



Vol. 3, No. 1; Jan – Mar (2023)

## Quing: International Journal of Commerce and Management

Available at <https://quingpublications.com/journals/ijcm>



# An In-Depth Analysis of Trend, Pattern and Progress of Mergers and Acquisitions in Indian Manufacturing Companies



**Shravani\***

Research Scholar, Department of Commerce, Vijayanagara Sri Krishnadevaraya University, Ballari, KA, IND.

**CMA Dr. Jeelan Basha V**

Professor & Dean, Department of Commerce, Vijayanagara Sri Krishnadevaraya University, Ballari, KA, IND.

ARTICLE INFO	ABSTRACT
<p><b>Received:</b> 02-01-2023 <b>Received in revised form:</b> 06-02-2023 <b>Accepted:</b> 09-02-2023 <b>Available online:</b> 30-03-2023</p> <hr/> <p><b>Keywords:</b> Acquisition; Bombay Stock Exchange; Change Management; Indian Manufacturing Companies; Merger; Promoters' Holding.</p>	<p>The corporate world across the globe has been restructuring its business operations, adopting various types of integration strategies amidst different challenges posed by the changing faces of markets. To meet the challenges, companies have opted to grow inorganically using various forms of business restructuring strategies like mergers and acquisitions. Hence, an explanatory attempt has been made to know the trends, patterns, and progress related to mergers and acquisitions in the Indian manufacturing industry. During the study period, the lion's share of M &amp; A deals has EPS less than ₹10, a face value of ₹10 each, an offer price of less than ₹250 and being from Indian acquirers. As the age of companies increases, the number of M &amp; A deals decreases sharply during the study period. As the percentage of promoters holding increases from 0-75%, the number of M &amp; A deals also increases. More than half of M&amp;A deals have offered shares less than ₹50 lakhs, being from the southern region and belonging to the horizontal type of structure over the study period. More than ¼<sup>th</sup> of M&amp;A deals belonged to the metal sector. The majority of M &amp; A deals are consistent, positively skewed, and leptokurtic. Almost all M&amp;A deals have significant differences among them.</p>

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**DOI:** <https://doi.org/10.54368/qijcm.3.1.0001>

## 1.0 INTRODUCTION

The corporate world across the globe has been restructuring their business operations adopting various types of integration strategies amidst different challenges posed by the changing faces of markets. Domestic and international markets are tightly integrated, and these changes are needed to stay competitive and grow according to their respective goals of the business organization. To meet the challenges, companies have opted to grow inorganically using various forms of business

\* Corresponding author's e-mail: [shravanid775@gmail.com](mailto:shravanid775@gmail.com) (Shravani)

restructuring strategies like mergers and acquisitions. This paper is an explanatory attempt to analyse various studies conducted in the field of merger & acquisitions (M & A) in the Indian manufacturing industry. The intensity of change-related activities has increased over time as the government has passed various deregulations and acted as a promoter of a newly liberalized economy. As a result of globalisation in the Indian corporate sectors, business processes and business strategies are undergoing transformation in all industries. Several mergers and acquisitions have already taken place, primarily due to extreme pressure on domestic companies with limited resources to compete with the huge multinationals expanding their operations in India. Most of these changes have been noticed in finance, Banking and Insurance, Telecommunication, Pharmaceutical, and IT sectors. At present, the sector has been undergoing a paradigm shift in policies keeping in focus the changing faces of the market and its broader social responsibilities.

### 1.1 Review of Literature

Ramnath, Subramanyam and Lakshman (2018) undertook an empirical study on 'Mergers and Acquisitions Trends in India'. The study shows that from 2013-2017 the number of Mergers & Acquisition deals has shown an increasing trend. However, domestic, inbound and outbound deals showed consistent growth in terms of a number of deals.

Kapoor (2018) studied the changing regulatory framework, trend and progress towards mergers and acquisitions in India and finally reveals that Indian markets have seen a growing trend in mergers, which may be related to an impending business restructuring drive all over different sectors.

Rao and Chalam (2014) investigated that the competition between the companies is nationally and internationally forcing to choose mergers and acquisitions to survive. The study is considered top ten in M&A deals in India during 2011-12 focusing on the types of M&A strategy that have created worth for acquirers in the past, managers are more likely to be able to build shareholders' value.

Singh (2012) states that during the study period, the Indian firms grew in size, and attain better market share. As a result, study reveals that after the experience of mergers and acquisition, firms did not have any effect on return on net worth for the event of study.

Adnan, Rizwan and Sheikh (2011) examined the performance record of 45 mergers and acquisitions in different sectors in Pakistan between 2004 and 2010 using an event research methodology. The overall survey showed that neither the target nor the acquirer created value for shareholders during the 11-day window period.

Calipha, Tarba and Brock (2010) pointed out that today's corporate strategy is clearly aimed at M&A as an instrument to drive imminent growth and produce sustainable worth. As a result, companies actively seek out and acquire compatible, synergic businesses in order to bolster their core competencies and sell non-core operations.

### 1.2 Research Gap

For the past few decades, researchers around the world have mainly focused on the limited use of variables. But this study focused on more than ten variables. *i.e.*, offer shares, offer price, age, sector, face value, location, assets, EPS, promoter holdings, type of M&As, paid up capital and nation. No such studies are found related to the trends and progress in M & A deals in Indian manufacturing sector.

### 1.3 Objective

- To analyse the trend, pattern and progress related to mergers and acquisitions in the Indian manufacturing industry.

### 1.4 Hypotheses

On the basis of the literature review, the following hypotheses are formulated and tested with the help of statistical tools.

- H<sub>1</sub>:** There are no significant differences among age-wise M & A deals.
- H<sub>2</sub>:** There are no significant differences among sector-wise M & A deals.
- H<sub>3</sub>:** There are no significant differences among promoters holding -wise M & A deals.
- H<sub>4</sub>:** There are significant differences among structure-wise M & A deals.
- H<sub>5</sub>:** There are no significant differences among region-wise M & A deals.
- H<sub>6</sub>:** There are no significant differences among offer price-wise M & A deals.
- H<sub>7</sub>:** There are no significant differences among offer shares-wise M & A deals.
- H<sub>8</sub>:** There are no significant differences among face value-wise M & A deals.
- H<sub>9</sub>:** There are no significant differences among EPS-wise M & A deals.

## 2.0 DATA AND RESEARCH METHODOLOGY

The current study is established on secondary data. The needed data has been collected from official websites of Bombay Stock Exchange, Securities Exchange Board of India, numerous journals, research papers, newspapers, the Internet, books, e-books, and Bloomberg are also used for this present study. The study includes 208 Indian manufacturing companies. The study's sample period is 12 years from January 1, 2010, to January 1, 2021. Exclusive class intervals are applied to the classification of all M & A deals. Descriptive and inference statistics are extensively used.

## 3.0 ANALYSIS AND RESULTS

Table 1 – Age wise Merger and Acquisition Deals During 2010-21

Year	No. of M & A deals	Age of Companies			
		Below 25	25 to 50	50 to 75	Above 75
2010	32	23	7	0	2
2011	24	10	9	3	2
2012	28	11	12	4	1
2013	25	11	11	1	2
2014	14	7	5	1	1
2015	21	10	9	0	2
2016	14	7	6	1	0
2017	9	3	5	1	0
2018	2	0	2	0	0
2019	13	4	8	0	1
2020	12	4	7	1	0

2021	14	3	10	1	0
Total	208 (100.0%)	93 (44.71%)	91 (43.75%)	13 (6.25%)	11 (5.28%)
Average	17.333	7.750	7.583	1.083	0.917
SD	8.690	6.017	2.843	1.240	0.900
CV	0.501	0.776	0.375	1.145	0.982
Skewness	0.106	1.428	-0.318	1.531	0.185
Kurtosis	-0.539	3.105	-0.111	2.055	-1.865
ANOVA p-Value	6.03E-07				

Source: Author's compilation

Nearly 45% of each of the total number of mergers and acquisition (M & A) during the study are from the deals having less than 25 years and 25 -50 years of age. Rest of the age-wise deals are about 5% each of them. As the age of companies increases, number of M & A deals decreases sharply during the study period. The most consistency is in the age-wise group of 25-50 years. 117 M&A deals are positively skewed out of 208. Nearly 50% of M&A deals are leptokurtic and the rest half are platykurtic. Since p -value of F statistics is less than 5% at 95% of confidence level, null hypothesis is rejected. Hence, there are significant differences among the means of age-wise M&A deals (see Table 1).

Table 2 – Sector-wise Merger and Acquisition Deals During 2010-21

Year	M&A	Sectors					
		Chemicals	Food	Machinery	Metals	Textile	Other
2010	32	5	3	6	11	6	1
2011	24	6	0	3	7	1	7
2012	28	5	1	6	9	6	1
2013	25	4	1	7	7	4	2
2014	14	5	1	2	4	1	1
2015	21	4	2	3	3	6	3
2016	14	0	1	2	6	1	4
2017	9	2	2	1	3	0	1
2018	2	0	0	0	2	0	0
2019	13	4	2	2	1	2	2
2020	12	5	3	3	0	0	1
2021	14	7	0	1	2	1	3
Total	208 (100.0%)	47 (22.59%)	16 (7.69%)	36 (17.30%)	55 (26.44%)	28 (13.46%)	26 (12.5%)
Average	17.333	3.917	1.333	3.000	4.583	2.333	2.167
SD	8.689	2.193	1.073	2.216	3.397	2.462	1.899
CV	0.501	0.560	0.805	0.739	0.741	1.055	0.876

Skewness	0.105	-0.866	0.255	0.722	0.547	0.767	1.627
Kurtosis	-0.538	0.044	-0.996	-0.542	-0.653	-1.238	3.108
ANOVA p-Value	0.011451468						

Source: Author's compilation

More than ¼<sup>th</sup> of M&A deals belonged to the metal sector, followed by chemicals (22.59%), machinery (17.30%), textiles (13.46%), others (12.5%) and the food sector (7.69%) respectively. The consistency of all sectors is almost the same. Five sectors are positively skewed out of six sectors. All selected sectors except the chemical sector were leptokurtic during the study period. It is evident from p-value of F statistics that the null hypothesis is rejected as there are significant differences among the sector-wise M&A deals during the study period (*see Table 2*).

Table 3 – Promoters Holding-wise Merger and Acquisition Deals During 2010-21

Year	No. of M & As deals	Promoters Holding (%)			
		Below 25 (%)	25 to 50 (%)	50 to 75 (%)	Above 75 (%)
2010	32	8	8	14	2
2011	24	3	7	13	1
2012	28	5	8	12	3
2013	25	5	11	8	1
2014	14	5	2	7	0
2015	21	0	9	12	0
2016	14	4	7	3	0
2017	9	1	3	5	0
2018	2	0	1	1	0
2019	13	5	5	3	0
2020	12	4	2	6	0
2021	14	1	4	9	0
Total	208 (100.0%)	41 (19.71%)	67 (32.21%)	93 (44.71%)	7 (3.36%)
Average	17.333	3.417	5.583	7.750	0.583
SD	8.690	2.466	3.204	4.330	0.996
CV	0.501	0.722	0.574	0.559	1.708
Skewness	0.106	0.033	0.076	-0.006	1.712
Kurtosis	-0.539	-0.595	-1.199	-1.299	2.226
ANOVA p-Value	4.9235E-06				

Source: Author's compilation

Table 3 shows that the average annual number of M & A deals is eight having promoters holding ranging from 50% to 75% followed by six companies having promoters holding ranging 25% - 50%, less than 25% and more than 50%, respectively. As the percentage of promoters holding increases from 0-75%, the number of M & A deals also increases. Selected M&A deals are stable except for more than

75% of promoters holding. All are leptokurtic except M&A deals having promoters holding ranging from 50% to 70%. More than of the total M&A deals are positively skewed during the study period. There are significance differences among the means of promoters holding- wise M & A deals.

Table 4 – Structure-wise Merger and Acquisition Deals During 2010-21

Year	No. of M & As deals	Structure		
		Horizontal	Vertical	Conglomerate
2010	32	15	0	17
2011	24	13	0	11
2012	28	9	1	18
2013	25	15	2	8
2014	14	10	1	3
2015	21	14	1	6
2016	14	10	0	4
2017	9	4	1	4
2018	2	2	0	0
2019	13	10	2	1
2020	12	8	0	4
2021	14	9	1	4
Total	208 (100.0%)	119 (57.21%)	9 (4.32%)	80 (38.46%)
Average	17.333	9.917	0.750	6.667
SD	8.690	4.055	0.754	5.836
CV	0.501	0.409	1.005	0.875
Skewness	0.106	-0.575	0.478	1.119
Kurtosis	-0.539	-0.030	-0.868	0.265
ANOVA p-Value		2.06803E-05		

Source: Author's compilation

It was found from the *Table 4*, 119 out of 208 companies belong to the horizontal type of structure. It is followed by 80 M&A deals belonging to a conglomerate structure. All types of M&A deals are stable since their CV is less or equal to one. The skewness of vertical and conglomerate M&A deals is positively skewed during the study period. The majority of them are leptokurtic. The alternative hypothesis of significant difference is accepted as its P-value is 0.00002.

Table 5 – Region-wise Merger and Acquisition Deals During 2010-21

Year	No. of M & A deals	Region			
		Eastern	Western	Northern	Southern
2010	32	3	5	7	17
2011	24	4	6	5	9
2012	28	4	5	4	15
2013	25	3	5	8	9

2014	14	0	1	1	12
2015	21	2	4	1	14
2016	14	2	3	4	5
2017	9	1	1	1	6
2018	2	1	0	0	1
2019	13	0	6	2	5
2020	12	2	1	2	7
2021	14	1	3	2	8
Total	208 (100.0%)	23 (11.05%)	40 (19.23%)	37 (17.78%)	108 (51.92%)
Average	17.333	1.917	3.333	3.083	9.000
SD	8.690	1.379	2.146	2.539	4.710
CV	0.501	0.719	0.644	0.823	0.523
Skewness	0.106	0.176	-0.255	0.848	0.213
Kurtosis	-0.539	-1.003	-1.531	-0.297	-0.573
ANOVA p-Value		1.84E-06			

Source: Author's compilation

More than half of M&A deals are from the southern region. The rest of the region-wise deals range from 10% to 20% of total deals. There is consistency in region-wise M & A deals during the study period. Except for the western region, all other regions are positively skewed. All regions have platykurtic. The null hypothesis is rejected since their p-value is less than 0.05; hence, there are significant differences among the region-wise M&A deals (*see Table 5*).

Table 6 – Offer Price-wise Merger and Acquisition Deals During 2010-21

Year	No. of M & A deals	Offer Price (₹)			
		Below 250	250 to 500	500 to 750	Above 750
2010	32	27	3	1	1
2011	24	19	1	2	2
2012	28	22	4	0	2
2013	25	21	1	1	2
2014	14	11	3	0	0
2015	21	18	1	1	1
2016	14	13	0	0	1
2017	9	7	1	0	1
2018	2	2	0	0	0
2019	13	12	0	0	1
2020	12	9	1	1	1
2021	14	12	1	0	1
Total	208 (100.0%)	173 (83%)	16 (7.69%)	6 (2.88%)	13 (6.25%)

Average	17.333	14.417	1.333	0.500	1.083
SD	8.690	7.115	1.303	0.674	0.669
CV	0.501	0.494	0.977	1.348	0.617
Skewness	0.106	0.092	1.031	1.068	-0.086
Kurtosis	-0.539	-0.423	0.101	0.352	-0.190
ANOVA p-Value	8.87E-13				

Source: Author's compilation

Table 6 shows the average annual number of M&A deals is about 15 under the category of the offer price of less than ₹250, registering 83% of the total no of M&A deals. There is consistency in the given categories.  $\frac{3}{4}$ <sup>th</sup> of the categories is positively skewed. Two of them are platykurtic. There are significant differences among offer price-wise M&A deals are considered significant when the p-value is less than 5%.

Table 7 – Offer Shares-wise Merger and Acquisition Deals During 2010-21

Year	No. of M & A deals	Offer Shares (in lakhs.)			
		Below 50	50 to 100	100 to 500	Above 500
2010	32	26	2	3	1
2011	24	15	1	6	2
2012	28	13	4	7	4
2013	25	19	1	4	1
2014	14	8	4	2	0
2015	21	16	2	3	0
2016	14	10	1	1	2
2017	9	6	2	0	1
2018	2	1	1	0	0
2019	13	10	0	2	1
2020	12	5	3	4	0
2021	14	9	3	1	1
Total	208 (100.0%)	138 (66.36%)	24 (11.59%)	33 (15.86%)	13 (6.25%)
Average	17.333	11.500	2.000	2.750	1.083
SD	8.690	6.789	1.279	2.221	1.165
CV	0.501	0.590	0.640	0.808	1.075
Skewness	0.106	0.678	0.313	0.616	1.469
Kurtosis	-0.539	0.639	-0.856	-0.299	2.761
ANOVA p-Value	1.62919E-08				

Source: Author's compilation

About  $\frac{2}{3}$ <sup>rd</sup> of the M&A is from deals offering shares less than ₹50 lakhs recording eleven the average number of M&A deals. The rest are not more than 3, the average number of M&A deals. They are more or less stable. All of them are positively skewed. Half of them is platykurtic. Significant differences are among offer-shares-wise M&A deals because their p-value is less than 5% (see Table 7).



Table 8 – Face Value-wise Merger and Acquisition Deals During 2010-21

Year	No. of M & A deals	Face value (₹)				
		1	2	2.5	5	10
2010	32	0	1	0	1	30
2011	24	1	1	0	1	21
2012	28	1	4	1	0	22
2013	25	2	1	0	1	21
2014	14	1	0	0	1	12
2015	21	2	0	0	0	19
2016	14	1	2	0	1	10
2017	9	0	1	0	1	7
2018	2	0	1	0	0	1
2019	13	0	2	0	1	10
2020	12	1	3	0	0	8
2021	14	1	0	0	1	12
Total	208 (100.0%)	10 (4.80%)	16 (7.69%)	1 (0.48%)	8 (3.84%)	173 (83.17%)
Average	17.333	0.833	1.333	0.083	0.667	14.417
SD	8.690	0.718	1.231	0.289	0.492	8.174
CV	0.501	0.861	0.923	3.464	0.739	0.567
Skewness	0.106	0.262	0.988	3.464	-0.812	0.320
Kurtosis	-0.539	-0.685	0.649	12.000	-1.650	-0.347
ANOVA p-Value		5.96951E-14				

Source: Author's compilation

Not less than 80% of the total M&A are from the deals having a face value of ₹10 each, followed by 7.69% from ₹2, 4.80% from ₹1, 3.84% from ₹5 and 0.48% from ₹2.5 respectively. The average annual number of M&A is 15 from deals with a face value of ₹10 each. The rest of them are almost one each. They are stable. All are positively skewed except deals having face value of ₹10 each majority of them are leptokurtic. There are differences among the means of deals having different face values of shares, as evident from the p-value of the F statistics (*see Table 8*).

Table 9 – EPS-wise Merger and Acquisition Deals During 2010-21

Year	No. of M & As deals	EPS			
		Below 10	10 to 20	20 to 30	Above 30
2010	32	27	4	0	1
2011	24	20	1	2	1
2012	28	22	1	2	3
2013	25	20	2	1	2
2014	14	11	1	1	1
2015	21	17	3	0	1
2016	14	13	1	0	0
2017	9	6	2	0	1

2018	2	2	0	0	0
2019	13	11	0	1	1
2020	12	10	0	0	2
2021	14	12	0	0	2
Total	208 (100.0%)	171 (82.21%)	15 (7.21%)	7 (3.36%)	15 (7.21%)
Average	17.333	14.250	1.250	0.583	1.250
SD	8.690	7.137	1.288	0.793	0.866
CV	0.501	0.501	1.030	1.359	0.693
Skewness	0.106	0.114	0.976	0.988	0.441
Kurtosis	-0.539	-0.388	0.374	-0.464	0.234
ANOVA p-Value		0.013667			

Source: Author's compilation

Table 9 found that, out of 208, 171 M&A deals had EPS less than ₹10. The most consistency EPS wise M&A deals are less than ₹10 and more than ₹30. The skewness of all EPS-wise deals is positively skewed during the study period. More than 80% of the M&A deals are leptokurtic, and the rest are platykurtic. As evident from the p-value of F statistics, the null hypothesis is rejected. Hence, there are significant differences among the number of EPS-wise M & A deals during the study period.

## 4.0 CONCLUSION

During the study period, the lion's share of M & A deals has, EPS less than ₹10/-, face value ₹10 each, offer price less than ₹250/- and being from Indian acquirer. As the age of companies increases, the number of mergers & acquisition deals decreases sharply during the present study. As the percentage of promoters holding increases from 0-75%. The number of mergers & acquisition deals also increases.

Over the study period, more than half of M&A deals have offered shares of less than ₹50 lakhs from the southern region and belonging to the horizontal structure. More than ¼<sup>th</sup> of M&A deals belonged to the metal sector, followed by chemicals (22.59%), machinery (17.30%), textiles (13.46%), others (12.5%) and food sector (7.69%) respectively. The majority of M&A deals are consistent, positively skewed, and leptokurtic. Almost all M&A deals have significant differences among them. M&A deals in the Indian manufacturing sector have increased M&A activity not only as a way to restructure businesses but also as an effective way to grow and penetrate new markets. M&A transactions in the Indian manufacturing sector have increased as a result of policy measures to develop the country's economy. Additionally, there was an increase in the desire of foreign investors to make investments in Indian businesses and the Indian market.

### 4.1 Limitations and Scope of the Study

The study is limited to the mergers and acquisitions of Indian manufacturing companies. Moreover, there are limits on several variables, stock exchanges and the time horizon of M&A deals. There is a need to account for other significant variables like macroeconomic and investment banker's prestige. Further, this study can be extended for further periods and needs to identify the determinants of mergers and acquisitions to analyse the impact of M&A deals on the stock price. Therefore, future research can also be conducted on a comparative study at the global level.

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