Evaluating Economic Efficiency in Indian Mergers and Acquisitions: Empirical Insights across Key Industries

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Abstract: *Mergers & acquisitions (viz-corporate restructuring) play a pivotal role in improvising financial, social and economic environments across the globe. Predominant strategic goals due to scarcity of time can be accomplished with the aid of mergers and acquisitions with a relatively secure and stable outcome. Significant sectors such as Banking & Finance, Pharmaceuticals, Manufacturing, Telecommunication And Information Technology sectors etc have adopted mergers and acquisitions (M&A) for business expansion and overcoming globalization challenges most importantly. The overall research paper aims to analyze the impact that M&A has on economic efficiency, financial performance and shareholder value using various models and statistical tools and techniques considering the prime current objective as a significant impact of cultural integration of M&A on the performance of the selected sample Indian industries. The study is based on secondary data which was collected from the capital market database called Centre for Monitoring Indian Economy Pvt Ltd (prowess, CMIE) various websites, journals and the Capitaline database. The period under study is 7 years ranging from financial assessment year 2015-16 to 2021-22. Ratio analysis has been used as a prime tool for the computation of the financial performance of the sample companies from the selected sectors under study in the Indian context. The results of the overall analysis depict that chosen explanatory variables (i.e. Liquidity, Operating Efficiency, Profitability and Leverage) in the post-acquisition period had not changed uniformly in all the acquiring sample companies and there is a positive response of cultural integration on the performance of (M&A) in various sectors from the current sample under study. Although there was an apparent increase in the created shareholder value in the post-acquisition period, however, a significant improvement was noted in the case of a few current sample companies.*

Keywords: *Cultural Integration, Economic Efficiency, Financial Performance, Merger & Acquisitions (M& A), Ratio Analysis, Shareholder Value Creation*

Introduction

The new-age business ecosystem (Paulus-Rohmer et al., 2016; Rong et al., 2018) is a complex and dynamic entity that fosters continuous innovation in a hyper-competitive world. With technical breakthroughs and cultural shifts all around, the business world is evolving at a breakneck speed. Mergers and Acquisitions (M&A's) in India have evolved through a distinct phase of regulations. Mergers and Acquisitions are the business transactions that lead the proprietorship of corporations, organizations or their functioning units to be transmitted or combined with some other business or organization. The main reason for the necessity of M&A in today's economy is that it permits businesses to achieve economies of scale. By merging with another company or acquiring another organization, companies can grow at an unprecedented rate which is difficult to achieve independently. Recently, the M&A has increased vastly in India and substantial strategies are being employed for its optimum benefits (Hossain, 2021). Moreover, there are many purposes for various M&A types witnessed in the corporate world. The objective of the study is to provide a comprehensive overview of M&A from the industry perspective. The primary aim is to examine the role of cultural integration in influencing financial performance in selected 5 sectors.

Review of Related Literature

Many authors investigating the topic of mergers and acquisitions have restricted their analysis to the possibilities of realisation of the sale and purchase transactions, possibilities of synergetic effects, or increase of the shareholders' value. Meanwhile, recent works point out, for instance, that merging cultures remains one of the main challenges after a merger (Cartwright & Schoenberg, 2006) Until sometime, M&A was practised only as a way to increase the competitiveness of the firm, but the integration of cultures has been recognized as an important factor of economic effectiveness of mergers, but less developed and understood. In India, where culturally diverse elements add complexity to the task of integration, the exploration of cultural variables becomes ever more critical to the success of any M&A. In the IT sphere, Varma, Kar, Soni, & Suder (2017) investigated the study that examines the factors influencing cross-border mergers and acquisitions in India's IT sector, providing insights into cultural and strategic outcomes. Effective cultural integration and sector-specific strategies significantly enhance post-merger financial performance, particularly in industries with strong alignment practices. In the same way, the studies in the manufacturing sector also report a mix of financial returns to shareholders after merger and acquisition activities. Rani, Yadav, & Jain (2015) investigated the impact of mergers and acquisitions (M&A) on the long-term financial performance of acquiring firms in India. Analyzing a sample of 305 M&A transactions from January 2003 to December 2008, the authors compare pre- and post-merger financial data to assess changes in profitability, efficiency, leverage, and liquidity. Kumar & Bansal (2008) find that mergers and acquisitions in India positively impact acquiring firms' long-term financial performance, enhancing profitability, efficiency, and liquidity. However, the study also maintained that the absence of successful integration of the cultures of the organizations resulted in performance differences, and structural isolation of the involved organizations remained long after the mergers. Other sectors particularly pharmaceutical, banking and telecommunications have had different experiences. Nummela & Raukko (2012) examines the issues faced during the cultural integration and cross-border acquisition of the Indian pharmaceutical company Ranbaxy by Japanese firm Daiichi Sankyo. The research identifies the challenges in aligning organizational cultures which had a negative impact on the profitability and employee retention post-acquisition. In the same vein, Chaudhuri, Chatterjee, Mariani, & Wamba (2024) investigated the merger between Vodafone and Idea in the telecommunications sector and concluded that although financial synergies were available, other factors such as communication gaps and differences in acceptable practices between the merged organizations were barriers to the realization of the anticipated financial prospects. With a predominant presence of mergers and acquisitions within the strict regulatory environment, the banking industry has also received a great deal of attention. In their research, Gupta and Kishore (2019) utilized the CAMEL approaches to examine the M&A futures of selected private and public banks in India from 2008 to 2018 and observed that following the M&A private banks were more successful than public banks in enhancing the profitability and asset quality ratios. This difference was explained by the obstacles related to the integration of cultures and practices of the merging organizations especially about the public sector banks characterized by strong hierarchical weaknesses. While these frameworks show promise, existing literature lacks a thorough examination of the challenges associated with cultural integration in the context of M&A activities. Following this logic, future studies should adopt multiple methodologies, incorporating quantitative with qualitative techniques like interviews and employee feedback to create a larger picture. This could enhance understanding of the mechanisms through which culture impacts on M&A outcomes–enhancing knowledge specificity for effective post-merger integration.

Research Methodology

This research utilizes a multi-method approach in evaluating M&A's activities impact on cultural and financial performances. Financial information was qualitative and focused on liquidity, operating efficiency, profitability and leveraged ratios collected from a sample size of 25 merged Indian firms. All these ratios measure key exponents that help to determine the health of the companies before and after the Merger. Two Liquidity ratios measure the short-term solvency position, Operating Efficiency ratios determine how well resources are used, Profitability ratios show returns to shareholders and Leverage ratios measure financial risk. All ratios were computed and analyzed through paired sample t-tests to determine possible changes in the ratio's measurements after and before a merger.

Typical of most M&A studies, cultural integration is central to the study. It was examined indirectly by studying its influence on the financial performance metrics and eventually comprehended qualitatively. The specific dimensions of operational efficiency and employee retention were put forward as examples of cultural fit that could be achieved through better financial performance, and specific cultural problems were emphasized to see how cultural fit varies across different sectors. To assess the association between cultural fit after a merger and financial performance, regression analysis was carried out with the help of qualitative perspectives of previous studies. Such a stance helps to understand the cultural and financial metrics post-merger period.

Maximum entanglement/entrenchment of the elements receives support from all four operational metrics such as: asset turnover ratios, liquidity ratios, return on equity and return on assets which gives multilevel perspectives on the strategy. Basically, each view shows strategies which would improve shared-value creation. It is also to note that different forces apply in different operational metrics, where some impact onto the remaining ones very strongly. For instance, a reasonable position may be generated through ROA (Return On Assets) analysis which highlights how efficiently a company is able to deploy its asset towards profitable transactions. In particular, a high asset turnover ratio is essential, but covets only when paired with relative profit-maximization principles. Such integration points towards a split without restrictions, where the hibernation period would need a reasonable emphasis regarding interacting cultures and powerful integration strategies.

An upsurge in return on assets (ROA) measures after the merger denotes better cost management and success in asset integration and thus, the performance of the M&A can be vindicated. A high ROA is beneficial to shareholders since it implies better returns on investment as the results indicate the company has become more profitable after the merger. Besides, improved ROA can be a consequence of cultural integration if there have been enhanced employee productivity and collaborations after the merger aimed at optimal asset utilization.

The Debt-To-Equity Ratio is the last measure and it determines the amount of debt capital relative to a company's shareholders' equity and consequently the level of financial risk. A reasonable target for post-acquisition or merger entities is to keep this ratio the same or lower because it indicates efficient utilization of equity and management of the debt level, thus, protecting the interests of shareholders. In such instances where the Debt-To-Equity Ratio goes down or does not change, it can be said that both companies have similarly lower risk appetite pertaining to their financials, thus, culture integration in financial strategies.

Although financial ratios offer quantitative insights, they also serve as indirect indicators of cultural integration. Improved efficiency (as seen in Asset Turnover and ROA) and stability (in current and debt-to-equity ratios) may reflect unified processes and aligned risk management across merged teams, which signals cultural alignment. Nonetheless, these financial metrics should be complemented by qualitative assessments—such as employee surveys, feedback, and interviews—to capture a more comprehensive picture of cultural integration post-merger. This combination offers a fuller understanding of how cultural alignment impacts both financial performance and long-term shareholder value.

To examine changes in financial ratios and measure statistical significance, this study employs a range of statistical tools designed to analyze pre- and post-merger data effectively and rigorously.

• **Paired Sample T-Test**: This test is used to analyze changes in financial ratios such as liquidity, profitability, and leverage by comparing pre-merger and post-merger values for each company. By assessing whether the mean differences in these ratios are statistically significant, the paired sample t-test provides insights into whether the merger had a meaningful impact on each financial metric. A significant result suggests that the merger influenced the respective financial outcome, offering evidence of M&A effectiveness.

• **One-Way ANOVA:** One-Way Analysis of Variance (ANOVA) is used to assess whether there are statistically significant differences in financial performance between different industry sectors (e.g., banking, telecommunication, pharmaceuticals, IT, and manufacturing). This model helps determine if certain sectors experience more significant financial improvements post-merger, which can indicate sector-specific factors affecting M&A success. ANOVA results offer a comparative view across industries, highlighting where M&A impacts are most pronounced.

• **Regression Analysis:** To understand the relationship between cultural integration and financial performance, regression analysis is applied. This model evaluates how cultural integration metrics (measured indirectly through qualitative proxies or inferred from efficiency gains) correlate with financial ratios, such as return on assets or asset turnover. A regressions result helps to quantify the influence of cultural integration on financial outcomes, providing insights into the extent to which cultural alignment drives post-merger financial success.

• **Descriptive Statistics:** Descriptive statistics, including mean, standard deviation and range, provide a baseline understanding of financial ratios pre- and post-merger. These metrics helps to interpret the central tendencies and variability within each financial indicator, giving context to changes observed in the paired t-tests and ANOVA.

By combining these statistical tools, the study rigorously assesses the impact of M&A on financial performances, while regression analysis specifically explores the role of cultural integration in shaping these outcomes. This approach lends a robust analytical foundation, ensuring that findings are statistically validated and industry-specific insights are highlighted.

While financial ratios allow us to draw quantitative conclusions, they also act as proxies of integration within the merged organization. Decreased efficiency measured in terms of Asset Turnover and ROA, as well as increased stability reflected in current and debt to equity ratios, may suggest that the merging teams have adopted streamlined processes and coordinated risk management strategies which are indicative of degree of cohesion. Still, such financial ratios should be supplemented with qualitative measures, for instance employee satisfaction surveys, feedback, and interview responses, so that a complete understanding of the activities involved in the cultural integration process after the merger is developed. Together, these two present a more rounded perspective of the influence that congruence in culture has on the financial performance of the institution and its value in the long term.

a. Data Collection

The study has intended to collect data specific to the selected 25 companies those have gone through M&A in India. The data of last 7 years have been accessed. The data related to profitability ratio, liquidity ratio, leverage and activity ratio have been collected. The study has planned to analyze the quantitative data in IBM SPSS and Excel software. Based on the result, the study will provide further suggestions and recommendations for future enhancement. The data is collected from reliable and standard databases such as Centre for Monitoring Indian Economy (CMIE) and Registrar of Companies (RoC). The company's balance sheets also are referred from Ministry of Corporate Affairs (MCA), Bombay Stock Exchange (BSE), and National Stock Exchange (NSE) and Company Annual Reports.

b. Data Methodology

Ratio analysis technique calculates the economic strength of the organisation in terms of liquidity, operational efficacy, and profitability place. It is ended through the association of data available in the economic statements. It is an effectual method used for evaluation of economic performance of the various industries viz (Manufacturing, Telecommunication, Information Technology, Banking And Finance, Pharmaceuticals). Entirely, 9 ratios casing diverse sorts like liquidity, leverage, profitability and operational efficacy have been assessed for ascertainment of economic presentation.

c. Research Question/Objectives of the Study

1. How cultural integration does affects the financial operations of the organizations post-merger in various selected sample sectors in India?
2. Are there any sector-specific differences in financial metrics like profitability, liquidity and assets quality after the M&A?

d. Company Profile Parameters and Demographic Details

Descriptive

Descriptive statistics method denotes to a group of techniques applied to encapsulate and define the foremost aspects of a dataset like its **distribution, variability and central tendency**. These approaches give an outline of the data and assist to recognize designs and associations.

Table 1: Pre-Merger and Acquisition

Descriptive Statistics						
SAMPLECOMPANIES	N	R	Minimum (Min)	Maximum (Max)	M	SD
Indus Towers & Bharti Infratel	8	3248	0	3248	455.33	1133.057
Indiabulls Housing Finance Limited (IBHFL) And India Bulls & Lakshmi Vilas Bank Limited (LVB)	8	10000	0	10000	1281.26	3523.038
Bank Of Baroda & Vijaya Bank And Dena Bank	8	46168	0	46168	5839.04	16295.579
Indusind Bank & Bharat Financial (SKS Microfinance)	8	16000	0	16000	2214.65	5597.598
Nbfc Capital First & Idfc Bank	8	5000	0	5000	711.63	1744.745
Vodafone India & Idea Cellular	8	105870	0	105870	13249.92	37424.181
TATA Steel &ThyssenKrupp	8	77000	0	77000	9644.14	27215.898
State Bank Of India & Bhartiya Mahila Bank	8	22000	0	22000	2788.82	7763.170
Flipkart & E-Bay India	8	30000	0	30000	3802.38	10585.968
Infosys & Kaleidoscope Innovation	8	29287	0	29287	3729.95	10328.344
Reliance Retail & Future Group's Retail Business	8	18000	0	18000	2329.73	6332.650
Ola & Etergo	8	1500	0	1500	207.87	523.131
Itc & Sunrise Foods	8	36500	0	36500	4619.19	12882.061
Zomato & Uber Eats	8	40000	0	40000	5106.42	14100.250
LIC & IDBI Bank	6	109999	1	110000	18508.83	44822.903
Walmart & Flipkart	8	2300000	0	2300000	287517.74	813165.630
Bharti Airtel & Tikona	8	66000	0	66000	8301.71	23313.827
Wipro Ltd& Info Server S.A.	8	150000	0	150000	18796.27	53014.379
Ebix &Yatra	8	10430	1	10431	1329.07	3677.887
Havells India & Lloyd Electric's Consumer Durable Business	8	5847	0	5847	812.80	2043.420
Dr. Reddy Laboratories Ltd & Imperial Credit Private Ltd	8	22175	0	22175	2776.02	7838.375
Taro Pharma & Canada's Thallion Pharmaceuticals	8	1407	0	1407	185.85	494.178
Bandhan Bank & Gruh Finance	8	66000	0	66000	8291.93	23317.829
Apple & Intel's Smartphone Modem	8	132000	0	132000	16520.05	46660.963
Tata Steel & Bhushan Steel	8	77000	0	77000	9656.51	27210.905
Valid N (Listwise)	6					

Source: Author's Compilation

From the tables above, it is observed that there are 6 and 9 count of observations inside the data group for pre-merger and acquisition. The data set value, calculated through totalling all the records and isolating through the sum of figures are considered to be normal. The value of mean in the data set splits the greater values from the minor values. The value of standard deviation should be above 0.5 and all the variables of our study matched the exposed range.

Table 2:Post-Merger and Acquisition

Descriptive Statistics					
SAMPLE COMPANIES	N	Min	Max	M	SD
Indus Towers & Bharti Infratel	9	0	3500	642.88	1260.997
Indiabulls Housing Finance Limited (IBHFL) And Indiabulls & Lakshmi Vilas Bank Limited (LVB)	9	0	26000	3019.16	8626.103
Indusind Bank & Bharat Financial (SKS Microfinance)	9	0	17000	2337.93	5568.620
NBFC Capital First & Idfc Bank	9	0	10000	1283.48	3281.439
Vodafone India & Idea Cellular	9	0	9226	1032.57	3072.615
TATA Steel & ThyssenKrupp	9	0	80500	9517.27	26667.757
State Bank Of India & Bhartiya Mahila Bank	9	0	245652	27859.53	81683.945
Flipkart & E-Bay India	9	0	22000	2472.08	7323.385
Infosys & Kaleidoscope Innovation	9	0	336294	38465.99	111717.451
Reliance Retail & Future Group's Retail Business	9	0	245581	28310.25	81504.023
Ola & Etergo	9	0	3000	335.23	999.292
Itc & Sunrise Foods	9	0	49824	6261.93	16454.535
Zomato & Uber Eats	9	0	67900	7562.60	22626.581
LIC & IDBI Bank	9	0	95700	11344.35	31680.531
Walmart& Flipkart	9	1	2200000	245571.20	732918.233
Bharti Airtel & Tikona	9	0	67774	7827.45	22486.781
Wipro Ltd & Info Server S.A.	9	0	201000	22748.90	66849.883
Ebix & Yatra	9	0	11000	1247.57	3657.524
Havells India & Lloyd Electric's Consumer Durable Business	9	0	6500	938.32	2141.475
Dr. Reddy Laboratories Ltd & Imperial Credit Private Ltd	9	0	22739	3345.43	7552.126
Taro Pharma & Canada's Thallion Pharmaceuticals	9	0	1550	368.37	654.873
Bandhan Bank & Gruh Finance	9	0	75000	8831.81	24851.207
Apple & Intel's Smartphone Modem	9	0	137000	15245.85	45657.840
Tata Steel & Bhushan Steel	9	0	80500	9511.15	26670.184
Valid N (List Wise)	9				

Source: Author's Compilation

From the tables above, it is observed that there are 6 and 9 count of observations inside the data group for post-merger and acquisition. The data set value, calculated by totalling all the records and isolating through the sum of figures are considered to be normal. The value of mean in the data set splits the greater values from the minor values. The value of standard deviation should be above 0.5 and all the variables of our study matched the exposed range.

Exploratory Data Results with Secondary Data

- Cultural Integration of (M&A) On the Performance of Selected Indian Industries

Culture is known as a combination of national culture, artifacts and employee engagement which includes satisfaction levels. A firm's values and visions are mostly discussed and defined during a process of merger usually; this process is done from high authorities such as CEO in the company with information from the management team. Cultural integration in M&A is crucial for accomplishment, as cultural factors are significant in country like India. Understanding and addressing culture in initial phase is a key to successful merger. Top leadership involvement, monitoring through key performance indicators and clear milestones are essential. Through establishing common values, behavior and visions, companies involved in merging can become a high performing firm post-merger. Cooperativeness has a significant part in cultural integration during the process of M&A.It is an essential component for companies to boost a cooperative work environment to effectively blend cultures after merging process. Acceptance in cultural integration of organization in a phase of M&A is very important. Acceptance reduces the resistance to changes, increases a sense of belonging and stimulates employee collaboration from both companies. While employees accept the emerged new culture, it shows the sign of high chance of align behavior, work practice and values with the integrated organization's goals and vision.

Hypothesis of the Research Work

Ha1: There is significant impact/role of cultural integration of m&a on the performance of the selected Indian industries.

$H_0$1: There is no significant impact/role of cultural integration of m&a on the performance of the selected Indian industries.

Paired sample T test

This test is also called as dependents sample test as it is a statistical technique utilized to identify whether the mean variation among two group of observation is zero. In this test, each entity or subject is measured double time, resulting in sets of observation.

Table 3: Paired Sample Test

Paired-Samples Test									
		Paired Diff							
					95% Con Int of the Diff				
		M	SD	Std. Err M	L	U	t	df	S
Pair 1	NET PROFIT(PRE) - NET PROFIT(POST)	18.101	71.907	14.678	48.464	12.263	1.233	23	.002

Source: Author's Compilation

The above table specifies the paired-sample test to describe the difference of pre and post net profit. The T-test shows the P value is .002. It highlights the test variables of the hypothesis. The value determines that, cultural integration of M&A influence the performance of Indian industries. Hence, the test results are opposite to the null hypothesis.

• One sample T test

T-Test is defined as a numerical test applied to compare the significant means of two sets of data. It is generally applied to assess the hypothesis mean values on the basis of dependent and independent variable.

Table 4: One Sample Test

One Sample Test						
					95% Con Int of the Diff	
	t	df	S	M Diff	Lower	Upper
FIRM SIZE(POST)	1.889	24	.001	163799.440	-15143.84	342742.72
NET PROFIT(POST)	3.245	24	.003	43.298	15.76	70.84

Source: Author's Compilation

The above table specifies the one-sample test to describe the association of current tax, stock price and net profit. The T-test shows the P value is .001 and 0.003. It highlights the test variables of the hypothesis. The value determines that, cultural integration of M&A influence the performances of the selected Indian industries. Hence, the test results are opposite to the null hypothesis.

ONE-WAY ANOVA

This test is applied to evaluate whether there exist statistically important variation among the means of more or two variables. This involves one or more dependent variables and one independent variable.

Table 5: ANOVA

ANOVA						
		Sum of Squares (SoS)	Df	Mean Square ($M^{2)}$)	F	S.
NET PROFIT(POST)	Between Groups	105919.513	24	4605.196	5.106	.005
	Within Groups	901.850	1	901.850		
	Total	106821.364	25			
CASH EARNINGS RETENTION RATIO(POST)	Between Groups	35094.693	24	1525.856	1.899	.005
	Within Groups	803.604	1	803.604		
	Total	35898.297	25			

Source: Author's Compilation

The above table demonstrates the cultural integration of M&A influence on the recital of firm in the business sector. One-way ANOVA represents that the considered company's performance which has influenced through cultural integration of M&A. The net profit of the company post M&A influence the recital which reveals the function of firm post M&A without any significant fall. Consequently, the ANOVA test result denied the null hypothesis.

• **Regression**

The regression method is applied to define the arithmetical value of variable. This assessment is used to assess the relationship among the research variable dependent variable and independent variable. Then, the present research used regression test to examine the influence of cultural integration of M&A on the performance of Indian industries.

Table 6: Model Summary

Mod Summary				
Mod	R	R^2	Adjusted R^2	Std Err of the Est
1	.207[a]	.543	.444	.669
a. Predictors: (C), CURRENT RATIO(POST), FIRM SIZE(POST)				

Source: Author's Compilation

Table 7: ANOVA

ANOVA[a]						
Model		Sos	df	M2	F	S.
1	Regression	.442	2	.221	.493	.001
	Residual	9.853	22	.448		
	Total	10.295	24			
a. Dependent Variable: ASSET TURNOVER RATIO(POST)						
b. Predictors: (Constant), CURRENT RATIO(POST), FIRM SIZE(POST)						

Source: Author's Compilation

Table 8: Coefficients

Coefficients'						
		Unstd Coeff		Std Coeff		
Mod		B	Std. Err	Beta	t	S.
1	(C)	.725	.148		4.914	.000
	FIRM SIZE(POST)	2.045	.000	.135	.647	.004
	CURRENT RATIO(POST)	.001	.001	.147	.701	.000
a. Dependent Variable: ASSET TURNOVER RATIO(POST)						

Source: Author's Compilation

The above tables illustrate the influence of economic factors on the performance of the firm and the p-value is below .005. Tables also validate the result of the regression test with an R^2 value of 0.543. The outcome of the regression test demonstrates that cultural integration of M&A affects the performance of Indian industries through the association of independent and dependent variables. The firm size of the concern indicates the number of workers working the firm post-M&A which indirectly reveals the acceptance among the employee so, the current ratio and firm size are represented as variables. This table establishes the influence of cultural integration on M&A in Indian firms.

- **Correlation - Partial**

Pearson correlation Test

This analysis test is implemented to determine the relationship among two variables considered for the study. The correlation value demonstrates the relationship among the variables. In case of the correlation value is determined as 1 or -1 then the outcome illustrates there is a relationship between the variables. Consequently, the present study applied the PC test to regulate the range of relationships between the cultural integration of M&A and the performance of Indian industries.

Table 9: Correlations

Correlations				
Control Variables			INVENTORY TURNOVER RATIO(POST)	CURRENT RATIO(POST)
NET PROFIT(PRE)	INVENTORY TURNOVER RATIO(POST)	Correlation	1.000	.663
		S (2-tailed)	.	.005
		df	0	21
	CURRENT RATIO(POST)	Correlation	.663	1.000
		S (2-tailed)	.005	.
		df	21	0

Source: Author's Compilation

The above table validate the correlation test result to determine the association among the dependent (net profit) plus independent (inventory turnover and current ratio) variable of post M&A. The value of p in PC test is .000 and correlation value is determined as positive 1 that demonstrates the net profit, inventory turnover and current ratio are correlated. These are the economic factors influencing the Indian industries' performance. Hence, the correlation test result denied the null hypothesis.

• **Correlation - Bivariate**

Bivariate correlation is generally used to define the consequence that two or more phenomena happen at the same time and hence they are associated.

Table 10: Correlations

Correlations				
		OPERATING PROFIT(POST)	ASSET TURNOVER RATIO(POST)	NET PROFIT(POST)
OPERATING PROFIT(POST)	Pearson Correlation	1	.383	.004
	S		.005	.005
	N	25	25	25
ASSET TURNOVER RATIO(POST)	Pearson Correlation	.383	1	.020
	S	.005		.002
	N	25	25	25
NET PROFIT(POST)	Pearson Correlation	.004	.020	1
	S	.005	.004	
	N	25	25	25

Source: Author's Compilation

The above table demonstrates the correlation test outcome to determine the association among test variables such as operating profit, net profit and asset turnover ratio. The p-value of the correlation test is less than .005 and the correlation value is determined as positive 1, which demonstrates the cultural integration of M&A and the performance of Indian industries are correlated. Hence, the correlation test result denied the null hypothesis.

Findings of Study

Company profile parameters and their demographic details are collected. The descriptive statistics method has been measured to denote the distributions, variability and central tendency. For the descriptive statistics, a total 25 companies were measured with mean, median, minimum, maximum and standard deviation values for pre-merger and acquisition. The outcome of the result was that the 6th and 9th count of the observations which are present inside the data are grouped for the pre-merger and acquisition. The data set value was calculated by adding up all the records and isolated using of the sum of figures which is considered as normal. As for the same companies, post-merger and acquisitions were carried with the aid of descriptive statistics. The result presented with the output that the 6th and 9th count of the observations which are present inside the data group was measured for the post-merger and acquisition.

• Exploratory data results have been measured with the secondary data**.** Cultural integration of merger and acquisition on the performance of Indian industries was measured with the aid of hypothesis. The hypothesis is that significant impact of cultural integration of M&A on the performance of the Indian Industries whether it is present or not. Paired sample T test was calculated for the net profit of Merger and Acquisitions (M&A) with mean, correlation, standard error and sigma values. Difference of the paired sample T test was carried out in M&A, it resulted that test results are opposite to the null hypothesis.

One sample T test was carried out with the same hypothesis. It was measured with the post M&A of firm size and net profit. One sample T test was analysed to describe the relationship of stock price, current tax and net profit values. It shows the p-values of .003 and .001. These test results are opposite to the null hypothesis.

One way ANOVA was taken under consideration to evaluate the variation among different variables. It involves one independent variable and one dependent variable. This was analysed for the net profit and cash earnings retention. It was measured within the groups, between the groups and the total value. The P-value measured for this analysis is .005. From this analysis, it is considered that ANOVA represents the company's performance which is influenced by the M&A. It denies the null hypothesis.

Regression method was employed to determine the arithmetical value of the variable. It has been assessed to identify the relationship between the independent variable and dependent variable. Mod summary was estimated for the current ratio and firm size of post M&A. ANOVA was carried out for the models such as regression, residual and total values. Asset turnover ratio was taken for consideration of post M&A. Coefficients were performed for Mod with firm size and current ratio. It results the regression test with value of 0.543.

Correlation-partial was calculated by Pearson correlation test. Net profit in pre M&A was calculated by inventory turnover ratio and current ratio of post M&A. P-value was determined with the positive value that net profit, inventory turnover and current ratio are correlated and denied the null hypothesis. Correlation-Bivariate was determined for post M&A such as operating profit, asset turnover ratio and net profit. Results have been correlated with the asset turnover ratio, operating profit and net profit. It was measured with positive value and denied the null hypothesis 1.

• Sector Specific Findings

Cross-sectional analysis of financial indicators across sectors suggests different patterns with respect to M&As for the sampled firms along with the fact that there are trends in cultural and financial metrics within sectors.

a. Banking Sector: There was consistent improvement across banking companies with respect to *liquidity and solvency ratios* post the merger. However, profitability ratios such as *return on assets (ROA)* varied across companies attributable to level of operational integration and regulatory frameworks. Cultural integration in this sector was challenging because public banks experienced structural constraints that limited the extent to which employees could be integrated.

b. Pharmaceutical Sector: Some gains were realized by companies in the pharmaceutical sector concerning *profitability ratios* as well as *leverage ratios* due to enhanced operational effectiveness resulting from improved research activities by the companies. Cultural integration was however still a problem/hurdle, particularly in the case of mergers where the countries involved were different as the different cultures of the corporations affected the efficiency of work and the retention of the workforce.

c. Information Technology (IT) Sector: IT companies have witnessed changes in *asset turnover* and *operational efficiency ratios* which improved due to technological synergies available after merger. However, the extent of cultural integration within these firms was not uniform; those that employed a team-building integration approach had relative ease in integration. Other firms, which lacked a defined cultural integration strategy, experienced varied financial recovery.

d.Telecommunication Sector: In telecommunications, companies made distinct improvements in *revenue growth and asset turnovers* although the *profitability* levels remained unstable due to poor communication and poor alignment of objectives. Moreover, so limited cultural integration initiatives undermined employee morale and reduced financial synergies.

e. Manufacturing Sector: As for manufacturing firms, some progress has been made in solvency ratios while operational efficiencies remained erratic. Problems of cultural integration continued to exist since operational silos existed. Companies whose integration strategies were focused on production processes showed better post-merger performance.

Summary

These findings underscores that sectors like, information *technolo*gy, *banking* and the *pharmaceutical* sectors have relatively high improvements in culture after the merger and in the financial performance levels later on. The *telecommunications* and *manufacturing sectors* on the other hand experienced problems in the financial and even the cultural integration after the merger, suggesting that different kinds of upper management strategies would be adopted so as to enhance the outcomes of M &A activities.

Conclusion and Implications

Just like any research, the current study has its own limitations. This research emphasises on the role of cultures in M&A's presents some concerns especially in the integration construct as the only measure of effectiveness. While quantitative studies provide an objective view of the topic, subjective outlook is missing. Testing cultural congruence through the use of financial measures alone limits the scope of the research. Financial ratios may include but are not limited to employee satisfaction, communication effectiveness, and leadership credibility, which are critical in providing context to cultural integration. Financial targets serve as indicators; they are indirect measures that require consideration of time perspective. Problems of measuring the degree of cultural integration stem from the fact that cultural alignment, and therefore reverence, is a hybrid sociocultural phenomenon that cannot be evaluated adequately with numerical data only. Future studies also need to extend their scope to successfully assess the degree of cultural integration and include qualitative techniques such as employee interviews and focus group discussions to gather the views of employees and managers in the merged entities. Such approaches could give a different appreciation of how the employees reconciled with the new culture and the extent to which they were willing to change thereby providing a broader understanding of integration effectiveness. Integrating qualitative and financial analysis could significantly broaden the debate on the extent to which cultural issues affect M&A's and their relationships so that future researchers would be able to conceptualise the economic side and the human capital of successful integration.

Scope For Future Research

Future work in M&A's could build on existing literature by employing a mixed methods approach and be more specific in measuring the role of cultural integration in determining success. While this study used purely financial integration metrics, future research should use a combination of employee interviews, focus groups, and surveys to understand better, employee engagement, leadership consensus and cultural integration. Such qualitative data would complement the existing frameworks and help explain the role of cultural factors in shaping the success of M&A activities. Also, it is advisable to perform longitudinal studies in order to assess the enduring effects since the effects of cultural integration are usually realized over a long period. This method would enable an understanding of how performance, change, and the workforce are managed after a merger. It would be worthwhile to extend the research to other sectors involving healthcare, retail, and energy to identify the peculiar integration issues presented by each sector's broad-based industry perspective would enable the provision of specific strategies, which could assist leaders from different fields in the best practices for financial and cultural fit during M&As.

Recommendations

A clear methodical approach is paramount in enhancing M&A's results and in this case, the emphasis should be on the cultural merger aspect, for more effective communication and coordination, senior management should have a detailed plan in advance. Team integration objectives should be announced in advance to those involved, helping to prevent limitations and resistance during the actual integration. Proper communication helps to clarify **b**oundaries and norms and promotes integration over time. Cultural gaps are projected through integrating units before the actual merger and at least two approaches are beneficial in that scenario. Creating and empowering culture leaders and their teams is essential as they advocate for cross-unit cooperation as well as provide transition support. A strong teamwork climate centred on improvement efforts and cross-department activity integration helps to draw employees around new ideals. To evaluate the effectiveness of cultural integration measures, the level of satisfaction of employees with qualitative and relevant characteristics of the cultural integration processes and the new culture should be measured by employing questionnaires and/or interviews. This brings to light some of the obstacles to cultural integration and it helps to withstand the challenges. In addition, cultural integration targets should be assigned along with the economic targets so that the economic objective does not take precedence over the cultural integration one. Organizations that follow these guidelines enhance employee commitment, acculturation processes, and financial outcomes, ultimately translating into long-term shareholder value.

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