed cost remain unchanged. The variance of company’s profit is one of the measures of business risk. There are many other factors such as changing customer demand, pricing decision, the positioning of the competitors, government regulations, worker productivity and cost of inputs. Out of these some factors are controllable whereas others are not. Operating leverage among these can be reduced partially as some of the above mentioned factors like; fixed cost can be controlled by policy decisions, variability in input price can be partly arrested by negotiating long term material supply and labour contract. Thus, though business risk cannot be eliminated at all but can be reduced up to an extent that provide room for tapping available opportunities and long term survival.

Operating leverage

The leverage associated with investment or asset acquisition activities is referred to as operating leverage. This investment in assets is meant for the operation purpose which will generate stream of cash flows for the firm. It is the result of fluctuations in sales accompanied by disproportionate fluctuation in operating profit. It can be defined as “the firm’s ability to use fixed operating costs to magnify the effects of changes in sales on its EBIT”. If the proportion of operating costs is higher in total cost then the firm is said to have higher degree of operating leverage and vice-versa.

Measure of operating leverage

Operating leverage can be measured with the help of following formula.

$$DOL = \frac{\text{Contribution}}{\text{Operating Profit (EBIT)}} > 1$$

Where, Contribution = Sales - Variable Cost

Operating Profit = Contribution - Fixed Cost

The value of degree of operating leverage must by greater than 1. If the value is equal to 1, there is no operating leverage.

DATA ANALYSIS

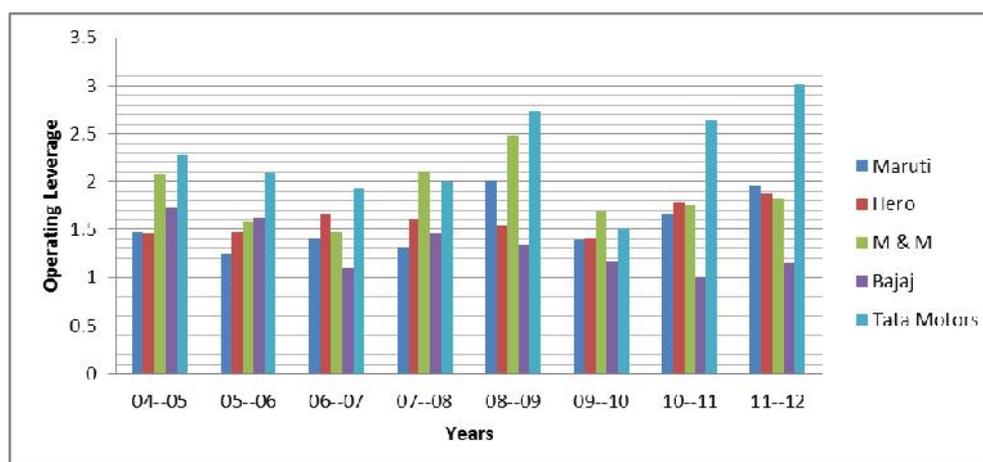
There are five automobile companies included in the list of Nifty- 50. Following is the table and chart showing operating leverage and followed by the hypothesis tested with the help of ANOVA test at 5% level of significance.

Table-1, Degree of Operating Leverage of Automobile Companies

Companies/Year	04--05	05--06	06--07	07--08	08--09	09--10	10--11	11--12
Maruti	1.48	1.25	1.4	1.32	2.01	1.39	1.66	1.95
Hero	1.47	1.48	1.66	1.61	1.54	1.42	1.79	1.88
M & M	2.07	1.58	1.48	2.1	2.47	1.69	1.75	1.82
Bajaj	1.73	1.63	1.1	1.46	1.34	1.17	1.01	1.15
Tata Motors	2.27	2.09	1.93	2	2.73	1.52	2.64	3.01
Min.	1.47	1.25	1.1	1.32	1.34	1.17	1.01	1.15
Max.	2.27	2.09	1.93	2.1	2.73	1.69	2.64	3.01

(Source: Calculated from annual report)

Figure-1, Degree of Operating Leverage of Automobile Companies



The table shows that during the period under study there was the highest operating leverage of 3.01 of Tata Motors in the year of 2011-12, where as the lowest operating leverage of 0.01 of Bajaj in the year of 2010-11. It has also been found from the data that Tata motors been highly levered during the period under study and Bajaj has been least levered company in comparison to all the companies of automobile sector in NIFTY 50.

Hypothesis Testing

Ho: There is no significant difference in the operating leverage among Automobile companies during period under study.

Ha: There is significant difference in the operating leverage among Automobile companies during period under study.

Table-2, Two-Way ANOVA Table

Source of Variation	SS	df	MS	F	F crit
Rows	3.732411	3	1.244137	12.50798	3.159908
Columns	1.036986	6	0.172831	1.737563	2.661305
Error	1.790414	18	0.099467		
Total	6.559811	27			

The Two-Way ANOVA Table shows that, between rows the Calculated value of F (12.50798) is greater than Critical value of F (3.159908) thus, here null hypothesis is rejected and suggest that there is significant difference in the operating leverage between companies. Whereas, between columns the calculated F (1.737563) is less than critical value of F (2.661305) and thus, null hypothesis is accepted and indicates that there is no significant difference in the operating leverage between years. Thus, it can be said that, there is a pattern followed by individual company year on year basis but, no pattern exist between them.

CONCLUSION

The study reveals that automobile companies of Nifty-50, individually follows pattern in maintaining operating leverage year on year basis

but, there is no similarity in level of operating leverage between companies under study. It clearly indicates that though they are the part of an industry but are differ in age and size of the business and their presence in the international market which affects the level of operating leverage as it gives advantages to an independent firm in terms of economies of scale, bargaining power over suppliers, brand image, technological up-gradation and learning curve.

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