Research Paper Commerce

# Determinants f Profitability in Select Indian Motor Cycle Companies

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**ABSTRACT**

The automobile industry has emerged as a sunrise sector in the Indian economy. It embarked on a new journey in 1991 with de-licensing of the sector and subsequently opening up for 100% FDI through the automatic route. Indian Automobile Industry witnessed a total sales growth of 4.3% in January 2014 with 1,866,950 units sold across all segments as opposed to January 2013 where 1,789,283 units were sold. Two Wheeler Sales grew by 9% in January 2014 with 1,484,849 units sold against 1,360,630 units sold during January 2013 (Source: SIAM, ACG). Two and three wheelers industries, specially the motor cycle segments, have shown a steep jump, while the volume growth of all the players has recorded pretty good market share. Therefore, Motor Cycle Companies have been selected for this study in order to determine their Profitability during the study period. A firm's Profitability is determined by leverage, size, age, working capital, assets turnover ratio etc., Data required for the study is Secondary in nature. The Secondary data have been collected from the Capital Line database from 2002-2012 for the select Motor Cycle companies. The collected data is analyzed by making use of correlation and Multiple Regression. The result reveals that there exists relationship between age, expenses to income ratio and assets turnover ratio on profitability.

**KEYWORDS** Automobile Industry, Motor Cycle Companies, Profitability, Asset Turnover Ratio, Expenses to Income Ratio.

## Introduction

Transport sector plays a key role in a country's economic growth and development. Automobile industry is a major constituent of surface transport. The Automobile Industry is growing at a very high speed. The automobile market is split into four main segments, viz., two-wheelers, passenger vehicles, commercial vehicles & three-wheelers. Like most developing markets, two-wheelers, such as motorcycles and motor scooters, are the most popular mode of personal transport in India. Two-wheelers are more affordable than low cost cars and even used cars. Since the average road speeds in India are low, the lower passenger safety of two-wheelers when compared to cars does not inhibit buyers. These factors have made India the second largest two-wheeler market in the world with annual sales of over 10 million units. The increasing income levels in semi-urban and rural areas of the country offer further growth potential for two-wheeler manufacturers. Two wheeler exports had increased by 11% in January 2014 at 171,053 units against 153,699 units in January 2013. Overall Production in January 2014 stood at 5.1% higher than same month during the previous year, with only Two Wheeler Production recording positive growth of 10.1%, while all other segments registered negative growths, notable 7% reduction for Passenger Vehicles (Source: SIAM, ACG). The Ministry of Heavy Industries & Public Enterprises has come up with Automotive Mission Plan 2006-2016 that envisages the automobiles sector to be worth USD 145 billion in 2016 contributing around 10% to the GDP and providing an additional employment of 25 million. But owing to the recent sluggish economy, the Society of Indian Automobile Manufacturers (SIAM) has revised the estimates to USD 111 billion by 2016.

## Review of Literature

Samuels and Smyth (1968) find that firm size and net assets determine the profit earning capacity. James Ted MC Donald (1997) observes that lagged profitability is a significant determinant of current year profit. Vishnu Kanta Purohit (1998) finds that by increasing size of the company through diversification and modernization the earning capacity of a company be increased. Profitability of a company depends on the age of the firms, vertical integration, diversification and industry policy adopted by the Government (Agarwal, 1999). Vijayakumar and Kadirvel (2003) find that age is the strongest determinant of profitability followed by variables like vertical integration, leverage, size, current ratio, inventory turnover ratio, operating expenses to sales ratio and growth rate. Afza and Nazir (2007) find that there exists inverse relationship between working capital and profitability. The growth in sales positively influences firm's profitability (Mohammad Tahir and Dr. Melati Binti Ahmad Anuar, 2011). Amir Hossein Jamali and Asghar Asadi (2012) observe that profitability depends on management efficiency of a company. Dharmendra S. Mistry (2012) finds that Debt Equity, Inventory Turnover Ratio and Size are the variables that influence a company's profitability.

## Statement of Problem

Finance is regarded as a life blood of a business. India's manufacturing sector used to account for only about 10 per cent of its GDP in the early 1950s, but currently it accounts for about 19 per cent. In India, the automobile industry is one of the largest industries. The industry has shown great advances since de-licensing and opening up of the sector to Foreign Direct Investment (FDI) in 1991-92. The automobile industry is estimated to provide employment directly and indirectly to 5 lakhs of people and indirectly to around 50 million people. Profitability is the test of efficiency, powerful motivational factor and the measure of control in any business. Hence, an attempt has been made to study the profitability of motor cycle companies.

## Objective of the study

To identify the factors determining the Profitability of Indian motor cycle companies.

## Research Methodology

### Data

Data required for the study is secondary in nature. Hence, data required for the study has been collected from Capital Line database for the period ranging between 2002 and 2012.

**Framework of Analysis**
The collected data have been analyzed by making use of Statistical tools like Correlation and Multiple Regression. Level of Significance chosen is five and one percent level.

**Selection of Sample Companies**
Motor Cycle Companies in India comprises five companies namely, Hero Moto Corp., TVS Motor Company, Kinetic Engineering and Majestic Auto and Kinetic. But, owing to non-availability of financial statements for a continuous period of 2002 to 2012, the sample size have been restricted to four companies.

**Limitation**
The study pertains to Motor Cycle companies. Hence, the result of the study may not be generalized to other automobile companies.

**Analysis and Interpretation**
The following paragraphs discuss the nature and quantum of association and factors associated with Profitability. For measuring profitability return on investment is introduced as a dependent Variable and Leverage, Size, Age, Working Capital Ratio, Expenses to Income Ratio, Growth, Assets Turnover Ratio, Inflation and Index of Industrial Production are introduced as independent variables.

**Correlation**
In order to examine the nature and quantum of association of variables with Profitability, correlation analysis is used. Out of nine variables selected only six variables have been found to be significant. Leverage, Size, Age, Working Capital Ratio, Expenses to Income Ratio and Assets Turnover Ratio are found to be significant at one per cent level. Age is found to be significant at five per cent level.

**Table No.1**
**Variables associated with level of Profitability- Correlation Analysis**

| Variables | R | $r^2$ |
|---|---|---|
| Leverage | -0.568** | 0.323 |
| Size | 0.471** | 0.221 |
| Age | -0.333* | 0.111 |
| Working Capital Ratio | -0.727** | 0.528 |
| Expenses to Income Ratio | -0.438** | 0.192 |
| Growth | 0.275 | 0.075 |
| Assets Turnover Ratio | 0.837** | 0.700 |
| Inflation | -0.087 | 0.008 |
| Index of Industrial Production | 0.012 | 0.000 |

*** Significant at five per cent level **Significant at one per cent level**

**Leverage**
Leverage and profitability are negatively correlated. This shows that level of profitability is more with low leveraged companies. The coefficient of determination ($r^2$) shows that leverage accounts for 32.30 per cent of the variation in the level of profitability.

**Size**
Size and profitability are positively correlated. This shows that level of profitability is more with companies' having more fixed assets. The coefficient of determination ($r^2$) shows that size accounts for 22.10 per cent of the variation in the level of profitability.

**Age**
Age and profitability are negatively correlated. This shows that level of profitability is more with newly promoted companies. The coefficient of determination ($r^2$) shows that age accounts for 11.10 per cent of the variation in the level of profitability.

**Working Capital Ratio**
Working Capital Ratio and profitability are negatively correlated. This shows that level of profitability is more with companies, which needs less quantum of working capital. The coefficient of determination ($r^2$) shows that working capital turnover ratio accounts for 52.80 per cent of the variation in the level of profitability.

**Expenses to Income Ratio**
Expenses to Income Ratio and profitability are negatively correlated. This shows that level of profitability is more with companies, which have reduced their expenditure. The coefficient of determination ($r^2$) shows that expenses to income ratio accounts for 19.20 per cent of the variation in the level of profitability.

**Assets Turnover Ratio**
Assets Turnover Ratio and profitability are positively correlated. This shows that level of profitability is more with companies, which utilizes their asset optimally. The coefficient of determination ($r^2$) shows that assets turnover ratio accounts for 70.00 per cent of the variation in the level of profitability.

**Determinants of Profitability**
To ascertain the combined influence of select independent variable over the dependent variable multiple regression test has been made use of. All the variables that are considered for correlation test have been utilized for multiple regression. Out of nine variables selected, only three variables influence profitability namely, Age, Expenses to Income Ratio and Asset Turnover Ratio.

**Table No.2**
**Determinants of Profitability - Multiple Regression Analysis**

| Variables | Regression coefficient | Standard error | t |
|---|---|---|---|
| Leverage | -1.864 | 1.792 | -1.041 |
| Size | -0.005 | 0.009 | -0.586 |
| Age | 1.250** | 0.379 | 3.295 |
| Working Capital Ratio | -7.469 | 9.993 | -0.747 |
| Expenses to Income Ratio | -1.860* | 0.836 | -2.225 |
| Growth | -0.015 | 0.084 | -0.177 |
| Assets Turnover Ratio | 17.669** | 2.894 | 6.106 |
| Inflation | -0.614 | 0.780 | -0.788 |
| Index of Industrial Production | -0.336 | 0.225 | -1.494 |

**Constant: -9.052, Std. Error of Estimate: 18.627, R2: 0.799, R2: 0.850****

**Age**
The regression coefficient indicates that Age positively influences the level of profit. The value of regression coefficient indicates that a unit of increase in age of the company shall increase profit by 1.250 units. As the age of the company increases profit also increases.

**Expenses to Income Ratio**
The regression coefficient indicates that expenses to income ratio negatively influence the level of profit. The value of regression coefficient indicates that a unit of decrease in expenses shall increase profit by 1.860 units. The company which reduces their expenses will maintain high level of profit.

**Assets Turnover Ratio**
The regression coefficient indicates that Assets turnover ratio positively influences the level of profit. The value of regression coefficient indicates that a unit of increase in asset turnover ratio shall increase profit by 17.669 units.

**Findings**
The Multiple Regressions Analysis of the selected variables with the dependent variable, i.e., Profitability of selected companies two variables namely Age and Assets Turnover Ratio

have significant positive correlation with profitability. Around 85.00 per cent of variation in level of profit is due to the selected variables.

Availability of finance and credits increased sale of Motor Cycle Companies. Inflation and recession directly affect the demand. Profitability of any business enterprise depends on the effective utilization of Asset Turnover Ratio. Asset Turnover Ratio needs to be maintained at a healthy level in the sample Companies.

**Suggestions**

- The companies have to reduce their operating expenses to the minimum extent, thereby their profits may be increased.
- The companies have to utilize their fixed assets to an optimum extent, which reduce the overhead cost and enhance profitability.
- The old generation companies have to modernize their production in order to compete with newly promoted companies.
- Similarly, companies have to optimally utilize their working capital thereby their companies earning potential may be raised.

**Conclusion**

Intensity of competition prevailing in Motor Cycle Company is drastic. Thus, companies in order to survive in the competitive scenario have to increase their profitability by adopting suitable measures like reduction in operating expenses, modernization of their production units and the like, which surely pave the way for company to retain in the market for a longer period of time.

**REFERENCES**

1. Samuels, J.M and Smyth, D.J (1968), "Profits, Variability of Profits and Firm Size" Economica, Vol.35, pp.127-139. | 2. James Ted MC Donald (1997), "The Determinants of firm profitability in Australian Manufacturing" Melbourne Institute Working Paper No.17/97. | 3. Vishnu Kanta Purohit (1998), "Profitability in Indian industries", Gayathri Publications, New Delhi. | 4. Agarwal, R.N. (1999), "Profitability and growth in Indian automobile manufacturing industry" Indian Economical Review, Vol.26, No.1, pp.81. | 5. Vijayakumar, A. and Kadirvel, S. (2003), "Determinants of Profitability in Indian Public Sector Manufacturing Industries-An Econometric Analysis" The Journal of Institute of Public Enterprises, Vol.26, pp.1-2. | 6. Afza T. and M.S. Nazir (2007). "Working Capital Management Policies of Firms: Empirical Evidence from Pakistan". Presented at 9th South Asian Management Forum (SAMF) on February 2007, PP 24-25, North South University, Dhaka, Bangladesh. | 7. Mohammad Tahir and Dr. Melati Binti Ahmad Anuar (2011), "The effect of working capital management on firm's profitability" Interdisciplinary Journal of Contemporary Research in Business, August 2011, Vol.3, No.4, pp. 365-369. | 8. Amir Hossein Jamali and AsgharAsadi (2012),"Management efficiency and profitability in Indian automobile industry: from theory to practice." Indian Journal of Science and Technology Vol. 5 No. 5 (May 2012) ISSN: 0974- 6846, pp.2779-2781. | 9. Dharmendra S. Mistry (2012), "Determinants of Profitability in Indian Automotive Industry", Tecnia Journal of Management Studies Vol. 7 No. 1.