

Drivers of Economic Value Added (EVA) in Indian Automobile Companies: A Panel Data Analysis

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ABSTRACT

The automobile industry has become the fastest-growing sector in the world. The study analysed the economic worth of the business using the Economic Value-Added method. Determinants of EVA in selected automobile companies are also analysed. The data are collected over sixteen years, from 2010 to 2025, for the selected ten companies. The study utilised panel data collected from the annual report. The results show that Bajaj Auto Ltd. and Maruti Suzuki Ltd. have experienced a rising trend in economic growth, including a notable boost over the last two years. The EVA of Hindustan Motor Company Ltd is low compared to other companies. Correlation, Durbin-Watson statistic, Unit Root Test, and Least Squares regression are the tests used for analysis. Using panel data regression, the study found that the Fixed Assets Turnover Ratio (FAR) and market capitalisation (Mar.Cap) have a significant, positive influence on EVA. It suggests that Hindustan Motor Company Ltd and Majestic Ltd should focus on the fixed assets turnover ratio (FAR) and the firm's market capitalisation (Mar. Cap), which accelerates the company's EVA.

Keywords: Economic Growth, Economic Value Added (EVA), Market Value Added (MVA), Automobile companies, firm's Operating Profit After Tax, Return on Assets.

1. INTRODUCTION

Economic Value Added (EVA) is an important measure of a firm's economic performance and value creation (Kariuki Grace Muthoni et al., 2019). Traditionally, firms have assessed financial performance using accounting measures such as profitability and earnings per share (Yaman & Kurtlar, 2022). EVA provides a broader assessment by considering the cost of capital and the efficiency of financial and investment decisions (Jakub et al., 2015). Although EVA is widely used as a performance measurement and management tool, its application and effectiveness may vary across firms and economic environments (Sharma & Kumar, 2010). When the company calculates its value and can take the essential procedures to make

development in its fiscal performance, then economic value analysis is used to assess the success of the activities taken by the management (Kumar, 2020). This investigation attempts to consider some of these variables that influence the EVA and to examine the company's economic growth. Economic growth is identified using the method known as Economic Value Added (EVA) of a company. EVA was analysed using some standard formulas taken from the review.

2. LITERATURE REVIEW

While manipulating the “Economic Value Added” of a business, the procedure followed is: NOPAT means “Net Operating Profit After Tax” and subtracts WACC, “Weighted Average Cost of Capital”, multiplied by IN “Investment Capital”. Positive EVA value denotes NOPAT “Net Operating Profit After Tax” of the firm is greater than WACC “Cost of Capital” (Kambey & Silinaung, 2020).

The most popular measure of profitability is the return on equity (ROE) (Marvadi, 2015).

- H_1 – Return on Assets will be a significant influence on “Economic Value Added”.
- H_2 – Return on Equity will be a significant influence on “Economic Value Added”.
- H_3 – Proprietary Ratio will be significantly influenced by “Economic Value Added”.
- H_4 – Fixed Asset Turnover Ratio will be a significant influence on “Economic Value Added”.
- H_5 – Market capitalisation will be a significant influence on “Economic Value Added”.
- H_6 – Share Price will be a significant influence on “Economic Value Added”.
- H_7 – Age of the company will be a significant influence on “Economic Value Added”.

To find whether a business has developed or destroyed, EVA is used. This is one of the methods used to find the performance and how it effectively calculates the increase or decrease in the economic growth (Gopale, 2022).

3. METHODOLOGY

Annual reports of the selected ten automobile companies in India are used to collect data for investigation. This research paper took panel data of automobile companies for the annual years from 2009-2010 to 2023-2025. This study is purely to come up with the secondary data that is compiled from the financial statements of selected businesses' websites.

3.1.OBJECTIVES:

The major focus of the Investigation is:

- To calculate the “Economic Value Added” of selected automotive businesses.
- To identify the determinants of Economic Value-Added using Panel data of selected automobile companies.

3.2.TOOLS FOR ANALYSIS:

An estimated regression model was used for the investigation using panel data.

$$EVA_{it} = \beta_i + \beta_1 ROA_{it} + \beta_2 ROE_{it} + \beta_3 PR_{it} + \beta_4 FAR_{it} + \beta_5 Mak.Capt_{it} + \beta_6 SP_{it} + \beta_7 AGE_{it} + \epsilon_{it}$$

Table 1 – Factors and the symbols

Name of the variables	Symbol	Measurement
Economic Value Added	EVA	NOPAT – (WACC * Invested Capital)
Return of Assets	ROA	Net Income / Total Assets
Return on Equity	ROE	Net Income / Equity
Proprietary Ratio	PR	Proprietor’s Fund / Total Assets
Fixed Asset Turnover Ratio	FAR	Sales / Fixed Assets
Market Capitalization	Mak. Capital	Share Outstanding * Total Outstanding Shares
Share Price	SP	Price of the share
Age	AGE	Number of years since the company was registered

3.3.STATISTICS RESULTS

This economic value added (EVA) is calculated using yearly information from selected businesses. EVA is a financial performance indicator determined by deducting capital cost from Net Operating Profit after taxes. The data shows that all companies have an upward trend in EVA over the period. EVA of Bajaj Auto Ltd is growing and stable. It suggests a solid growth of EVA and an outstanding rise in the last few years. This can occur due to excellent financial performance, value creation, and strategic advancements.

Figure 1 – Economic Growth of Selected Companies

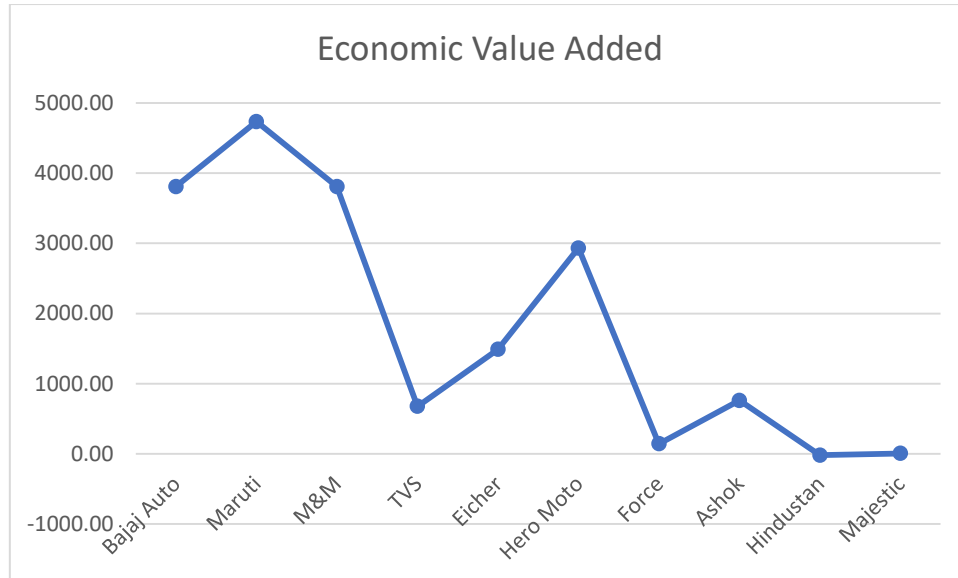


Figure 1 indicates that the EVA of Maruti Suzuki Ltd. placed first and the growth of the last three years (2022-2023 and 2023-2025) is notable, as it reached a high EVA value compared to past years. Overall, the EVA is growing significantly and has a steady upward trend. Bajaj Auto Ltd and Mahindra & Mahindra have had peak EVA for the past three years (2022-2023 and 2023-2025). It shows that the performance and management of the company in recent years have improved. The EVA of Hindustan is low compared to other companies selected for the study. It also shows selected companies have substantial increases in EVA for recent years (2020-2021 and beyond). These upward trends in the later years indicate potential for future growth.

Table 2 - Correlation

	VIF	EVA	ROA	ROE	PR	FAR	Mar. Cap	SP	AGE
EVA		1							
ROA	1.076	0.165	1						
ROE	1.121	0.145	0.149	1					
PR	1.387	0.317	0.194	0.271	1				
FAR	1.303	0.451	0.213	0.220	0.344	1			
Mar. Cap	2.941	0.863	0.085	0.071	0.277	0.348	1		
SP	2.954	0.645	0.113	0.092	0.342	0.299	0.797	1	
AGE	1.149	0.070	-0.036	-0.147	-0.282	0.017	0.011	-0.120	1

Source: Computed table

Table 2 indicates a significant positive correlation between Economic Value Added (the dependent factor) and ROE, ROA, and AGE (Independent factors). The VIF column shows values between 1 to 5. It means that there is no multicollinearity problem.

Table 3 - UNIT ROOT TEST “Augmented Dickey-Fuller test”

Variables	At level		1 st difference
	Intercept	Trend and Intercept	Intercept
ROA	0.0000	-	-
ROE	0.0000	-	-
PR	0.0291	-	-
FAR	0.1418	0.0434	-
Mak. Cap	0.0001	-	-
SP	0.0037	-	-
AGE	0.0802	0.2325	0.0000
EVA	0.0000	-	-

Source: Computed table

Table 3 of “Augmented Dickey-Fuller test,” commonly known as ADF, is widely used to determine whether the series is stationary or nonstationary. Normally, the facts must be stationary when they are utilised for Time series or Panel data analysis. Data should be stationary when using many statistical models, as time-series analysis typically requires a stationarity test.

The Variables listed in their level test have a p-value less than 0.05. It indicates the factors used are stationary in testing their levels and intercept. But the variable Fixed Asset Turnover Ratio, AGE, was stationary at the level with Trend & intercept and first difference. A stationary test is necessary before carrying out the regression analysis.

Table 4 – Regression Analysis

Dependent Variable: EVA – Economic Value Added				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-448.6193	317.6201	-1.412440	0.1599
ROA	7.942677	5.287517	1.502156	0.1351

ROE	3.272757	2.631224	1.243815	0.2155
PR	314.9576	214.6476	1.467324	0.1444
FAR	90.39047	29.03441	3.113219	0.0022
MAR. CAP	0.029017	0.002059	14.09513	0.0000
SP	-0.135461	0.064592	-2.097173	0.0376
AGE	8.644054	4.947402	1.747190	0.0826
R-squared	0.786277	Durbin-Watson stat		1.821223

Source: Computed table

Table 4 analyse with cross-sectional data to examine the influence of ROA, RO, PR, FAR, market capitalisation, share price, and firm age on EVA. The regression model explained 78% of the variation in EVA ($R^2 = 0.78$), indicating a strong relationship between the selected variables and EVA. The Durbin–Watson value of 1.8 falls within the acceptable range of 1.5–2.5, suggesting that the data do not exhibit significant autocorrelation and are suitable for regression analysis.

The results indicate that Fixed Assets Turnover Ratio (FAR), Market Capitalisation (Mar. Cap), and Share Price (SP) have a statistically significant influence on EVA, as their p-values are below 0.05. FAR and Market Capitalisation, with coefficients of 90.39047 and 0.029017, respectively, show a strong positive relationship with EVA and emerge as the most influential predictors. In contrast, Share Price, with a coefficient of -0.135461 , has a negative relationship with EVA. The other variables—ROA, ROE, PR, and AGE—do not show a statistically significant relationship with EVA.

4. FINDINGS AND SUGGESTIONS:

Bajaj shows consistent growth, excellent financial performance, and value creation. Maruti and Eicher have had exceptional performances in recent years. Mahindra & Mahindra and TVS have more variable performance, but recent performance is strong, and Hindustan, despite lower EVA, shows promising improvement. Fixed assets turnover ratio (FAR), market capitalization (MAR.CAP), and share price (SP) will influence the economic growth of the

company. So by concentrating on the fixed assets and market capitalization the company can grow their economic value.

Policy Implication:

- For Companies: Adopt EVA as a performance measure to identify value creation or destruction and support better investor decisions.
- For Management: Use EVA to assess true economic profit and improve financial transparency.
- For Regulators: Encourage supplementary EVA disclosure in financial statements.
- For Financial Institutions: Consider sustainable value creation when making lending and investment decisions..

5. Conclusion

The study examined EVA and its key determinants among ten selected automotive companies in India. The findings show that Maruti Suzuki Ltd. recorded the highest EVA and maintained a consistent upward trend over the study period, indicating strong financial performance and value creation.

The Durbin–Watson test indicated no significant autocorrelation, while the Unit Root test confirmed that the data were stationary. The panel regression results showed that fixed asset turnover and market capitalisation had a strong positive relationship with EVA, suggesting that efficient utilisation of fixed assets and higher market value contribute significantly to economic value creation. In contrast, share price showed a negative relationship with EVA. Overall, the findings highlight the importance of asset utilisation and market capitalisation in improving the economic performance of automotive companies.

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