

A STUDY ON DIGITAL TRANSFORMATION AND ITS IMPACT ON FINANCIAL MANAGEMENT, CUSTOMER RELATIONSHIP AND OPERATIONAL PERFORMANCE OF ENTREPRENEURS IN COIMBATORE DISTRICT

Dr. R. Rajini* **Mr. F. Joseph****

**Associate Professor in Economics, Sri G.V.G. Visalakshi College for Women, Udumalpet Taluk, Tiruppur District, Tamil Nadu, India.*

***Research Scholar in Economics, Sri G.V.G. Visalakshi College for Women, Udumalpet, Tiruppur District, Tamil Nadu, India.*

Abstract

Digital transformation has become a vital driver of entrepreneurial competitiveness, efficiency, and sustainability in the contemporary business environment. Entrepreneurs increasingly depend on digital technologies to strengthen financial management practices, enhance customer relationship management, and improve operational performance. This study examines the impact of digital transformation on financial management, customer relationship, and operational performance of entrepreneurs in Coimbatore District, Tamil Nadu.

The study focuses on key dimensions such as adoption of digital payment systems, use of digital accounting and financial software, automation of business operations, efficiency of financial reporting, cash flow management, customer communication, grievance handling, and overall operational effectiveness. Primary data were collected from 175 entrepreneurs, including owners, managing partners, finance managers, operations managers, and senior executives, using a structured questionnaire. The data were analyzed using descriptive statistics, Kolmogorov–Smirnov normality tests, and one-way Analysis of Variance (ANOVA).

The findings reveal that operational performance variables do not follow a normal distribution, indicating heterogeneous levels of digital adoption among entrepreneurs. Mean score analysis indicates a moderate positive influence of digital transformation on automation, productivity, and overall operational performance, while improvements in cost reduction, inventory management, and operational efficiency remain uneven. ANOVA results demonstrate statistically significant differences among entrepreneurial roles for all selected digital transformation variables, highlighting the influence of managerial designation on perceptions and utilization of digital technologies.

The study concludes that although digital transformation has positively influenced financial management and customer relationship practices of entrepreneurs, its benefits are not uniformly realized across all entrepreneurial roles. The paper emphasizes the need for integrated and role-specific digital strategies, targeted capacity building, and supportive policy interventions to enhance entrepreneurial performance and ensure sustainable growth.

Keywords: Digital Transformation; Entrepreneurs; Financial Management; Customer Relationship Management; Operational Performance; Coimbatore District.

Introduction

Digital transformation has emerged as a strategic imperative for entrepreneurs operating small and medium-scale business ventures in an increasingly competitive and technology-driven economy. Rapid advancements in digital technologies such as cloud computing, digital payment platforms, enterprise

resource planning (ERP) systems, customer relationship management (CRM) software, data analytics, and automation tools have significantly altered traditional business models. Entrepreneurs are required to adopt and integrate these technologies to improve efficiency, responsiveness, and long-term sustainability.

Digitization has substantially transformed entrepreneurial financial management practices by enabling real-time accounting, digital invoicing, online banking, automated financial reporting, and improved cash flow monitoring. Similarly, customer relationship management has been strengthened through digital platforms that facilitate effective communication, personalized services, timely grievance redressal, and enhanced customer satisfaction. Operational performance has also benefited from digital transformation through process automation, productivity enhancement, cost optimization, and data-driven decision-making.

Coimbatore District is one of Tamil Nadu's prominent industrial and entrepreneurial hubs, with a large concentration of entrepreneurs engaged in manufacturing, engineering, textiles, trading, and service activities. Despite increasing access to digital infrastructure and policy initiatives promoting digitalization, the extent and effectiveness of digital transformation among entrepreneurs remain uneven. Differences in digital literacy, financial capacity, managerial orientation, and technological readiness influence adoption outcomes. In this context, the present study examines the impact of digital transformation on financial management, customer relationship management, and operational performance of entrepreneurs in Coimbatore District.

Objectives of the Study

1. To examine the impact of digital transformation on the financial management and customer relationship practices of entrepreneurs in Coimbatore District.
2. To analyze the influence of digital transformation on the operational performance of entrepreneurial ventures in Coimbatore District

Statement of the Problem

Digital transformation has become essential for entrepreneurs to remain competitive, efficient, and resilient in a rapidly evolving business environment. Digital accounting systems, online payment platforms, customer relationship management tools, and automated operational processes offer substantial potential to improve financial management, customer engagement, and operational efficiency. However, the extent to which entrepreneurs effectively adopt and utilize these digital technologies varies considerably.

In Coimbatore District, a major entrepreneurial and industrial hub, entrepreneurs operate across diverse sectors such as manufacturing, trading, and services. Despite growing digital infrastructure and government initiatives supporting digitalization, many entrepreneurs face challenges in integrating digital technologies into their business activities. Constraints such as limited digital skills, financial limitations, resistance to change, and lack of awareness regarding advanced digital tools hinder effective adoption. Furthermore, empirical studies examining the comprehensive impact of digital transformation on entrepreneurs—particularly in relation to financial management, customer relationships, and operational performance—remain limited. Accordingly, the present study addresses this research gap by analyzing whether and to what extent digital transformation influences financial management practices, customer relationship management, and operational performance of entrepreneurs in Coimbatore District.

Review of Literature

Review 1: Digital Transformation and Financial Management of SMEs

Bharadwaj et al. (2013) emphasized that digital transformation enhances organizational and entrepreneurial performance by improving financial transparency, accuracy, and strategic control. The adoption of cloud-based accounting systems, automated financial reporting, and digital payment technologies enables entrepreneurs to access real-time financial information, improve budgeting accuracy, and strengthen compliance.

Trainor et al. (2014) examined the role of digital technologies in customer relationship management and found that social media platforms, mobile applications, and data analytics significantly enhance customer engagement, satisfaction, and retention. The study concluded that entrepreneurs who effectively integrate digital CRM tools gain sustainable competitive advantage.

Zhu and Kraemer (2005) analyzed the relationship between digital technology adoption and operational performance and reported that digital transformation improves process automation, inventory management, supply chain coordination, and productivity. The study highlighted that entrepreneurs leveraging digital technologies achieve reduced operational costs and improved organizational agility.

The existing literature clearly establishes the positive role of digital transformation in enhancing financial, customer-related, and operational outcomes. However, limited studies focus explicitly on entrepreneurs as the primary unit of analysis, particularly in a district-level Indian context, thereby justifying the relevance of the present study.

Research Methodology

The study adopts a descriptive and analytical research design to examine the impact of digital transformation on financial management, customer relationship management, and operational performance of entrepreneurs. The study is confined to Coimbatore District of Tamil Nadu. Primary data were collected from 175 entrepreneurs, including owners, managing partners, finance managers, operations managers, and senior executives, using a structured questionnaire.

A stratified random sampling technique was employed based on the nature of business (manufacturing, trading, and services) and size of entrepreneurial ventures (small and medium). Secondary data were collected from journals, books, government reports, and relevant publications. The collected data were analyzed using percentage analysis, mean and standard deviation, one-way ANOVA, and Kolmogorov–Smirnov normality tests.

Limitations of the Study

Despite careful planning, the study is subject to certain limitations:

- The study is confined to **entrepreneurs operating in Coimbatore District**; therefore, the findings may not be generalized to entrepreneurs in other districts, states, or regions with different socio-economic and digital environments.
- The study is based on **primary data collected from entrepreneurs and managerial personnel**, and the responses may reflect personal perceptions, experiences, or subjective judgments, which could introduce respondent bias.
- Due to **time and cost constraints**, the sample size was limited to **175 entrepreneurs**, which may restrict the extent of generalization of the results.

- The **rapid pace of technological change** in digital tools and platforms may affect the long-term relevance of the findings, as digital practices and adoption levels among entrepreneurs evolve continuously.
- Some **entrepreneurs were hesitant to disclose detailed financial and operational information**, which may have limited the depth of analysis related to certain financial management and operational performance variables.

Analysis and Interpretation of the Study

Table No.1, Designation of the Respondents

	Frequency	Percent
Owner	76	43.4
Managing Partner	32	18.3
Finance Manager	40	22.9
Operation Manager	20	11.4
Senior Executive	7	4.0
Total	175	100.0

The table shows that a majority of the respondents are **Owners (43.4%)**, followed by **Finance Managers (22.9%)** and **Managing Partners (18.3%)**. This indicates that the study largely reflects the views of **key decision-makers and financial authorities** within SMEs.

Table No.2, Nature Of Business

Nature of Business	Frequency	Percent
Manufacturing	117	66.9
Trading	36	20.6
Service	22	12.6
Total	175	100.0

The data reveal that **manufacturing enterprises dominate the sample (66.9%)**, followed by trading (20.6%) and service sectors (12.6%). This suggests that the findings of the study are primarily influenced by **manufacturing-oriented SMEs**.

Table No.3 size of Enterprise

	Frequency	Percent
SMALL	79	45.1
MEDIUM	96	54.9
Total	175	100.0

The table indicates that **medium enterprises constitute a slight majority (54.9%)**, while **small enterprises account for 45.1%** of the sample. This reflects a **balanced representation of small and medium enterprises**, enabling meaningful comparison across firm sizes.

Null Hypothesis (H_0):

There is no significant difference among different categories of respondents (Owner, Managing Partner, Finance Manager, Operation Manager, Senior Executive) with respect to the selected digital transformation variables.

Alternative Hypothesis (H_1):

There is a significant difference among different categories of respondents with respect to the selected digital transformation variables.

Table No.4, Anova–Digital Transformation, Financial Management Practices And Customer Relationship Management

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Use of digital technologies for business operations	Between Groups	202.456	4	50.614	49.662	.000
	Within Groups	173.258	170	1.019		
	Total	375.714	174			
Adoption of digital payment systems	Between Groups	112.430	4	28.108	38.848	.000
	Within Groups	122.998	170	.724		
	Total	235.429	174			
Use of digital accounting/financial software	Between Groups	135.963	4	33.991	43.203	.000
	Within Groups	133.751	170	.787		
	Total	269.714	174			
Accuracy of financial records	Between Groups	84.314	4	21.079	47.005	.000
	Within Groups	76.234	170	.448		
	Total	160.549	174			
Timely preparation of financial reports	Between Groups	83.084	4	20.771	24.409	.000
	Within Groups	144.664	170	.851		
	Total	227.749	174			
Improved cash flow management	Between Groups	157.801	4	39.450	56.976	.000
	Within Groups	117.708	170	.692		
	Total	275.509	174			
Support for financial decision-making	Between Groups	50.434	4	12.609	9.562	.000
	Within Groups	224.160	170	1.319		
	Total	274.594	174			
Maintenance of customer records	Between Groups	141.576	4	35.394	39.570	.000
	Within Groups	152.058	170	.894		
	Total	293.634	174			
Improved customer communication	Between Groups	124.672	4	31.168	31.338	.000
	Within Groups	169.076	170	.995		
	Total	293.749	174			

Faster handling of customer complaints	Between Groups	110.556	4	27.639	35.280	.000
	Within Groups	133.182	170	.783		
	Total	243.737	174			
Increased customer satisfaction	Between Groups	91.920	4	22.980	46.954	.000
	Within Groups	83.200	170	.489		
	Total	175.120	174			

Source: Primary Data.

The ANOVA results clearly indicate statistically significant differences among respondent groups for all selected digital transformation variables, as the significance values are less than 0.05 in every case. This confirms that **entrepreneurial role and managerial designation** significantly influence perceptions and utilization of digital technologies related to business operations, financial management, and customer relationship practices among entrepreneurs. The findings reveal that although digital transformation has positively influenced areas such as cash flow management, financial reporting efficiency, and customer service practices, these benefits are **not uniformly experienced across all entrepreneurial roles**. Variations in digital awareness, functional responsibility, and decision-making authority contribute to differing levels of digital adoption and perceived benefits.

Overall, the results highlight the necessity for **integrated, role-specific digital strategies and coordinated implementation mechanisms** to ensure that the advantages of digital transformation are consistently realized across entrepreneurial functions and managerial levels.

Overall Conclusion for the ANOVA Analysis

The one-way ANOVA results demonstrate that all selected digital transformation variables exhibit statistically significant differences across respondent categories, leading to the **rejection of the null hypothesis in all cases**. This indicates that **entrepreneurial designation and managerial responsibility** play a decisive role in shaping perceptions of digital transformation outcomes related to financial management and customer relationship practices. The findings underscore that digital transformation outcomes among entrepreneurs are not homogeneous but are strongly influenced by role-specific engagement with digital technologies. To achieve comprehensive improvements in entrepreneurial performance, it is essential to promote **inclusive digital adoption, cross-functional integration, and targeted capacity-building initiatives** across all entrepreneurial roles.

Table No.5,Kolmogorov–Smirnov – test - Operational Performance

	N	Mean	Std. Deviation
Automation of operational processes	175	3.3657	1.11054
Improved operational efficiency	175	2.6114	1.09223
Reduction in operational costs	175	2.8400	1.24918
Increase in productivity	175	3.0571	1.25357
Improved inventory/resource management	175	2.5829	1.00730
Overall improvement in operational performance	175	3.1714	1.32365

The **Kolmogorov–Smirnov (K–S) normality test** is a statistical test used to examine whether a given set of sample data follows a **specified theoretical distribution**, most commonly the **normal distribution**. It compares the **empirical cumulative distribution function (CDF)** of the observed data with the **expected CDF of a normal distribution** having the same mean and standard deviation. The test measures the maximum difference between these two distributions to assess the degree of deviation from normality.

Hypotheses for the Table (Normality Test)

Null Hypothesis (H_0):

The data related to operational performance variables of entrepreneurs follow a normal distribution.

Alternative Hypothesis (H_1):

The data related to operational performance variables of entrepreneurs do not follow a normal distribution.

Operational Performance of Entrepreneurs

Table No.3

Particulars	N	Normal Parameters ^{a,b}		Most Extreme Differences			Test Statistic	SIG
		Mean	Std. Deviation	Absolute	Positive	Negative		
Automation of operational processes	175	3.37	1.11	0.25	0.15	-0.25	0.25	.000
Improved operational efficiency	175	2.61	1.09	0.24	0.24	-0.16	0.24	.000
Reduction in operational costs	175	2.84	1.25	0.16	0.16	-0.14	0.16	.000
Increase in productivity	175	3.06	1.25	0.19	0.19	-0.17	0.19	.000
Improved inventory/resource management	175	2.58	1.01	0.21	0.21	-0.17	0.21	.000
Overall improvement in operational performance	175	3.17	1.32	0.16	0.14	-0.16	0.16	.000

Based on the results of the Kolmogorov–Smirnov normality test, it is evident that all operational performance variables record significance values less than 0.05, indicating that the data do not follow a normal distribution. This confirms the presence of substantial variability and heterogeneity in the responses of entrepreneurs regarding the impact of digital transformation on operational performance. Accordingly, the non-normal distribution of the data justifies the application of non-parametric statistical techniques for further analysis in the study.

The non-normal nature of the data reflects differing levels of digital adoption, technological readiness, and operational maturity among entrepreneurs. While mean score analysis indicates a moderate positive influence of digital transformation on automation, productivity, and overall operational performance, comparatively lower mean values for operational efficiency, cost reduction, and inventory or resource management suggest uneven and partial realization of digital benefits. These variations highlight that

although digital transformation has begun to enhance operational performance among entrepreneurs, its impact remains inconsistent and is largely shaped by differences in managerial support, digital capability, and the extent of technology integration.

Suggestions Based on the Findings

Based on the ANOVA findings, which reveal statistically significant differences among respondent categories for all digital transformation variables, it is suggested that **entrepreneurs adopt role-specific digital strategies rather than a uniform or generalized approach**. Since perceptions, adoption levels, and usage of digital technologies vary across owners, managing partners, managers, and executives, **customized digital training and capacity-building programs** should be designed to enhance role-relevant digital awareness and practical competencies.

Greater involvement of **non-finance entrepreneurial roles** in digital financial and accounting systems is recommended to improve transparency, coordination, and consistency in financial management practices. Entrepreneurs should also strengthen **cross-functional integration of digital systems** to ensure that benefits related to customer relationship management, financial reporting, and decision-making are uniformly realized across entrepreneurial functions. Policymakers, industry associations, and support institutions may consider providing **targeted digital advisory services and mentoring support** to address role-based gaps in digital adoption and utilization.

Specific Suggestions

1. **Targeted Digital Training:**

Entrepreneurs should be provided with sector-specific and role-oriented digital training programs to ensure effective utilization of automation tools, financial software, and operational technologies.

2. **Gradual Automation Strategy:**

Entrepreneurs experiencing low operational efficiency should adopt a phased approach to automation, beginning with core operational processes to reduce resistance, implementation risk, and financial burden.

3. **Cost–Benefit Awareness:**

Entrepreneurs should be educated about the long-term cost savings, productivity gains, and strategic benefits of digital technologies to overcome hesitation related to initial investment costs.

4. **Improved Inventory and Resource Management:**

Adoption of digital inventory management systems and ERP solutions should be encouraged to enhance resource optimization, reduce wastage, and improve operational planning.

5. **Policy and Financial Support:**

Government agencies and financial institutions should provide targeted subsidies, low-interest credit facilities, and technical assistance to accelerate digital transformation among entrepreneurs.

Conclusion of the Study

Based on the analysis of the ANOVA results, the study concludes that **digital transformation has a significant influence on the financial management and customer relationship practices of entrepreneurs**, although the extent of its impact varies considerably across different entrepreneurial and managerial roles. The significant differences observed among owners, managing partners, finance

managers, operations managers, and senior executives indicate that digital technologies are **not uniformly adopted or utilized across entrepreneurial functions**.

The findings suggest that finance and operations-oriented entrepreneurial roles generally demonstrate higher engagement with digital tools related to accounting, digital payments, financial reporting, and process efficiency, whereas owners and senior executives tend to exhibit more selective or strategic usage patterns. This uneven adoption reflects differences in functional responsibility, digital familiarity, and decision-making priorities.

The study further reveals that while digital transformation has positively contributed to improvements in cash flow management, financial reporting efficiency, customer communication, and complaint handling, its potential to enhance overall customer satisfaction and decision-making effectiveness has not been fully realized across all entrepreneurial roles. This indicates that digital initiatives among entrepreneurs are often **function-specific rather than organization-wide**, limiting their strategic impact. Overall, the study establishes that **entrepreneurial role and managerial responsibility are significant determinants of perceptions and outcomes of digital transformation**. To achieve holistic improvements in operational performance and customer satisfaction, entrepreneurs must move towards **integrated, inclusive, and strategically aligned digital adoption strategies**, supported by role-based capacity building and stronger internal coordination. The findings underscore the importance of aligning digital technologies with entrepreneurial objectives to ensure sustainable growth and competitiveness in the digital era.

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