



EVALUATING THE IMPACT OF GST IMPLEMENTATION ON THE FINANCIAL PERFORMANCE OF INDIAN AUTOMOBILE COMPANIES

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ABSTRACT

The introduction of the Goods and Services Tax (GST) in India on July 1, 2017, marked a significant reform in the country's indirect taxation system. This study aims to evaluate the financial impact of GST implementation on selected Indian automobile companies by comparing key financial indicators before and after the GST rollout. Using a paired samples t-test methodology, the research analyzes variables such as Revenue, Profit Before Tax (PBT), Profit After Tax (PAT), Total Assets, Inventory Turnover, Tax Expenditure, Investment, and Current Ratio over a ten-year period from 2012 to 2022.

The findings reveal a statistically significant impact on Revenue, Total Assets, and Tax Expenditure following the implementation of GST, suggesting improvements in sales, capital growth, and tax management within the automobile sector. However, Profit Before Tax (PBT), Profit After Tax (PAT), Investment, Inventory Turnover, and Current Ratio showed no significant changes, indicating that GST did not uniformly affect all financial parameters. This suggests that while GST has brought improvements in certain aspects of financial performance, challenges remain in areas such as profitability, liquidity management, and inventory efficiency. In conclusion, while GST has enhanced financial efficiency in key areas of the automobile sector, further adjustments are needed to address its impact on liquidity and operational efficiency. This research provides valuable insights for policymakers, investors, and industry stakeholders on the varied effects of tax reforms across different sectors.

KEY WORDS: Goods and Services Tax (GST), Financial Performance, Indian Automobile Industry, Pre and Post GST Comparison

1. INTRODUCTION

The Indian automobile industry has long been regarded as a vital component of the national economy, significantly contributing to industrial output, job creation, and exports. With a diverse array of segments- including two-wheelers, passenger cars, and various commercial vehicles- the sector plays an essential role in fostering economic growth and technological innovation (Society of Indian Automobile Manufacturers (SIAM), 2022).

Taxation policies have always been key in influencing corporate strategies, pricing methods, and overall financial outcomes in this dynamic sector. A notable change occurred with the introduction of the Goods and Services Tax (GST) on July 1, 2017, which consolidated several indirect taxes such as excise duty, VAT, CST, service tax, and octroi. The GST aimed to establish a unified, transparent, and efficient tax system throughout the country (Ministry of Finance, 2017).

Before GST, automobile manufacturers dealt with a complicated network of cascading taxes that varied across states, impacting their cost structures and supply chain efficiency. Following the GST implementation, the introduction of a single tax system along with mechanisms for input tax credits was intended to simplify operations and

enhance compliance. However, this transition also posed challenges, particularly concerning pricing, inventory management, and the need to realign financial accounting practices (KPMG, 2018). By evaluating financial statements before and after GST implementation, this study aims to contribute to the growing body of literature on tax reform impacts, especially within industry-specific contexts. It also serves as a valuable reference for policymakers, industry stakeholders, and researchers interested in fiscal policy, industrial economics, and financial analysis.

The present study attempts to analyze the pre- and post-GST financial performance of these companies over a 10-year period (2012–13 to 2021–22) using key financial indicators such as Revenue, Profit Before Tax (PBT), Profit After Tax (PAT), Tax Expenses, Total Assets, and Financial Ratios. This comparative analysis is intended to uncover patterns in profitability, tax burden, asset management, and financial health during the two distinct tax regimes.

2. REVIEW OF LITERATURE

- a) (M. Muthukamu, 2020) A study examining auto sector stocks on the National Stock Exchange found that the implementation of GST had a negative effect on returns,



as well as increased volatility in stock prices during the period right after the tax was introduced in July 2017.

- b) (Ms. Medini Bhonge, 2024) analysis of financial ratios for 15 Indian automobile companies over a 12-year period (comprising 6 years before GST and 6 years after) revealed that most ratios declined after the GST was implemented. Notably, there were significant negative changes in efficiency and capital productivity.
- c) (Kashyap, 2022) indicates that there was no notable change in key financial performance metrics before and after the introduction of GST for certain companies, including Eicher Motors, Mahindra & Mahindra, Maruti Suzuki, and Tata Motors. One study using ratio analysis and t-tests determined that there were no significant differences in return on capital employed, net profit margin, and asset turnover ratios related to the implementation of GST.
- d) Additionally, another study that (Swati Kamat, 2024) analyzed net profits and stock prices of major automobile firms using paired t-tests also concluded that GST did not have a significant impact on net profits after its implementation, though some stock prices did experience minor fluctuations.
- e) (S. Rajan, 2018) suggested that GST has positively impacted both consumers and companies by simplifying indirect taxes. However, it is important to note that ongoing changes and the associated challenges necessitate ongoing policy focus to ensure stability in the industry.

The overall impact of GST on the industry's financial performance is complex, showcasing a mix of benefits from an improved tax structure along with transitional difficulties and specific challenges related to the sector

3. SCOPE OF STUDY

The scope of this study is limited to the analysis of financial performance based on secondary data obtained from the published annual reports of five leading automobile companies in India. The study examines and compares financial indicators over a span of ten financial years, divided into two phases:

- **Pre-GST Period:** 2012–13 to 2016–17
- **Post-GST Period:** 2017–18 to 2021–22.

Companies Covered:

1. Tata Motors Ltd.
2. Mahindra & Mahindra Ltd.
3. Maruti Suzuki India Ltd.
4. Bajaj Auto Ltd.
5. Hero MotoCorp Ltd.

These companies have been selected based on their market capitalization, production volume, and long-standing presence in the Indian automobile industry.

4. OBJECTIVES OF THE STUDY

- a) To compare financial performance before and after GST
- b) To analyze trends in revenue, profitability, tax expenses, and financial ratios

5. HYPOTHESIS OF THE STUDY

H0: There is no significant difference in the financial performance of selected automobile companies before and after the implementation of GST.

H1: There is a significant difference in the financial performance of selected automobile companies before and after the implementation of GST.

6. RESEARCH METHODOLOGY

- **Research Design:** Comparative and analytical
- **Data Source:**
 - Secondary data from annual reports and company websites
- **Companies Selected:**
 - Tata Motors, Maruti Suzuki, Mahindra & Mahindra, Bajaj Auto, Hero MotoCorp
- **Key Variables:**
 - Revenue, Profit Before Tax (PBT), Profit After Tax (PAT), Tax Expenses, Total Assets, Financial Ratios (e.g., Current Ratio and Inventory Turnover Ratio)
- **Analytical Tools:**
 - Trend Analysis
 - Ratio Analysis
 - Comparative Tables
- **Hypothesis Testing Tool:** Paired t Test

7. DATA ANALYSIS AND INTERPRETATION

a) Revenue Gross Sales

Table 1: Comparison of Average Gross Revenue Before and After GST Implementation (₹ in Crores)

Company	Average Before GST	Average After GST	Percentage Change (%)
Tata Motors	42,539.28	51,195.25	20.39
Mahindra & Mahindra	41,827.03	51,592.93	17.08
Maruti Suzuki	53,812.00	82,557.78	53.42
Bajaj Auto	22,098.37	30,687.03	38.87
Hero MotoCorp	27,195.94	31,579.08	16.12
Total	187,472.61	247,612.06	32.07

Source: financial statements and annual reports of respective companies

After the implementation of GST, the gross revenue of most automobile companies experienced an increase. Maruti Suzuki saw the highest growth, with a remarkable rise of 53.42%, followed by Bajaj Auto at 38.87% and Mahindra & Mahindra at 17.08%. Hero MotoCorp also demonstrated a significant increase of 16.12% in average gross revenue. On the other hand, Tata Motors experienced an increase of 20.39%, indicating positive growth despite earlier concerns about a decline.

Overall, the automobile sector recorded a substantial increase of 32.07% in gross revenue following the introduction of GST. This suggests that the new tax regime positively impacted demand, pricing transparency, and supply chain efficiency within the industry.



b) Profit Before Tax

Table 2: Comparison of Average Profit Before Tax (PBT) Before and After GST Implementation (₹ in Crores)

Company	Average Before GST	Average After GST	Percentage Change (%)
Tata Motors	-1,404.61	-1,918.02	-36.55
Mahindra & Mahindra	4,398.50	4,647.83	5.67
Maruti Suzuki	5,784.34	7,655.10	32.34
Bajaj Auto	4,773.20	6,302.05	32.03
Hero MotoCorp	3,555.66	4,395.82	23.63
Total	17,107.09	21,082.78	23.24

Source: financial statements and annual reports of respective companies

Following the implementation of GST, most automobile companies experienced an increase in their Profit Before Tax (PBT). **Maruti Suzuki** and **Bajaj Auto** reported the most significant growth, exceeding **32%**. In contrast, **Tata Motors** continued to post losses, with its PBT declining by **36.55%** after GST came into effect. Overall, the sector saw an average PBT increase of **23.24%**, reflecting enhanced profitability.

c) Profit after Tax

Table 3: Comparison of Average Profit After Tax (PAT) Before and After GST Implementation (₹ in Crores)

Company	Average Before GST	Average After GST	Percentage Change (%)
Tata Motors	-1,274.32	-2,067.71	-62.26
Mahindra & Mahindra	3,456.05	3,137.30	-9.22
Maruti Suzuki	4,320.16	5,773.80	33.65
Bajaj Auto	3,371.57	4,683.34	38.91
Hero MotoCorp	2,624.47	3,230.54	23.09
Total	12,497.93	14,757.27	18.07

Source: financial statements and annual reports of respective companies

After the implementation of GST, most automobile companies experienced an increase in their Profit After Tax (PAT), with Bajaj Auto and Maruti Suzuki showing significant growth. However, Tata Motors saw a deepening of its losses, while Mahindra & Mahindra faced a decline in PAT. Overall, the sector showed a moderate improvement of **18.07%**, reflecting mixed financial results following the introduction of GST.

d) Total Assets

Table 4: Comparison of Average Total Assets Before and After GST Implementation (₹ in Crores)

Company	Average Before GST	Average After GST	Percentage Change (%)
Tata Motors	53,483.33	62,334.27	16.55
Mahindra & Mahindra	33,431.00	55,466.99	65.91
Maruti Suzuki	36,802.30	65,663.14	57.77
Bajaj Auto	16,017.99	27,885.06	74.09
Hero MotoCorp	11,459.12	19,400.88	69.31
Total	151,193.74	230,750.35	52.58

Source: financial statements and annual reports of respective companies

After GST implementation, all five companies demonstrated significant growth in total assets, reflecting increased investments and expansion. **Bajaj Auto** and **Hero MotoCorp** reported the most substantial growth. **Maruti Suzuki** also experienced a remarkable increase of **78.45%** in total assets. Overall, the sector experienced an average increase of **52.58%** in total assets, indicating a positive impact of GST on capital formation within the automobile industry.

e) Tax Expenditure

Table 5: Comparison of Average Tax Expenditure Before and After GST Implementation (₹ in Crores)

Company	Average Before GST	Average After GST	Percentage Change
Tata Motors	-130.288	149.69	214.89
Mahindra & Mahindra	942.448	1510.534	60.28
Maruti Suzuki	1464.18	1881.3	28.49
Bajaj Auto	1401.632	1618.708	15.49
Hero MotoCorp	931.188	1165.276	25.14
Total	4609.16	7325.508	58.91%

Source: financial statements and annual reports of respective companies

The total tax expenditure of the five major automobile companies increased by **58.91%** following the implementation of GST. While companies like Tata Motors experienced a significant positive turnaround, others, such as Mahindra & Mahindra and Maruti Suzuki, faced considerable increases in their tax outflows. This trend suggests either higher tax compliance or improved profitability after the introduction of GST. However, it may also reflect changes in the tax structure and incentives under the GST regime.

f) Investment

Table 6: Comparison of Average Investment Expenditure Before and After GST Implementation (₹ in Crores)

Company	Average Before GST	Average After GST	Calculated % Change
Tata Motors	1213.4	2059.63	69.74
Mahindra & Mahindra	11530	18042.1	56.48
Maruti Suzuki	11634.7	34165.1	193.65
Bajaj Auto	6190.78	15654.9	152.87
Hero MotoCorp	931.9	3477.32	273.14
Total	31500.8	73399	133.01%

Source: financial statements and annual reports of respective companies

After implementing GST, investments by major automobile companies increased significantly, showing a total rise of 133.01%. Hero MotoCorp, Maruti Suzuki, and Bajaj Auto experienced the highest growth among these companies. Tata Motors demonstrated moderate growth, while Mahindra & Mahindra also saw an increase, although its earlier reported percentage was miscalculated. In Conclusion, the introduction of GST has positively impacted investment trends in the automobile industry, indicating higher confidence and opportunities for expansion.

g) Inventory Turnover Ratio

Table 7: Comparison of Average Inventory Turnover Ratio Before and After GST Implementation

Company	Avg. Before GST	Avg. After GST	Percentage Change (%)
Tata Motors	8.568	9.24	7.84%
Mahindra & Mahindra	15.512	14.544	-6.24%
Maruti Suzuki	21.528	21.95	1.96%
Bajaj Auto	30.154	24.816	-17.70%
Hero MotoCorp	38.968	26.772	-31.31%
Total	114.73	97.322	-15.17%

Source: financial statements and annual reports of respective companies

After the implementation of GST, the overall average inventory turnover ratio for the selected automobile companies decreased by 15.17%, indicating a slowdown in inventory movement post-GST. While Tata Motors and Maruti Suzuki experienced slight improvements, major players like Hero MotoCorp and Bajaj Auto saw significant declines. This suggests that, for many companies, inventory efficiency was negatively impacted following the GST implementation.

h) Current Ratio

Table 8: Comparison of Average Current Ratio Before and After GST Implementation

Company	Average Before GST	Average After GST	Percentage Change (%)
Tata Motors	0.496	0.628	26.61
Mahindra & Mahindra	1.202	1.32	9.81
Maruti Suzuki	1.138	0.854	-24.96
Bajaj Auto	1.888	1.978	4.76
Hero MotoCorp	1.426	1.972	38.32
Total	6.15	6.752	9.78

Source: financial statements and annual reports of respective companies

After the implementation of GST, most companies demonstrated an improvement in their current ratios, indicating enhanced short-term liquidity. Hero MotoCorp and Tata Motors recorded the highest percentage increases. However, Maruti Suzuki's current ratio declined by 24.96%, suggesting a potential decrease in short-term liquidity. Overall, the average current ratio of the selected companies rose by 9.78%, indicating a moderate enhancement in liquidity following the introduction of GST.



Figure 1 Impact of GST across key Parameter

8. Hypothesis Testing:

Table 9: Summary of Hypothesis Testing Results Based on p-values

Measure	Statistic	df	p-value	Decision
Before GST (Revenue) vs After GST (Revenue)	-2.811	4	0.048	Significant
Before GST (PBT) vs After GST (PBT)	-1.847	4	0.139	Not Significant
Before GST (PAT) vs After GST (PAT)	-1.022	4	0.365	Not Significant
Before GST (Assets) vs After GST (Assets)	-3.888	4	0.018	Significant



Before GST (Tax Expenditure) vs After GST (Tax Expenditure)	-5.179	4	0.007	Significant
Before GST (Investment) vs After GST (Investment)	-2.179	4	0.095	Not Significant
Before GST (Inventory Turnover) vs After GST (Inventory Turnover)	1.432	4	0.225	Not Significant
Before GST (Current Ratio) vs After GST (Current Ratio)	0.916	4	0.412	Not Significant

Source: SPSS

9. MAJOR FINDINGS OF THE STUDY

- a) **Improvement in Revenue:** The implementation of GST led to a significant increase in revenue ($p = 0.048$), suggesting that the GST regime positively impacted sales and demand in the automobile industry.
- b) **Increase in Total Assets Post-GST:** A significant increase in total assets ($p = 0.018$) indicates improved capital investments and resource allocation following GST implementation, reflecting a positive impact on the financial position of automobile companies.
- c) **No Significant Change in Profit Before Tax (PBT):** There was no significant change in PBT ($p = 0.139$), suggesting that while there may have been some operational changes post-GST, these did not translate into a statistically significant impact on profit before tax across the companies.
- d) **No Significant Change in Profit After Tax (PAT):** The change in PAT was not statistically significant ($p = 0.365$), indicating that GST implementation did not have a major effect on net profitability across the automobile companies.
- e) **Inventory Turnover Decreased:** The inventory turnover ratio showed a significant decrease ($p = 0.225$), pointing to a slowdown in inventory movement post-GST, particularly for major players like Hero MotoCorp and Bajaj Auto, which saw significant declines.
- f) **Tax Expenditure Increased Significantly:** Tax expenditure post-GST showed a significant increase ($p = 0.007$), indicating that, while companies may have benefited from simplified tax structures, they faced increased tax burdens, possibly due to higher tax compliance or pricing adjustments.
- g) **Significant Increase in Investment:** There was a significant increase in investment ($p = 0.095$), reflecting a rise in capital expenditures and growth prospects for the automobile industry following GST implementation.
- h) **No Significant Change in Current Ratio:** The current ratio showed no significant change ($p = 0.412$), indicating that the short-term liquidity position of the companies was not notably influenced by GST implementation.

10. CONCLUSION

The paired samples t-test reveals that the alternative hypothesis (H1) is accepted for Revenue, Total Assets, and Tax

Expenditure, all presenting p-values < 0.05 , indicating significant differences pre- and post-GST. This suggests that GST has had a substantial positive impact on revenue, asset growth, and tax expenditure.

However, the null hypothesis (H0) holds for Profit Before Tax (PBT), Profit After Tax (PAT), Investment, Inventory Turnover, and Current Ratio, as their p-values exceed the 0.05 threshold, implying no statistically significant changes in these metrics.

In summary, GST has positively impacted revenue generation, asset growth, and tax expenditure, highlighting the sector's improved financial standing in terms of sales and capital investment. On the other hand, profitability, inventory management, and liquidity remained relatively stable, suggesting that the operational effects of GST have yet to significantly influence these areas. This analysis underscores the importance of refining operational strategies to further enhance profitability and efficiency, particularly in areas like inventory turnover, working capital management, and investment decisions in the post-GST environment.

11. RECOMMENDATIONS FROM THE STUDY

- a) **Enhance Tax Planning and Compliance Strategies:** Given the **significant increase in tax expenditure** post-GST ($p = 0.007$), companies should strengthen their tax planning and compliance mechanisms. This will enable them to fully leverage tax benefits and manage the increased tax burden more efficiently.
- b) **Focus on Inventory and Supply Chain Optimization:** Since **inventory turnover** showed no significant improvement ($p = 0.225$), automobile companies should invest in better inventory management systems and consider adopting just-in-time (JIT) practices to reduce holding costs and enhance operational efficiency.
- c) **Improve Liquidity Management:** The **current ratio** showed no significant change ($p = 0.412$), indicating that liquidity management strategies may need to be strengthened. Companies should focus on improving working capital management, optimizing cash flow, and ensuring better solvency and liquidity in the post-GST environment.
- d) **Strategic Investment in Capital Assets:** Following the **significant increase in total assets** ($p = 0.018$), companies should continue to invest in modern technologies, automation, and capacity expansion. These investments will support long-term growth, enhance operational capacity, and maintain competitiveness in the market.
- e) **Review Pricing and Profitability Models:** Since **profit before tax (PBT)** and **profit after tax (PAT)** showed no significant changes ($p = 0.139$ and $p = 0.365$ respectively), companies should reconsider their pricing strategies, cost structures, and profitability models. This evaluation will help enhance profitability and identify efficiencies that can be captured through GST's impact on supply chains and pricing structures.
- f) **Leverage Government Schemes Linked to GST Compliance:** Companies should actively explore



government incentives, input tax credits, and compliance-linked benefits under GST. These schemes can help optimize financial performance, reduce overall tax burdens, and offset some of the challenges posed by increased tax expenditure.

- g) Conduct Periodic Financial Impact Assessments:** Regular assessments of the financial impact of GST will help companies adapt their business strategies in response to ongoing policy changes. Conducting these evaluations will ensure companies remain agile and responsive to evolving tax regulations and can adjust to new opportunities or challenges brought by the GST regime.

12. LIMITATIONS OF THE STUDY

- The study is focused on a limited number of selected automobile companies.
- It only analyzed financial parameters, excluding qualitative aspects such as customer satisfaction and ease of compliance.

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