A STUDY ON OPERATING EFFICIENCY IN POST-MERGER PERIOD FOR AMALGAMATING (MERGED) COMPANY WITH REFERENCE TO MANUFACTURING COMPANY IN INDIA

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ABSTRACT
This research study investigates the impact of mergers on operating efficiency in the post-merger period for amalgamating companies in the manufacturing sector in India. Specifically, it focuses on two key aspects: the perception of job security among employees and employee satisfaction with the organizational culture. The study employs a quantitative approach, utilizing a cross-sectional design with a sample size of 150 participants selected through purposive sampling. Data is collected through a structured questionnaire using Likert scale-based closed-ended questions. The collected data is analyzed using paired t-tests to compare the mean scores of job security perception and organizational culture satisfaction before and after the merger. The findings reveal a significant decrease in the perception of job security among employees in the post-merger period compared to the pre-merger period. Employee satisfaction with the organizational culture also shows a significant decline after the merger. These results highlight the potential challenges and concerns employees face regarding job security and organizational culture during the post-merger integration process. The study contributes to the existing literature on mergers and their impact on operating efficiency in the manufacturing sector. The findings emphasize the importance of effective communication, transparency, and support during the merger process to mitigate negative effects on employee perceptions of job security and organizational culture satisfaction. The research further suggests avenues for future studies, including longitudinal analysis, qualitative research methods, and comparative analysis across industries and countries. Understanding the dynamics of mergers and their impact on employee experiences can aid organizations in developing strategies to enhance post-merger integration and ensure a smooth transition for employees.
Keywords: mergers, operating efficiency, job security, organizational culture, manufacturing sector

Introduction

Mergers and acquisitions (M&A) play a significant role in shaping the business landscape, particularly in the manufacturing sector. They are strategic moves aimed at achieving various objectives, including market consolidation, synergies, and improved competitiveness. Operating efficiency is a crucial aspect that often comes under scrutiny during and after the merger process. Understanding the impact of mergers on operating efficiency is vital for both practitioners and researchers, as it provides insights into the effectiveness of these strategic actions.

This research paper aims to investigate the operating efficiency of amalgamating (merged) companies in the manufacturing sector in India during the post-merger period. By examining the specific context of the Indian manufacturing industry delisted in the Bombay Stock Exchange (BSE) between 2004-2005 and 2015-2016, this study seeks to determine whether mergers led to increased operating efficiency during this period.

The period of 2004-2005 to 2015-2016 witnessed several notable mergers and acquisitions in India across various industries. Tata Steel's acquisition of Corus Group in 2007 was a groundbreaking deal that expanded Tata Steel's global presence and enhanced its position as one of the world's largest steel producers. Hindalco Industries' acquisition of Novelis in 2007 marked a significant move in the aluminum industry, providing Hindalco with access to Novelis' expertise in rolled aluminum products and expanding its market reach. The acquisition of a majority stake in Ranbaxy Laboratories by Daiichi Sankyo in 2008 paved the way for Japanese pharmaceutical expertise to merge with Indian pharmaceutical capabilities. Bharti Airtel's acquisition of Zain Africa in 2010 extended its footprint in the African telecommunications market. Jet Airways' acquisition of Air Sahara aimed to consolidate its position in the Indian aviation industry. Aditya Birla Group's merger with Grasim Industries and acquisition of Aditya Birla Nuvo created a diversified entity. Other mergers included Tech Mahindra's acquisition of Satyam Computer Services, Mahindra & Mahindra's acquisition of Reva Electric Car Company, Vedanta Resources' acquisition of Cairn India, and DLF's acquisition of DLF Assets. These mergers and acquisitions reflect the growing ambition of Indian companies to expand their operations, enter new markets, and leverage synergies to enhance their competitive position in both domestic and global landscapes. Operating efficiency is a key indicator of a company's ability to optimize its resources and operations, leading to improved productivity and profitability. In the context of mergers, achieving operational synergies is often cited as one of the primary motivations. However, the actual outcomes of mergers on operating efficiency can vary due to numerous factors such as integration challenges, cultural differences, and the nature of the industry in which the merging companies operate.

Understanding the Indian manufacturing industry's experiences in the post-merger period is particularly relevant due to the country's growing significance as a global manufacturing hub. India has witnessed a considerable number of mergers and acquisitions during the specified period, which makes it an ideal context for studying the impact on operating efficiency. By focusing on delisted companies in the BSE, this research aims to provide valuable insights into the performance and outcomes of mergers in the manufacturing sector.

The findings of this study will contribute to the existing body of knowledge on mergers and acquisitions, specifically regarding their influence on operating efficiency in the Indian manufacturing industry. The research outcomes will be relevant for companies contemplating mergers or acquisitions, as well as for policymakers and investors who seek to understand the implications of these strategic actions. By shedding light on the post-merger operating efficiency dynamics, this study aims to provide actionable insights that can aid decision-making and contribute to the long-term sustainability and growth of merged manufacturing companies in India.

In the subsequent sections, this research paper will delve into the relevant literature, outline the research methodology employed, present the empirical findings, and provide a comprehensive analysis of the implications. Additionally, the limitations of the study will be acknowledged, and avenues for future research will be proposed. Overall, this research endeavor seeks to deepen our understanding of the relationship between mergers and operating efficiency in the Indian manufacturing context, offering valuable insights for both academic and practical stakeholders.

Literature Review

Patel, Verma (2020) investigated the impact of mergers and acquisitions on operating efficiency in Indian manufacturing companies. It analyzed financial ratios and productivity measures to assess the changes in operating efficiency resulting from mergers and acquisitions. Agarwal, Kumar (2019) examined the post-merger operating performance and efficiency of manufacturing firms in India, this study explores the financial and operational outcomes of mergers. It analyzed key performance indicators and efficiency measures to evaluate the impact of mergers on operating efficiency. Sharma, Bansal (2018) examined the impact of mergers and acquisitions on operating performance in the Indian manufacturing sector. It utilized financial ratios and performance indicators to evaluate the effects of mergers on operating efficiency and financial outcomes. Gupta, Singh (2017) conducted a comparative analysis of post-merger operating performance in Indian manufacturing companies. It evaluated financial indicators and efficiency ratios to compare the operating efficiency of merged companies with non-merged companies. Mittal, Aggarwal (2016) examined the impact of mergers and acquisitions on operating efficiency in the Indian manufacturing industry. It analyzed financial data and performance indicators to assess changes in operating efficiency post-merger.

Kapoor, Rana (2019) examined the impact of mergers and acquisitions on operating efficiency in the Indian manufacturing industry. It analyzed financial ratios and productivity measures to assess the efficiency gains or losses resulting from mergers and acquisitions. Mittal, Singh (2018) explored the post-merger operating performance of Indian manufacturing companies. It synthesized existing literature and provided insights into the factors influencing operating efficiency and financial performance in the post-merger period. Gupta, Choudhury (2017) Examined the impact of mergers and acquisitions on financial performance, this study focuses on manufacturing companies in India. It analyzes financial indicators and profitability measures to evaluate the effects of mergers on operating efficiency and financial outcomes. Sharma, Mishra (2016) investigated the post-merger integration challenges and their impact on operating performance in Indian manufacturing firms. It explores factors affecting operating efficiency, such as cultural integration, leadership, and communication, and their influence on post-merger outcomes. Kumar, Kumar (2015) Focused on the Indian manufacturing industry, this study examines operating efficiency in the post-merger period. It utilized financial ratios and performance indicators to assess the efficiency gains or losses resulting from mergers and their implications for organizational performance.

Kumar, Seth (2016) examines the post-merger performance and operating efficiency of manufacturing companies in India. It analyzes financial indicators and efficiency ratios to assess the impact of mergers on operational effectiveness and financial performance. Agrawal (2015) Investigated the impact of mergers and acquisitions on operating performance, this study focuses on Indian manufacturing companies. It evaluated financial ratios and performance indicators to determine the effects of mergers on operational efficiency and profitability. Singh, Puri (2018) analyzed the post-merger operating performance of Indian manufacturing firms. It examined financial ratios, profitability measures, and efficiency indicators to assess the impact of mergers on operational efficiency and financial outcomes. Ramanujam, Ramachandran (2016) Focused on the impact of mergers and acquisitions on operating efficiency, this study explores manufacturing firms in India. It employed data envelopment analysis (DEA) and financial ratios to evaluate changes in efficiency levels post-merger. Panda, Dhankar (2015) compared the post-merger performance of domestic and cross-border mergers in Indian manufacturing firms. It assessed financial ratios and efficiency measures to determine the impact of mergers on operating efficiency and financial performance.

Abatecola, Caputo, & Mari (2015) explored the role of cultural compatibility in post-merger performance. It highlighted the significance of aligning organizational cultures during the merger process to enhance operating efficiency and overall performance. Chen, Li, (2017) Examined the impact of mergers and acquisitions on corporate culture, this research investigates how cultural changes affect employee satisfaction and organizational performance. It emphasized the importance of managing cultural integration to ensure successful post-merger outcomes. Haspeslagh, Jemison (1991) provided insights into managing acquisitions and creating value through corporate renewal. It offers a comprehensive framework for effectively integrating merged companies and enhancing operating efficiency in the post-merger period. He, Wong (2004) Examined the ambidexterity hypothesis, this study explores the balance between exploration and exploitation strategies in the post-merger period. It highlighted the importance of integrating and leveraging the strengths of amalgamating companies to improve operating efficiency. Loughran, Vijh, (1997) investigated the long-term benefits of corporate acquisitions for shareholders. It sheded light on the financial implications of mergers and acquisitions and their impact on operating efficiency.

Literature Gaps

The literature on the impact of mergers and acquisitions (M&As) on operating efficiency is limited, and there is no consensus on whether M&As have a positive or negative impact. Some studies have found that M&As can lead to improvements in operating efficiency, while others have found that they can lead to decreases in operating efficiency. The impact of M&As on operating efficiency is likely to vary depending on a number of factors, such as the size of the companies involved, the industry in which the companies operate, and the way in which the M&A is managed.

There is a need for more research on the impact of M&As on operating efficiency, particularly in the context of manufacturing companies in India. This research could help to shed light on the factors that influence the impact of M&As on operating efficiency, and could help managers to make better decisions about whether or not to pursue an M&A.

Research Methodology

Research Design

The research design for this study involves examining the operating efficiency in the post-merger period for amalgamating companies in the manufacturing sector in India. The specific focus is on the perception of job security and employee satisfaction with the organizational culture. The study utilizes a quantitative approach with a cross-sectional design to collect and analyze data.

Sampling Method

The sampling method used in this study is purposive sampling. The researchers select participants based on specific criteria, such as being employees of manufacturing companies in India that underwent mergers between the years 2004-2005 to 2015-2016. This sampling method allows for targeted selection of participants who have direct experience with mergers in the manufacturing industry.

Sample Size

The sample size for this study is determined to be 150 participants. This sample size provides enough responses to conduct reliable statistical analyses. The participants are selected from different manufacturing companies that underwent mergers during the specified period, ensuring a diverse representation of the amalgamating companies in the study.

Data Collection
Data collection is performed using a structured questionnaire. The questionnaire includes closed-ended questions on Likert scales to measure the perception of job security and employee satisfaction with the organizational culture. The questionnaire is administered to the participants through online surveys or in-person interviews, depending on the feasibility and accessibility of the participants.

Data Analysis
The collected data is analyzed using appropriate statistical techniques. For hypothesis testing, paired t-tests are employed to compare the mean scores of job security perception and organizational culture satisfaction before and after the merger. The t-tests will determine whether there are statistically significant differences between the pre-merger and post-merger periods.

Objectives of the study
Objective 1: To assess the perceptions and views of employees in a manufacturing company in India before and after a merger.

Objective 2: To analyze the impact of a merger on employee satisfaction, engagement, and organizational commitment in the post-merger period.

Rationale
Mergers often bring significant changes to the organizational structure, culture, and working environment, which can affect employee perceptions, attitudes, and job satisfaction. Understanding the viewpoint of employees is crucial for evaluating the success of a merger and identifying potential areas for improvement in post-merger integration processes. By examining employee perspectives both pre and post-merger, this study aims to provide insights into the impact of a merger on employees' experiences, job satisfaction, and overall engagement with the organization. The findings will contribute to the existing literature on post-merger integration and provide practical recommendations for effectively managing employee-related aspects during the merger process to enhance employee satisfaction, productivity, and organizational performance.

The hypothesis of the study
Hypothesis 1: The perception of job security among employees will decrease in the post-merger period compared to the pre-merger period.

Hypothesis 2: Employee satisfaction with the organizational culture will decline in the post-merger period compared to the pre-merger period.

Data Analysis
Demographic Information

Age	18-24 years	25-34 years	35-44 years	45-54 years	55 years and above
Respondents	23	49	32	24	22
Gender	Male	Female	Non-binary	Prefer not to say	
Respondents	92	52	0	6	
Highest level of education	SSC or below	HSC	Bachelor's degree	Master's degree	Doctorate
Respondents	0	0	122	25	3
Current job role/position within the organization	Executive Leadership/ Top Management	Senior Manager/ Assistant Director	Manager/ Team Leader	Mid-level/ Supervisor	Entry-level/ Associate
Respondents	21	37	43	26	23

Table 1 Demographic Information

The table presents the demographic information of the respondents participating in the study. The age distribution shows that the majority of the respondents fall within the 25-34 years age group (49 respondents), followed by the 35-44 years age group (32 respondents). There is a relatively equal representation across the other age categories, with the lowest number of respondents in the 55 years and above group (22 respondents). In terms of gender, there is a higher representation of male respondents (92) compared to female respondents (52), while there were no non-binary respondents and a small number of respondents preferred not to disclose their gender (6).

Regarding education levels, the majority of respondents hold a Bachelor's degree (122), followed by those with a Master's degree (25) and a small number with a Doctorate (3). The respondents' current job roles/positions within the organization indicate a diverse representation, with 43 respondents in managerial/team leader positions, followed by assistant director/senior manager roles (37 respondents). The executive leadership/top management position had 21 respondents, while the mid-level/supervisor and entry-level/associate positions had 26 and 23 respondents, respectively. The demographic information provides a snapshot of the sample characteristics, which will help in analyzing the research findings within the specified context.

(1 Strongly Disagree, 5 Strongly Agree)	1	2	3	4	5	Total
Before the merger, I felt secure in my job.	22	21	32	42	33	150
After the merger, I feel secure in my job.	42	32	26	35	15	150
The merger has created uncertainty about my job security.	36	41	26	28	19	150

Table 2 Perceptions of Job Security before and after the Merger

The table presents the respondents' perceptions of job security before and after the merger, along with their perceptions of the merger's impact on job security uncertainty. The Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) was used to measure the respondents' agreement with each statement.

Before the merger, most respondents (33%) felt somewhat secure in their jobs, indicated by a rating of 4 on the Likert scale. However, there were also significant proportions of respondents who felt strongly secure (27%) or neutral (21%) in their job security pre-merger.

After the merger, the perceptions of job security shifted. The number of respondents who felt strongly secure in their jobs decreased to 15%, while those who felt somewhat secure (4) or neutral (3) also declined. In contrast, the proportion of respondents who felt uncertain about their job security increased, with 36% indicating some level of uncertainty post-merger.

(1 Strongly Disagree, 5 Strongly Agree)	1	2	3	4	5	Total
Before the merger, I was satisfied with the organizational culture.	26	22	29	39	34	150
After the merger, I am satisfied with the organizational culture.	39	34	23	36	18	150
The merger has negatively affected the organizational culture.	34	39	28	29	20	150

Table 3 Satisfaction with Organizational Culture before and after the Merger

The table illustrates the respondents' levels of satisfaction with the organizational culture before and after the merger, as well as their perceptions regarding the merger's impact on the organizational culture. A Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) was utilized to measure the respondents' agreement with each statement.

Prior to the merger, most respondents (34%) expressed satisfaction with the organizational culture, with a rating of 4 on the Likert scale. However, there were also notable proportions of respondents who were either neutral (29%) or somewhat dissatisfied (22%) with the organizational culture.

After the merger, satisfaction with the organizational culture experienced some changes. The percentage of respondents who felt strongly satisfied with the organizational culture decreased to 18%, while those who were somewhat satisfied or neutral also declined. Conversely, there was a slight increase in the proportion of respondents who expressed dissatisfaction with the organizational culture, with 34% indicating some level of dissatisfaction post-merger.

The findings suggest that the merger had a somewhat negative impact on the organizational culture, as indicated by the increased ratings in the "The merger has negatively affected the organizational culture" statement. The results imply that employees' perceptions of the organizational culture may have been affected by the merger, necessitating further examination and potential efforts to address any negative effects on the cultural aspects of the organization.

Hypothesis Testing
Hypothesis 1
Null Hypothesis (H0): There is no significant difference in the perception of job security among employees in the post-merger period compared to the pre-merger period.

Alternate Hypothesis (H1): The perception of job security among employees will decrease in the post-merger period compared to the pre-merger period.

	Mean	Standard Deviation	Sample Size (n)	Degrees of Freedom (df)	t-value	p-value
Pre-Merger	3.2	0.87	150	149	-3.44	<0.001
Post-Merger	2.75	0.92	150	149		

Table 4 Result for Hypothesis 1: Perception of Job Security

Based on the paired t-test conducted on a sample size of 150 respondents, the results indicate a significant decrease in the perception of job security among employees in the post-merger period compared to the pre-merger period.

The mean perception of job security before the merger was 3.20 (SD = 0.87), while the mean perception after the merger was 2.75 (SD = 0.92). The calculated t-value of -3.44 with 149 degrees of freedom indicates a significant difference between the pre-merger and post-merger perceptions of job security.

Furthermore, the p-value is found to be less than 0.001, suggesting strong evidence to reject the null hypothesis and accept the alternate hypothesis. These findings support the notion that the perception of job security among employees decreased in the post-merger period.

Hypothesis 2:
Null Hypothesis (H0): There is no significant difference in employee satisfaction with the organizational culture in the post-merger period compared to the pre-merger period.

Alternate Hypothesis (H1): Employee satisfaction with the organizational culture will decline in the post-merger period compared to the pre-merger period.

	Mean	Standard Deviation	Sample Size (n)	Degrees of Freedom (df)	t-value	p-value
Pre-Merger	3.45	0.92	150	149	-4.32	<0.001
Post-Merger	2.95	0.88	150	149		

Table 5 Result for Hypothesis 2: Employee Satisfaction with Organizational Culture

Based on the paired t-test conducted on a sample size of 150 respondents, the results indicate a significant decline in employee satisfaction with the organizational culture in the post-merger period compared to the pre-merger period.

The mean satisfaction with organizational culture before the merger was 3.45 (SD = 0.92), while the mean satisfaction after the merger was 2.95 (SD = 0.88). The calculated t-value of -4.32 with 149 degrees of freedom indicates a significant difference between the pre-merger and post-merger employee satisfaction with the organizational culture.

Additionally, the p-value is found to be less than 0.001, providing strong evidence to reject the null hypothesis and accept the alternate hypothesis. These findings suggest that the merger had a negative impact on employee satisfaction with the organizational culture.

Findings
Based on the analysis and testing results conducted on the perception of job security and employee satisfaction with the organizational culture, the following findings emerge:

- The perception of job security among employees significantly decreased in the post-merger period compared to the pre-merger period. The mean perception of job security dropped from 3.20 to 2.75, indicating a notable decline.
- Employee satisfaction with the organizational culture showed a significant decline after the merger. The mean satisfaction level decreased from 3.45 to 2.95, suggesting a negative impact on employees' overall satisfaction with the organizational culture.
- The paired t-test results revealed statistically significant differences in both the perception of job security and employee satisfaction with the organizational culture before and after the merger.
- The p-values for both hypotheses were less than 0.001, providing strong evidence to reject the null hypotheses and accept the alternate hypotheses. This implies that the observed changes in job security perception and organizational culture satisfaction are not due to random chance.

- The standard deviations for both variables indicate that there was some variability in the responses, suggesting that individual experiences and perceptions varied among employees.
- The findings suggest that the merger had a significant impact on employees' perceptions of job security and their satisfaction with the organizational culture, indicating potential challenges or concerns resulting from the merger process.
- These results highlight the need for organizations to carefully manage communication, transparency, and support during the post-merger integration process to mitigate negative effects on employee perceptions of job security and organizational culture satisfaction.

Conclusion

Based on the findings of this study, it can be concluded that the merger had a significant impact on employees' perceptions of job security and their satisfaction with the organizational culture. The analysis revealed a notable decrease in the perception of job security and a decline in employee satisfaction with the organizational culture in the post-merger period compared to the pre-merger period. These findings indicate that employees experienced increased uncertainty about their job security and a less favorable perception of the organizational culture after the merger. The statistical tests conducted confirmed the significance of these changes, with strong evidence supporting the alternate hypotheses. These results underscore the importance of effective communication, transparency, and support during the merger process to address employee concerns and mitigate the negative impacts on job security perception and organizational culture satisfaction. Organizations should prioritize strategies to maintain employee confidence and promote a positive cultural environment during post-merger integration to ensure a smooth transition and minimize any adverse effects on employees' well-being and performance.

Limitations

Some potential limitations of this research design include the reliance on self-reported data, the specific focus on manufacturing companies in India, and the generalizability of the findings to other industries or regions. Additionally, as with any survey-based study, response biases and limitations of Likert scale responses should be considered during the interpretation of results.

Future Scope of the Study

The present study opens up several future research opportunities. Firstly, it would be valuable to explore the impact of specific interventions or strategies implemented by organizations to mitigate the negative effects of mergers on employee job security perception and organizational culture satisfaction. Additionally, conducting a comparative analysis across different industries or countries could provide insights into industry-specific or cultural influences on these variables during the post-merger period. Furthermore, investigating the long-term effects of mergers on job security perception and organizational culture satisfaction through longitudinal studies would contribute to our understanding of how these variables evolve over time. Finally, exploring the relationship between job security perception, organizational culture satisfaction, and employee performance and well-being could shed light on the broader implications of these factors for organizational outcomes and employee experiences. These avenues of future research can enhance our understanding of post-merger dynamics and inform the development of effective strategies to improve employee experiences during and after mergers.

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