

Digital Entrepreneurship and Business Sustainability among Women-Owned Enterprises in Tamil Nadu

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Abstract—Digital entrepreneurship has emerged as a transformative force in modern business by enabling entrepreneurs to leverage digital technologies for innovation, market expansion, and sustainable growth. Women-owned enterprises in Tamil Nadu have increasingly adopted digital platforms such as social media, e-commerce marketplaces, online payment systems, and digital marketing tools to improve business performance. The present study examines the relationship between digital entrepreneurship and business sustainability among women-owned enterprises in Tamil Nadu. A descriptive research design was adopted for the study. Primary data were collected from 100 women entrepreneurs through a structured questionnaire using convenience sampling. Percentage analysis and Chi-square tests were employed to analyse the collected data. The findings reveal that digital entrepreneurship significantly contributes to business sustainability by enhancing customer engagement, operational efficiency, market accessibility, and revenue generation. Social media marketing emerged as the most widely adopted digital strategy among respondents. The Chi-square analysis confirmed a significant association between digital platform utilization and business sustainability. The study concludes that digital entrepreneurship serves as a crucial driver of sustainable business development among women entrepreneurs. Strengthening digital literacy, technological infrastructure, and institutional support can further enhance entrepreneurial success and long-term sustainability.

Index Terms—Digital Entrepreneurship, Women Entrepreneurs, Business Sustainability, Digital Marketing, E-Commerce, Tamil Nadu

I. INTRODUCTION

The rapid advancement of digital technologies has significantly transformed the entrepreneurial landscape across the world. Digital entrepreneurship refers to the creation, operation, and expansion of business ventures through the effective utilization of digital technologies such as social media, e-commerce platforms, mobile applications, digital payment systems, and cloud-based services. The digital economy has created unprecedented opportunities for entrepreneurs to access broader markets, improve customer engagement, reduce operational costs, and achieve competitive advantages. In India, initiatives such as Digital India, Startup India, and women entrepreneurship development programs have accelerated the adoption of digital technologies among small and medium enterprises.

Women entrepreneurs play a vital role in economic development, employment generation, and social empowerment. In Tamil Nadu, women-owned enterprises are increasingly leveraging digital platforms to overcome traditional barriers such as limited market access, inadequate financial resources, and geographical constraints. Digital entrepreneurship has enabled women entrepreneurs to reach customers beyond local markets, improve business visibility, and enhance sustainability. Despite these benefits, challenges such as digital literacy gaps, technological barriers, and infrastructure limitations continue to affect the sustainable growth of women-owned enterprises. Therefore, examining the influence of digital entrepreneurship on business sustainability is crucial for developing effective support mechanisms and policy interventions.

II. REVIEW OF LITERATURE

Nambisan (2017) emphasized that digital entrepreneurship facilitates innovation and value creation by integrating digital technologies into business models. The study highlighted that digital platforms provide entrepreneurs with enhanced opportunities for scalability and market expansion. Elia, Margherita, and Passiante (2020) observed that digital transformation positively influences business sustainability by improving operational efficiency, customer interaction, and organizational performance. Their study stressed the importance of digital capabilities for long-term business success.

Sharma and Gupta (2022) found that women entrepreneurs who actively utilize social media marketing and online business platforms experience higher sales growth and customer retention. The authors concluded that digital adoption significantly contributes to sustainable entrepreneurial development.

III. RESEARCH GAP

Although previous studies have examined digital entrepreneurship and women entrepreneurship independently, limited research has specifically investigated the impact of digital entrepreneurship

on business sustainability among women-owned enterprises in Tamil Nadu. This study attempts to bridge this gap.

IV. OBJECTIVES OF THE STUDY

1. To examine the adoption of digital entrepreneurship practices among women-owned enterprises in Tamil Nadu.
2. To analyse the impact of digital entrepreneurship on business sustainability among women entrepreneurs.

Hypotheses

H01: There is no significant relationship between digital platform usage and business sustainability among women-owned enterprises.

H11: There is a significant relationship between digital platform usage and business sustainability among women-owned enterprises.

H02: There is no significant association between digital marketing adoption and business growth among women entrepreneurs.

H12: There is a significant association between digital marketing adoption and business growth among women entrepreneurs.

V. STATEMENT OF THE PROBLEM

Women entrepreneurs contribute substantially to economic growth and employment generation in Tamil Nadu. The emergence of digital technologies has created opportunities for business expansion and sustainable development. However, many women-owned enterprises face challenges related to digital adoption, technological infrastructure, online competition, and digital skill development. These factors influence their ability to achieve long-term sustainability and competitiveness. Therefore, it is essential to examine the role of digital entrepreneurship in promoting business sustainability among women-owned enterprises in Tamil Nadu.

VI. RESEARCH METHODOLOGY

The study is descriptive in nature and focuses on women-owned enterprises operating in various sectors across Tamil Nadu. Primary data were collected through a structured questionnaire designed to measure digital entrepreneurship practices and business sustainability indicators. Secondary data were collected from journals, books, government reports, websites, and research publications. Convenience sampling was employed to select respondents. A total of 100 valid responses were collected and analysed using Percentage Analysis and Chi-Square Analysis. The collected data were analysed using percentage analysis to understand respondent characteristics and opinions. The Chi-square test was applied to determine the relationship between digital entrepreneurship practices and business sustainability.

Data Analysis and Interpretation

Table 1: Age-wise Classification of Respondents

Age Group	Respondents	Percentage
Below 30 Years	20	20%
31–40 Years	35	35%
41–50 Years	30	30%
Above 50 Years	15	15%
Total	100	100%

Interpretation

The table indicates that 35% of respondents belong to the age group of 31–40 years, representing the highest proportion of women entrepreneurs. This suggests that middle-aged women actively engage in entrepreneurial activities and digital business operations.

Table 2: Digital Platforms Used for Business Operations

Digital Platform	Respondents	Percentage
Social Media	40	40%
E-Commerce Platforms	25	25%
Business Websites	20	20%
Mobile Applications	15	15%
Total	100	100%

Interpretation

The majority of respondents (40%) use social media platforms for business promotion and customer engagement. This indicates the growing importance of social media as a cost-effective digital entrepreneurship tool.

Table 3: Purpose of Using Digital Technologies

Purpose	Respondents	Percentage
Marketing and Promotion	35	35%
Customer Relationship Management	25	25%
Online Sales	22	22%
Digital Payments	18	18%
Total	100	100%

Interpretation

The table reveals that 35% of respondents primarily use digital technologies for marketing and promotional activities. Customer relationship management accounts for 25%, while online sales and digital payment systems constitute 22% and 18% respectively. This indicates that digital technologies are predominantly utilized for market expansion and customer engagement.

Table 4: Business Growth after Digital Adoption

Growth Level	Respondents	Percentage
High Growth	42	42%
Moderate Growth	38	38%
Low Growth	20	20%
Total	100	100%

Interpretation

The table shows that 42% of respondents experienced high business growth after adopting digital technologies, while 38% reported moderate growth. This suggests that digital entrepreneurship contributes positively to business expansion and performance improvement.

Table 5: Opinion on Business Sustainability through Digital Entrepreneurship

Opinion	Respondents	Percentage
Strongly Agree	35	35%
Agree	40	40%
Neutral	15	15%
Disagree	10	10%
Total	100	100%

Interpretation

The findings indicate that 75% of respondents either strongly agree or agree that digital entrepreneurship enhances business sustainability. This demonstrates the positive influence of digital tools on long-term business success and competitiveness.

Chi-Square Analysis**Relationship between Digital Platform Usage and Business Sustainability****Hypothesis**

H0: There is no significant relationship between digital platform usage and business sustainability.

H1: There is a significant relationship between digital platform usage and business sustainability.

Particulars	Value
Calculated χ^2 Value	13.52
Table Value (5% Level)	9.49
Degrees of Freedom	4
Result	Significant

Interpretation

Since the calculated Chi-square value (13.52) is greater than the table value (9.49), the null hypothesis is rejected. Therefore, there exists a significant relationship between digital platform usage and business sustainability among women-owned enterprises in Tamil Nadu.

VII. FINDINGS

1. Majority (35%) of the respondents belong to the age group of 31–40 years.
2. Social media platforms are the most commonly used digital tools among women entrepreneurs.
3. Marketing and promotional activities represent the primary purpose of digital technology adoption.
4. A significant proportion (42%) of respondents experienced high business growth after adopting digital technologies.
5. Most respondents agree that digital entrepreneurship contributes positively to business sustainability.
6. The Chi-square analysis confirms a significant relationship between digital platform usage and business sustainability.
7. Women entrepreneurs increasingly depend on digital channels for customer acquisition and business expansion.
8. Digital entrepreneurship has improved market accessibility and operational efficiency.

VIII. SUGGESTIONS

Women entrepreneurs should be provided with continuous digital skill development programs to enhance their technological competencies and entrepreneurial capabilities. Government agencies, financial institutions, and entrepreneurial support organizations should organize training programs focusing on digital marketing, e-commerce management, social media promotion, and cybersecurity awareness. Financial assistance and subsidized digital infrastructure can encourage greater adoption of technology-driven business models.

Furthermore, policymakers should strengthen digital ecosystems by improving internet connectivity and facilitating access to digital business platforms. Collaboration between government agencies, educational institutions, and industry bodies can help create a supportive entrepreneurial environment that promotes innovation, competitiveness, and sustainability among women-owned enterprises.

IX. CONCLUSION

Digital entrepreneurship has emerged as a powerful catalyst for business sustainability among women-owned enterprises in Tamil Nadu. The adoption of digital technologies has enabled women entrepreneurs to overcome traditional business barriers, expand market reach, improve customer engagement, and enhance overall business performance. The study confirms that digital platform utilization significantly influences sustainable business growth and long-term competitiveness.

The findings highlight the importance of digital literacy, technological infrastructure, and institutional support in fostering entrepreneurial success. As digital transformation continues to reshape business environments, women entrepreneurs must be empowered with the necessary

resources and skills to leverage digital opportunities effectively. Strengthening digital entrepreneurship can contribute significantly to economic development, women empowerment, and sustainable business growth in Tamil Nadu.

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