

## Profitability variations and disparity in automobile sector: A case of leading Indian Automobile companies

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### CHRONICLE

### ABSTRACT

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The Indian automobile sector is the biggest market and emerging by displacing some advanced countries. The Indian automobile sector contributes positively and progressively to the growth and development of the Indian economy. The study is based on secondary data and considers the financial statements available on concerned websites. Ratio analysis, ANOVA (Analysis of Variance), CV (Coefficient of Variation), and rank correlation applied to analyze the data extracted from the financial statements of leading Indian automobile companies. The study reveals that there is a significant difference in the profitability of the Leading Indian automobile companies for the period 2011 to 2020. There is a moderate positive relational relationship between PBDIT(Profit Before Depreciation, Interest, and Tax) ratio and PBIT(Profit Before Interest and Tax) ratio and their variability while PBT ( Profit Before Tax) ratio and PAT ( Profit After Tax) ratio and their variability positively and highly correlated. This reveals that manufacturing expenses and depreciation do not affect profitability while profitability governs the interest and taxes of the leading Indian automobile companies. The study suggests a possible reduction in all direct and indirect costs, optimum cost of capital, or low cost of capital structure can be considered to avoid excessive burden against the profits of the negative performing leading Indian automobile sector companies.

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## 1. Introduction

The Indian automobile sector is the fourth largest market displacing Germany in selling passenger and commercial vehicles and is expected to achieve third position replacing Japan by 2021. Indian automobile market very strong in terms of exports of automobile products and fulfill the domestic demand. Indian automobile market can be bifurcated into four categories i.e. two-wheelers, three-wheelers, passenger vehicles, and commercial vehicles. In each automobile category, few companies manufacturing and fulfilling domestic and export demand of the vehicles. In the financial year 2020, Indian automobile exported 4.77 million with a compound annual growth rate of 6.94%. The Indian automobile industry is a growing industry and expected to achieve USD 251-282 billion by 2026 (IBEF). The operational profitability of a business organization reflects the profit-earning capacity from the business activities of the organization. The systematic and individual analysis of all the cost ingredients of the product discloses the pattern of cost composition and indicates the efficiency and inefficiency of the business organization. Normally, there are three types of overhead in any manufacturing organization i.e. manufacturing, selling and distribution, and administrative and management expenses, etc. The comparative analysis of the manufacturing expenses explains the cost efficiency and manufacturing velocity of the business organization. The comparative analysis of selling and distribution, and administrative and management expenses reveal the marketing efficiency and managerial efficiency of the business organization. Overall, manufacturing efficiency, selling distribution efficiency, and administrative efficiency reelect the operational profitability of the business organization, alternatively. In the last decade, there is fluctuations and disparity in operational efficiency i.e. manufacturing, selling and distribution, and administrative efficiencies among the leading automobile

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sector companies in India. There is a lack of study regarding the comparative profitability of the Indian automobile sector companies and components behind the disparity of operational profitability. The study aims to find out the disparity among the profitability of the Indian automobile sector companies and recognize the factor responsible for the disparity in profitability ratios or detect the responsible factors in low-performing businesses.

## 2. Literature Review

Kumar and Kaur (2016) studied the profitability and size relationship between Indian automobile companies for the period 1998 to 2014 and found a mixed relationship between the size and profitability of the automobile companies. Kaur and Kaur (2016) attempted to ascertain the profitability of the Indian automobile companies from the various segments listed in Bombay stock exchange from 2003-04 to 2013-14 and found that the profitability of Indian automobile sector companies governed by the liquidity, growth of the firm manufacturing velocity, operational efficiency, payment to creditors and proprietary position. Attari and Raza (2012) found that the length of the Cash Conversion Cycle (CCC) and return on the owners' fund negatively related to the profit-earning capacity in the automobile companies. Jaisinghani and Tandon (2016) studied the 105 automobile Indian firms for the period 2004 to 2013 and found a positive relationship between profitability and research and development. The relationship between profitability and research and development is U-shaped due to excess spending. They suggested investments in Research and development activities at an optimum level. Arumugam et al. (2016) advocated the importance of the automobile sector for the growth of the economy. They studied the profitability of the Indian automobile sector and found that the profitability of the Indian automobile companies effected by the operating ratio up to a larger extent. Ashraf (2012) found the negativity between the components of the working capital management and profitability while positivity between the size of the firm and the profitability in the companies from the various sector. Gopalakrishnan (2014) studied the growth of the Indian automobile sector companies and found the negative trend in the working capital and suggested the expansion in the range of the products, appropriate marketing strategy, and cost reduction and revision of the sale prices of the products to enhance the turnover and profit, ultimately. Paliwal and Chouhan (2017) studied the profitability and the liquidity of the automobile industry and found the positivity between the profitability and liquidity and suggested the trade-off between the liquidity and profitability. Shajar (2017) study the automobile sector firms and found that the components of the working capital and cash conversion cycle hurt the profitability measured in the context of the assets. He suggested that the management of the working capital components will enhance the profitability of the companies. Simlai and Guha (2019) explored that the debt-equity ratio of the Indian automobile companies is not 2:1 as per the standard and Indian automobile companies manage the fund from their sources. The gross profitability and operating profit ratio of the Indian automobile companies are satisfactory except Tata motors Ltd. Hassan and Shrivastava (2019) studied the working capital and profitability of the Tata Motors Ltd for the period 2013 to 2017 and found the significant relationship between the components of working capital and the profitability. Gandhi (2017) stated that the Indian automobile industry is the developing sector in the Indian economy. Gandhi selected the Tata Motors Ltd. and Mahindra and Mahindra Ltd. for the period 2005-60 to 2014-15 and found the difference between the profitability of the Tata Motors Ltd and Mahindra and Mahindra Ltd. Suresh and Sengottaiyan (2015) studied the relationship of capital structure and the profitability and found the mixed relationship i.e., positive and negative relationship between the capital structure and profitability of the Indian automobile companies. Jamali and Asadi (2012) explored the relationship between the profitability and the managerial efficiency of the Indian automobile companies and found strong positivity and suggested the enhancements of the management efficiency to improve the profitability. Singh et al. (2020) explored that the Indian automobile is the most progressive industry in the Indian market with and growth rate of 7.64% per annum. New entrants in the Indian automobile sector enhance the competition. So, there is a need to understand the needs and requirements of the Indian customers to survive in the tough competition in the market and enhance profit and profitability. Tripathi and Talukder (2020) studied the supply chain performance and profitability of the Indian automobile sector and found that the profitability is affected by the poor distribution of the products more than the operational velocity and the utilization of the resources. Swalih et al. (2021) studied the financial soundness of the Indian automobile sector and explored that the Indian automobile companies will be able to pay out their debts smoothly in near future. Tripathi and Rao (2016) found the growth trend in the turnover of two-wheeler and passenger vehicle in the Indian automobile industry. Hiran (2016) found negativity between the inventory turnover ratio and operating profit while the quick ratio is positively correlated with the operating profit and net profit. The current ratio of the companies has a negative relationship with the profit in Indian automobile companies. They further explored that the financial leverage and operating leverage of the automobile companies negatively correlated with profitability. Kumar and Choudhary (2019) studied the Indian automobile sector and explored that governments' policy of taxation, investment, and industrial policy affects the performance of automobile companies. Ranjithkumar and Eahambaram (2018) study the automobile sector companies listed in Bombay stock exchange for the period 2013-14 to 2017-18 and found that the Indian automobile sectors' performances governed by the liquidity position and growth of the firms, velocity of operational activities, and payment strategies and policies.

### Hypotheses

H<sub>01</sub>: There is no difference between the average PBDIT ratios of leading Indian automobile companies.

H<sub>02</sub>: There is no difference between the average PBIT ratios of leading Indian automobile companies.

H<sub>03</sub>: There is no difference between the average PBT ratios of leading Indian automobile companies.

H<sub>04</sub>: There is no difference between the average PAT ratios of leading Indian automobile companies.

### 3. Research Methodology

The study is purely based on the secondary data extracted from the financial statements of the leading Indian automobile sector companies for the period 2011 to 2020. Tata Motors Ltd. (Tata), Maruti Suzuki India Ltd. (Maruti), Mahindra and Mahindra Ltd. (Mahindra), Hero Motocorp Ltd. (Hero), Bajaj Auto Ltd. (Bajaj), Ashok Leyland Ltd. (Ashok0, TVS Motor Company Ltd. (TVS), and Eicher Motors Ltd. (Eicher) companies selected for the study operational profitability disparity. ANOVA (Analysis of Variance) and CV (Coefficient of Variations) of operational profitability ratios of automobile companies calculated to know the disparity and variability of operational profitability (Ali, 2020).

$$F = \frac{Bss/df1}{Wss/df2}; \text{ While, } F \geq F_{\alpha}, \text{ Reject } H_0;$$

where, F= Fishers' Ratio, Bss/df1 = sum of squares between samples divided by respective degrees of freedom, Wss/df2 = sum of squares within samples divided by respective degrees of freedom, and F $\alpha$  = critical value.

$$\text{Co-efficient of Variation (CV)} = \frac{\text{Mean}}{\text{Standard Deviation}}$$

where,

CV	CV < 0.10	0.10 ≤ CV ≤ 0.20	0.20 ≤ CV ≤ 0.30	CV > 0.30
<b>Interpretation</b>	Very good	Good	Acceptable	Not Acceptable

Spearman's rank correlation calculated to know the relational correlation between the variables.

$$\text{Spearman's Rank correlation ( } r_s) = 1 - \frac{6\sum(D*D)}{n(n^2-1)}$$

### 4. Analysis

The analysis of the study can be divided among the four categories to get the disparity of operational profitability and cost components responsible for low operational profitability and disparity of operational profitability among the automobile sector companies of India.

- I. PBDIT (Profit before Interest, Depreciation, and Tax) disparity and variability
- II. PBIT (Profit Before Interest, and Tax) disparity and variability
- III. PBT (Profit Before Tax) disparity and variability
- IV. PAT (Profit After Tax) disparity and Variability

#### 4.1 PBDIT (Profit before Depreciation, Interest, and Tax) disparity and variability

PBDIT (Profit before Interest, Depreciation, and Tax) is the absolute amount obtained deducting all the direct and indirect manufacturing cost from the revenue or excess of revenue over the all direct and indirect manufacturing cost is called PBDIT.

$$\text{PBDIT Ratio} = \frac{\text{PBDIT}}{\text{Revenue}} 100$$

where, PBDIT= Revenue – Direct and Indirect manufacturing cost,

The higher PBDIT ratio reflects the manufacturing efficiency and cost control over the direct and indirect cost of manufacturing of the business organization.

**Table 1**

ANOVA of PBDIT ratio of Indian leading automobile companies

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	4177.795	7	596.8278	60.17288	1.48E-27	2.139656
Within Groups	714.1357	72	9.918552			
Total	4891.931	79				

Source: Calculation based on ratios given in appendix 1.

Based on the results of Table 1, hypothesis H<sub>01</sub> is rejected as the calculated value of the F ratio (60.17288) is more than the critical value of the F ratio (2.13965551). Hence, there is a significant difference among the average PBDIT profitability of the leading Indian automobile companies. The comparative average PBDIT ratio and variability explain the average PBDIT and its comparative variability trend.

**Table 2**

Relational Co-variability of average PBDIT ratio and variability of PBDIT ratio of leading Indian automobile companies (2011 to 2020)

Statistical Measures	Tata	Maruti	Mahindra	Hero	Bajaj	Ashok	TVS	Eicher
Mean-PBDIT ratio	7.50	14.50	14.27	14.59	23.37	9.43	7.39	29.20
Rank-PBDIT (R <sub>1</sub> )	8	4	5	3	2	6	7	1
SD	3.38	3.11	1.44	2.88	1.58	3.09	0.98	5.89
CV-PBDIT ratio	0.45	0.21	0.10	0.19	0.06	0.32	0.13	0.20
Rank- CV(R <sub>2</sub> )	8	6	2	4	1	7	3	5
D <sup>2</sup> = (R <sub>1</sub> - R <sub>2</sub> ) <sup>2</sup>	0	4	9	1	1	1	16	16
								ΣD <sup>2</sup> = 48

Source: Calculation based on ratios given in appendix 1.

$$r_s = 1 - \frac{6\sum(D \cdot D)}{n(n^2 - 1)} = 1 - \frac{6\sum(48)}{8(8^2 - 1)} = 0.43$$

Table 2 states the ranking of PBDIT ratio and variability of PBDIT ratio and reveals moderate relational correlation ( $r_s = 0.43$ ) between them. This refers that there is no significant relationship between the level of manufacturing efficiency (PBDIT ratio) and variability in manufacturing efficiency for the period 2011 to 2020. As per the explanation of the interpretation of the Coefficient of Variation (CV), the variability of all PBDIT ratios of all leading Indian automobile companies is normal or insignificantly different as the CV is lesser than 0.30 or closer to 0.3 except Tata Motors Ltd. This indicates some other factors other than manufacturing efficiency affect the PBDIT ratio variability. Probably, the level of production or level of activities affects the PBDIT ratio due to the maximum allocation of fixed costs to the production units.

#### 4.2 PBIT (Profit before Interest, and Tax) disparity and variability

PBIT (Profit before Interest, and Tax) is the absolute amount obtained deducting all the direct and indirect manufacturing cost and depreciation from the revenue, or excess of revenue over all direct manufacturing cost, indirect manufacturing cost, and depreciation is called PBIT.

$$\text{PBIT Ratio} = \frac{\text{PBIT}}{\text{Revenue}} 100;$$

Where, PBIT= Revenue – Direct and Indirect manufacturing cost – Depreciation,

The higher PBIT ratio reflects the manufacturing efficiency, cost control over the direct, and indirect cost of manufacturing and efficient utilization of the depreciable assets of the business organization.

**Table 3**

ANOVA of PBIT ratio of Indian leading automobile companies

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	5015	7	716.428	68.15273	3.23E-29	2.139656
Within Groups	756.87	72	10.5121			
Total	5771.9	79				

Source: Calculation based on ratios given in appendix 2.

Based on the results of Table 3, hypothesis H02 is rejected as the calculated value of the F ratio (68.15273) is more than the critical value of the F ratio (2.139656). Hence, there is a significant difference among the average PBIT profitability of the leading Indian automobile companies. The comparative average PBIT ratio and variability explain the average PBIT and its comparative variability trend. Table 4 states the ranking of PBIT ratio and variability of PBIT ratio and reveals moderate relational correlation ( $r_s = 0.49$ ) between them. This refers that there is no significant relationship between the level of manufacturing efficiency and efficient utilization of depreciable assets (PBDIT ratio) and variability in manufacturing efficiency and efficient utilization of depreciable assets for the period 2011 to 2020. As per the explanation of the interpretation of the Coefficient of Variation (CV), the variability of all PBIT ratios of all leading Indian automobile companies is normal or insignificantly different as the CV is lesser than 0.30 or closer to 0.3 except Tata Motors Ltd. and Ashok Leyland.

**Table 4**

Relational Co-variability of average PBIT ratio and variability of PBIT ratio of leading Indian automobile companies (2011 to 2020)

Statistical Measures	Tata	Maruti	Mahindra	Hero	Bajaj	Ashok	TVS	Eicher
Mean-PBIT ratio	2.23	10.48	11.53	13.64	22.36	6.60	5.36	26.88
Rank-PBIT (R <sub>1</sub> )	8	5	4	3	2	6	7	1
SD	4.83	2.96	1.34	2.01	1.41	3.62	0.66	5.54
CV-PBIT ratio	2.17	0.28	0.12	0.15	0.06	0.55	0.12	0.21
Rank- CV(R <sub>2</sub> )	8	6	2.5	4	1	7	2.5	5
D <sup>2</sup> = (R <sub>1</sub> - R <sub>2</sub> ) <sup>2</sup>	0	1	2.25	1	1	1	20.25	16
								ΣD <sup>2</sup> = 42.50

Source: Calculation based on ratios given in appendix 2.

This indicates some other factors other than manufacturing efficiency affect the PBIT ratio variability and depreciation ratio in all automobile companies are the same. The relational correlation between PBDIT ratio and CV of PBDIT ratio ( $r_s = 0.43$ ) and PBIT ratio and CV of PBIT ( $r_s = 0.490$ ) is almost similar and refers to the similar efficient utilization of depreciable assets by the 3 leading Indian automobile companies.

$$r_s = 1 - \frac{6\sum(D*D)}{n(n*n-1)} = 1 - \frac{6\sum(42.50)}{8(8*8-1)} = 0.49$$

#### 4.3 PBT (Profit before Tax) disparity and variability

PBT (Profit before Tax) is the absolute amount is obtained deducting all the direct and indirect manufacturing cost, depreciation and interest from the revenue, or excess of revenue over the all direct manufacturing cost, indirect manufacturing cost, depreciation and interest is called PBT.

$$\text{PBT Ratio} = \frac{\text{PBT}}{\text{Revenue}} 100,$$

where, PBT = Revenue – Direct and Indirect manufacturing cost – Depreciation- Interest,

The higher PBT ratio reflects the manufacturing efficiency, cost control over the direct and indirect cost of manufacturing, efficient utilization of the depreciable assets, employment of low-cost capital, or employment of internal funds by the business organization.

**Table 5**

ANOVA of PBT ratio of Indian leading automobile companies

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	6423	7	917.5477	70.34289	1.21E-29	2.139656
Within Groups	939	72	13.04393			
Total	7362	79				

Source: Calculation based on ratios given in appendix 3.

Based on the results of Table 5, hypothesis  $H_03$  is rejected as the calculated value of the F ratio (70.34289) is more than the critical value of the F ratio (2.139656). Hence, there is a significant difference among the average PBT profitability of the leading Indian automobile companies. The comparative average PBT ratio and variability explain the average PBT and its comparative variability trend.

**Table 6**

Relational Co-variability of average PBT ratio and variability of PBT ratio of leading Indian automobile companies (2011 to 2020)

Statistical Measures	Tata	Maruti	Mahindra	Hero	Bajaj	Ashok	TVS	Eicher
Mean-PBT ratio	-2.57	10.23	11.12	13.73	22.65	4.93	4.66	26.45
Rank-PBT ( $R_1$ )	8	5	4	3	2	6	7	1
SD	6.64	2.98	2.02	2.22	2.18	3.08	1.06	5.21
CV-PBT ratio	-2.58	0.29	0.18	0.16	0.10	0.62	0.23	0.20
Rank- CV( $R_2$ )	8	6	3	2	1	7	5	4
$D^2 = (R_1 - R_2)^2$	0	1	1	1	1	1	4	9
								$\sum D^2 = 18$

Source: Calculation based on ratios given in appendix 3.

$$r_s = 1 - \frac{6\sum(D*D)}{n(n*n-1)} = 1 - \frac{6\sum(18)}{8(8*8-1)} = 0.79$$

Table 6 states the ranking of PBT ratio and variability of PBT ratio and reveals a high degree relational correlation ( $r_s = 0.79$ ) between them. This refers to a significant relationship between the level of manufacturing efficiency, efficient utilization of depreciable assets, cost of external funds and variability in manufacturing efficiency, efficient utilization of depreciable assets, and cost of external capital for the period 2011 to 2020. As per the explanation of the interpretation of the Coefficient of Variation (CV), the variability of all PBT ratios of all leading Indian automobile companies is normal or insignificantly different as the CV is lesser than 0.30 or closer to 0.3 except Tata Motors Ltd. and Ashok Leyland. This reveals that the PBT of all companies is normally variable except Tata Motors Ltd. and Ashok Leyland. The high degree relational correlation between the PBT ratio and variability of PBT ratio indicates that the PBT profitability governs the interest factor positively. In other words, it can be said that the outcomes of utilizing their external funds are similar to earning profit.

#### 4.4. PAT (Profit after Tax) disparity and variability

PAT (Profit After Tax) is the absolute amount obtained deducting all the direct and indirect manufacturing cost, depreciation and interest, and taxes from the revenue, or excess of revenue overall direct manufacturing cost, indirect manufacturing cost, depreciation, interest, and taxes is called PAT.



## 6. Conclusion

Indian automobile sector companies contribute Indian economy and enhance the GDP growth and displace the advanced countries at the international level. The profitability of the Indian automobile sector companies is significantly different. There is a circulative relationship between the profitability and variability of the profitability after considering the interest and taxes. On one hand, it refers that companies are utilizing their funds efficiently to enhance their income and, on another hand, it indicates the positivity between the number of external funds, taxable profits, and absolute of interest and taxes. The performance of few leading automobile companies is negative during the period of study i.e., 2011 to 2020 and negative leads to the high variability in profitability in expectation to recover the losses and attain the positivity of profits. The negatively performing companies have to focus on financial and non-financial factors to improve their profitability. Possible reduction in all direct and indirect costs, optimum cost of capital, or low cost of capital structure can be considered to avoid excessive burden against the profits of the negatively performing automobile sector companies a financial factor. Salable products, a higher level of activities, advanced products, and appropriate marketing strategy can help enhance the profitability and profits, overall.

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## Appendices

### Appendix 1

#### Profit Before Depreciation, Interest and Tax( PBDIT) of Indian automobile companies

Years	Tata	Maruti	Mahindra	Hero	Bajaj	Ashok	TVS	Eicher
2020	1.66	14.18	16.41	16.42	22.82	7.42	8.39	31.05
2019	10.82	15.76	15.53	16.7	21.92	11.17	7.91	35.24
2018	8.27	17.68	14.91	18.01	24.36	11.98	8.42	35.56
2017	5.84	18.59	13.3	18.09	25.93	11.61	8.49	34.57
2016	10.15	17.98	13.38	16.91	25.92	12.52	8.22	32.19
2015	1.77	15.09	12.89	12.66	21.74	8.48	6.3	30.69
2014	8.52	13.54	13.42	11.39	23.88	2.34	6.38	28.03
2013	8.48	11.56	13	10.69	22.15	7.52	6.12	23.13
2012	8.74	9.38	13.29	12.23	22.16	10.09	6.89	18.22
2011	10.8	11.32	16.57	12.88	22.85	11.25	6.8	23.36

Source: Author's own calculation based on data contained in the financial statements of the concerned Indian automobile companies.

### Appendix 2

#### Profit Before Interest and Tax ( PBIT) of Indian automobile companies

Years	Tata	Maruti	Mahindra	Hero	Bajaj	Ashok	TVS	Eicher
2020	-6.01	9.51	11.52	13.58	22	3.59	5.41	26.89
2019	6.35	12.25	12.06	14.91	21.04	9.03	5.71	32.19
2018	2.99	14.22	11.87	16.29	23.11	9.71	6.18	33.08
2017	-1	14.77	9.83	16.36	24.51	9.04	6.11	32.39
2016	4.71	13.07	10.76	15.37	24.56	9.95	6.1	29.98
2015	-5.39	10.15	10.39	12.66	20.5	5.41	4.78	28.55
2014	2.48	8.77	11.29	11.39	22.99	-1.44	4.73	26.38
2013	4.42	7.29	11.24	10.69	21.33	4.47	4.28	21.34
2012	5.79	6.18	11.49	12.23	21.41	7.34	5.24	16.58
2011	7.91	8.55	14.81	12.88	22.1	8.86	5.09	21.42

Source: Author's own calculation based on data contained in the financial statements of the concerned Indian automobile companies.

### Appendix 3

#### Profit Before Tax (PBT) of Indian automobile companies

Years	Tata	Maruti	Mahindra	Hero	Bajaj	Ashok	TVS	Eicher
2020	-16.22	9.34	6.85	15.86	21.99	2.07	4.59	26.77
2019	3.46	12.16	11.79	14.89	22.15	8.59	5.27	31.98
2018	-1.60	13.79	12.53	16.27	22.97	9.05	5.80	29.56
2017	-5.31	14.64	10.72	16.34	24.51	6.60	5.75	32.35
2016	0.36	12.93	10.48	15.36	24.56	4.36	5.66	29.95
2015	-10.95	9.74	10.70	12.06	18.90	3.26	4.51	28.51
2014	-2.99	8.37	10.78	11.34	22.98	-0.91	4.37	26.32
2013	0.39	6.86	10.99	10.64	21.33	3.77	2.30	21.33
2012	2.46	6.03	11.32	12.14	20.61	5.37	4.44	16.56
2011	4.66	8.48	15.00	12.39	26.51	7.17	3.94	21.12

Source: Author's own calculation based on data contained in the financial statements of the concerned Indian automobile companies.

### Appendix 4

#### Profit After Tax (PAT) of Indian automobile companies

Years	Tata	Maruti	Mahindra	Hero	Bajaj	Ashok	TVS	Eicher
2020	-16.59	7.47	2.92	12.59	17.04	1.37	3.6	20.97
2019	2.91	8.71	8.94	10.05	15.45	6.82	3.68	20.97
2018	-1.75	9.68	8.94	11.47	16.16	6.51	4.37	19.12
2017	-5.48	10.8	8.27	11.84	17.58	6.07	4.59	22.16
2016	-0.14	9.32	7.83	10.95	17.39	2.05	4.4	21.16
2015	-13.05	7.42	8.52	8.64	13.01	2.46	3.44	20
2014	0.97	6.36	9.27	8.34	16.09	0.29	3.28	18.43
2013	0.67	5.48	8.29	8.91	15.21	3.47	1.64	16.36
2012	2.28	4.59	9.03	10.08	15.38	4.4	3.49	13.79
2011	3.84	6.24	11.34	9.93	20.36	5.64	3.09	18.54

Source: Author's own calculation based on data contained in the financial statements of the concerned Indian automobile companies.

