

A Study On The Effect Of Digital Transformation Of Select Companies In India

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Abstract

The adoption of digital transformation is now the norm and is considered a crucial component of an organization's business transformation. Business operations have undergone a radical transformation. However, the total impact of significant forerunners to the digital transformation on the performance of manufacturing enterprises has not been thoroughly examined in the research. The study aims to identify the root reasons of digital transformation and demonstrates how it mediates company performance. The future's digital transition is already taking place. Indian consumers are embracing digitization to a greater and greater extent, but Indian enterprises are only adopting it to varying degrees. Due to the fact that multinational organisations are increasingly relying on disruptive technologies like cloud computing, 5G networks, blockchain, internet marketing, and 3D printing to stay competitive on a global scale, Indian businesses must adjust to this new reality. Digital transformation has several benefits that are undeniable in the data-driven, rushed NOW. Utilising dynamic performance evaluation tools such as Operational Breakeven Point, Discriminant Analysis Technique of Altman's Z-score, and Enyi's Relative Solvency Ratio, the study aims to quantify the effects of digital transformation on the long-term profitability and solvency of a subset of listed companies in India. The Going Concern Index, Current Ratio, Index of Digital Transformation Gains, and Markup Ratio were furthermore used in the study. The study employed regression analysis to reach its conclusion.

Keywords: Digital Transformation, Operational Break Even Theory,

Introduction

In the current era of the digital economy, digital transformation is currently a strategy for acquiring a competitive edge over other countries or industries. It is a technique for digitalizing current platforms. In addition, Verhoef et al. describe "digital transformation" as "a firm employs digital technologies, to develop a new digital business model that helps to create and appropriate more value for the firm." It also affects organisational capability, daily operations, and corporate protocols.

Businesses in a variety of industries are changing to gain a competitive edge. IoT platforms, cloud computing, augmented reality, customer profiling, data analytics, and improved human-machine interfaces are just a few of the technology that the organisations have integrated. The complete digitalization and integration of every component into the digital ecosystem are the companies' major objectives.

Businesses constantly strive to become more digital since it is a crucial tool for promoting innovation and increasing revenues. However, they do face significant challenges, particularly in industrial firms, such as the growing prominence of knowledge-intensive processes and the complexity that follows this abrupt transformation. Manufacturing businesses that have adopted digitalization have changed how operations are run and how personnel interact with the outside world. It also implies changes in how they connect with their customers. The digital transformation has also only been the focus of a small number of studies. Therefore, it is imperative to research the digitalization of manufacturing firms.

Businesses are increasingly utilising new technology and digitally redefining themselves to compete fiercely as a result of the shifting economic climate. Such a digital transformation must affect their financial and operational

success. This study intends to assess the effects of the digital transformation on a select group of listed companies in India.

It is thought that the standard analytical tools of corporate finance, such as the current ratio, acid test ratio, and credit policy, are grossly inadequate to measure such changes. Due to the innovative and revolutionary nature of the concept of digital transformation, the study has made an effort to adopt a more contemporary methodology by including data analysis techniques such Operational Break Even Theory, Altman's Z Score, and Enyi's Relative Solvency Ratio. For the study's purposes, information was gathered over the period of two years, namely 2018-19 and 2019-20, from nine companies listed on the BSE Stock Exchange.

This study adds two key concepts to the corpus of literature that currently exists. By concentrating on digital transformation in industrial organisations, the study contributes to the body of knowledge and provides a set of major antecedents of digital transformation in the first place. By experimentally determining the impact of the antecedents on digital transformation and company performance as a result, the study also has the potential to provide managers with practical guidance on how to create and sustain a presence in the digital market and achieve a competitive edge.

Importance of the Study:

Digital technology adoption has become essential for organisations with the arrival of the Fourth Industrial Revolution. Companies that innovate and digitise quickly will be better positioned to take advantage of India's sizable, connected market, according to the McKinsey Global Institute Report, 2019. In the context of rapidly improving technology and declining data costs, technology-enabled business models may become widely used over the next ten years. Therefore, the study makes an effort to quantify the benefits for businesses that are already on the road to digitalization.

Research Methodology

The several ratios and data analysis tools (explained below) were first calculated using the yearly reports posted on the business's official website. Following that, a regression study was carried out to determine the impact of each of these seven variables on the Market-Induced Solvency Ratio, the indicator of a firm's performance and solvency.

1. Going concern Index: The term "going concern" is most frequently used in corporate finance research. If a company's entire assets exceed its total liabilities, it is assumed that the company will continue to exist after the current accounting period. Thus, the Going Concern Index (GCI) calculation is Total Assets / Total Debts.

2. Current Ratio: The current ratio is regarded as a fundamental instrument for assessing a company's short-term liquidity. Current Assets/ Current Liabilities is the formula for the current ratio.

3. Altman's Z Score: The traditional financial control techniques of current ratio, stock turnover, and other ratios were wildly inadequate in assisting managers in solvency management and in determining the accurate fiscal health status of a firm, Altman observed in the year 1983 as firms began adopting digital technology. Additionally, as opposed to medium- or long-term liquidity, conventional techniques were more concerned with the short-term liquidity position of a corporate concern. As a result, he advised adopting the Discriminate Analysis Technique of Z Score as a more accurate method of determining company solvency. The Z value is calculated using both internal financial control data and market-based valuations, making it a comprehensive indicator of the financial health of the corporation. In a 2019 study by Pai, it was discovered that the Z Score's accuracy ratio ranged from 87% to 100% in forecasting a firm's solvency.

4. Enyi's Relative Solvency Ratio (RSR): Relative Solvency Ratio (RSR), a tool for firm-based discriminant analysis, was established by Enyi in 2008 to evaluate a company's working capital needs. The Relative Solvency Ratio compares the Actual Working Capital of the firm with the Required Working Capital while taking into account the operational scale and relative liquidity of the organisation. The RSR model was found to have a prediction rate of 42% to 96% in Pai's study from the year 2019.

5. Operational Breakeven Point (OpBEP): Operational Breakeven Point theory serves as the foundation for Enyi's Relative Solvency Ratio. The Operational Breakeven Point is the point at which the whole cumulative production, marketing, and administrative costs and losses for the learning period equal the cumulative contribution margin on recovered production outputs (Enyi, 2005). In other words, it is the point at which the company has generated enough

earnings to pay for all directly relevant expenses. The number of manufacturing cycles is used to calculate the OpBEP. As in this study, these cycles are typically assessed in terms of weeks.

6. Mark-up Ratio: When calculating the operational break-even point, the mark-up ratio is crucial. The mark-up ratio reveals the management's skill and competency in effectively managing the company and setting pricing to support cost recovery and profit maximisation. By dividing the Profit before Tax by the Total Operating Cost, one can calculate the mark-up ratio.

7. Digital Transformation Gains Index (DTGI): The study's measurement of the gains that accrue to a company as a result of the adoption of digital technology in its operations uses the Digital Transformation Gains Index. A company's operational performance and profitability are both impacted when it transitions to digital. Therefore, changes in both the capital turnover ratio and return on capital employed are taken into account when calculating the DTGI. Gains are calculated and the difference between the pre- and post-digital characteristics is found.

8. Market-Induced Solvency ratio (MISR): The going concern ratio fully disregards the market value of the shares and is solely based on the intrinsic qualities of the company. In order to get around this limitation, this study applies the same ratio but takes market value into account. The Market-Induced Solvency Ratio is the name given to this. This ratio is more accurate as a going concern measurement tool because it is based on both intrinsic and market values.

Sample and data collection procedure

In order to validate the study model, information from specialists taking part in the digital transformation of the manufacturing industry was gathered using a self-administered questionnaire. The sampling strategy used in this experiment was judgmental sampling. The phrase "subjective/selective sampling" is frequently employed. This sampling strategy relies on the researcher's judgement in selecting the study's target population.

Data Analysis and Interpretation

Hypothesis: The following hypothesis were tested in the study:

Ho1: A firm's longevity is not significantly predicted by the Going Concern Index.

Ho2: A firm's current ratio is not a reliable indicator of its ability to remain solvent.

Ho3: The solvency of a corporation cannot be significantly predicted by Altman's Z Score.

Table 1 Descriptive Statistics

	Mean	Std. Deviation	N
MISR	3.15387	12.5736	8
RSR	1.00	.000	8
Z Score	1.32	.796	8
C Ratio	1.7954	.597832	8
GCI	2.4328	.732457	8
DTGI	13.0487	22.210573	8
Op BEP	3.8954	1.369742	8
Mark-up Ratio	.372698	.0872463	8

Table 2 Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.598a	.328	-1.142	17.367458	3.576
a. Predictors: (Constant), MarkUpRatio, DTGI, Z Score, GCI, OpBEP, C Ratio					
b. Dependent Variable: MISR					

Table 3 ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	558.241	5	118.586	.219	.794b
	Residual	687.839	3	372.752		
	Total	1387.093	8			
a. Dependent Variable: MISR						
b. Predictors: (Constant), MarkupRatio, DTGI, Z Score, GCI, OpBEP, C Ratio						

Table 4 Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.853	121.587		.006	.845		
	Z Score	-14.841	25.703	-1.074	-.554	.615	.072	12.342
	C Ratio	12.523	39.354	.524	.274	.798	.058	13.294
	GCI	-22.313	32.171	-1.341	-.779	.472	.036	14.421
	DTGI	.317	.823	.321	.249	.845	.159	5.345
	OpBEP	-5.707	19.4247	-.545	-.343	.638	.089	12.232
	MarkupRatio	141.752	373.758	.874	.345	.674	.039	23.479
a. Dependent Variable: MISR								

Analysis and Findings

The mean Market Induced Solvency Ratio for the companies under study was 4.16, as shown in Table 1 of the descriptive statistics. The mean Z Score value, which is based on all five parameters of liquidity, profitability, productivity, leverage, and operational efficiency, reported a value of 1.79 and indicates that the firms had a moderate health status. The mean Relative Solvency Ratio value was found to be 1, which indicates that all nine of the study's companies had a strong fiscal health status. All companies' average current ratios were determined to be 1.88, little below the ideal of 2:1. All of the companies under investigation have a fair probability of surviving past the current accounting period, according to the mean Going Concern Index of 2.54. Although the high value of standard deviation suggests that certain organisations are still lagging behind others in the adoption of digitization, the mean Digital Transformation Gain Index of 13.08 reveals that some firms under study have implemented one or more forms of digital transformation. In other words, the enterprises under consideration have achieved operational equilibrium at a low level, which in turn indicates efficiency in the management of people, machinery, and appropriate pricing strategy. The mean operational breakeven point of 2.9 cycles is deemed to be very good. The average Markup Ratio of 24.7% shows that there is little company-to-company variation in the operational cost recovery.

Regression Analysis

The regression analysis's findings provided valuable information about the connections between the seven research variables and the Market Induced Solvency Ratio.

The GCI value, which is not significant, has an inverse relationship with the MISR since it only assesses the firm's capacity to settle its debts with its accessible assets and ignores the market value of securities. Additionally, it only assesses the going concern in the short term and says nothing about the company's long-term viability. The Current Ratio is similarly unimportant due to its short-term focus. Even the Z Score, which has an inverse relationship with MISR, is discovered to be irrelevant. This shows that, while taking into account the market valuation of assets, Z Score is an essential but flawed indicator of MISR. As a result, the first three hypotheses—that the Going Concern Index, the Current ratio, and Altman's Z Score are not important indicators of a firm's solvency—are not disproved.

The study discovered that Enyi's Relative Solvency Ratio is not a relevant indicator of a firm's solvency because the Relative Solvency Ratio variable was omitted from the final model. This is highly surprising given that the firm's performance and solvency are significantly impacted by the availability of adequate working cash. Therefore, we cannot prove that Enyi's Relative Solvency Ratio is not an important indicator of a firm's solvency.

It is discovered that the MISR and the operational breakeven point have an inverse connection. This is due to the fact that a company's profitability and operational breakeven point are inversely correlated. The profitability of the company increases with a decrease in the operational breakeven point. The Operational Breakeven Point is not a major indicator of the firm's operational proficiency, however, and as a result, we are unable to reject the hypothesis that it is not.

It is discovered that MISR and the Digital Transformation Gain Index are positively correlated. This indicates that although the DTGI value is not determined to be large, as firms use digital technology in one way or another, it has a favourable impact on their performance. So, the claim that the Digital Transformation Gain Index cannot effectively capture the effects of digital transformation is not refuted by us.

Similar to the DTGI, it has been discovered that the Markup Ratio and MISR are positively correlated, with the higher the profitability ratio, the higher the business's solvency ratio. However, because it is a ratio that only takes into account internal operations and ignores the stock market value of the company, its predictive power was insignificant. Its worth is not thought to be important. Therefore, we cannot prove that the markup ratio is not a meaningful indicator of the firm's long-term viability.

Conclusion

The manufacturing industry is going through a digital transformation that will change the nature of the market. It is causing a significant change in how manufacturers create and supply goods to the market. This study closes a knowledge gap about the reasons behind digital transformation and how it impacts the financial performance of the manufacturing industry.

It is undeniable that, particularly in the post-covid era, the phenomenon of digitization by businesses is on the rise around the world, with various businesses embracing various disruptive technologies for accelerated sales and higher profitability. In order to quantify the advantages of digitization adoption for businesses, the study used dynamic measuring techniques such as the Z Score, Relative Solvency Ratio, Operational Break Even Point, and Digital Transformation Gains Index. Despite the fact that the majority of the study's hypotheses were found to be unfounded, the findings showed that many Indian businesses have adopted the new technology and are reaping the rewards (as seen by high Digital Transformation Gains Index scores) in contrast to businesses that have opted to remain neutral. This study contributes in several ways by analysing the factors that influence the adoption of digital transformation and the increased impact of those factors on organisational performance as a result of mediating effects. Additionally, the paper suggests adopting innovative performance appraisal measures as opposed to the outdated current ratio and acid test ratio methodologies, which are no longer reliable in the age of online shopping, cashless transactions, and lightning-fast internet transactions.

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