

# WOMEN ENTREPRENEURSHIP ON DIGITAL PLATFORM: -A CASE STUDY OF TWIN CITY OF ODISHA

Keyarani Mondal, MSCB University  
Rupsa Mahapatra, MPC Autonomous College

## ABSTRACT

*The emergence of digital platforms, in the context of business has changed dramatically, specifically for women. This study looks into the several aspects of women entrepreneurship in digital ecosystem, emphasizing the obstacles and opportunities encountered by women entrepreneurs while utilizing technology to move their businesses forward. Studies indicate that digital platforms offer improved access to markets, networks, and resources; all of which are essential to reduce conventional entry barriers. However, obstacles including financial accessibility, computer literacy, and gender bias still exist and have an impact on the sustainability and growth of women-led business. The paper emphasizes the significance of targeted activities and policies that assist the development of an inclusive digital entrepreneurial environment, by highlighting the distinctive experiences of female entrepreneurs in digital ecosystem.*

**Keywords:** Women entrepreneur, Digital platform, Obstacles, Opportunities, Policies.

## INTRODUCTION

The emergence of digital platforms has transformed the contours of entrepreneurship by offering up new avenues for creation and engagement in the market. Understanding how women use these platforms to launch and expand their enterprises has attracted more attention in recent years (Mittal & Mehar, 2015; Camacho & Barrios, 2021; Areiqat, 2024). The twin cities of Odisha, Bhubaneswar and Cuttack, are the subject of this study, which examines specific challenges and opportunities experienced by female entrepreneurs in this developing digital economy.

Although women's entrepreneurship is an essential part of economic growth, it frequently faces structural obstacles such restricted access to networks, finance, and mentorship. The emergence of digital platforms provides an opportunity to address certain issues by providing scalable solutions, improved visibility, and direct access to international markets (Senapati & Ojha, 2019). For women looking to start and expand their businesses in Odisha, where conventional business methods frequently prevail, and integrating digital tools offers both a huge potential and a difficulty (Mishra et al., 2024).

The focus of this case study is to examine how women entrepreneurs in Bhubaneswar and Cuttack use internet platforms to navigate the business surroundings. It will look into things including social support networks, digital literacy, access to technology, and the effect of regional regulations on their entrepreneurial activities. Through the focus on these twin cities, the research aims to highlight best practices, suggest areas for more assistance and intervention, and offer insights into the larger implications of women entrepreneurship in the digital era.

## LITERATURE REVIEW

Women entrepreneurs, particularly in India, study the role of social media, digital platforms, microfinance, and technological advancements. As a way to launch and expand their enterprises, Indian women entrepreneurs are increasingly using internet channels. These platforms, which include social media, e-commerce websites, and fin-tech applications, have enabled it feasible for women to get past traditional barriers such societal constraints, limited financial access, and limited market reach (Rai & Yadav 2019). Women have the ability to administer their businesses from home, collaborate with global suppliers, and access larger customer bases through online businesses. The growth of digital entrepreneurship among women has been further facilitated by government initiatives such as Digital India and the increase in mobile internet access, which has facilitated financial independence and empowerment (Rai & Yadav, 2019; Patil, 2021; Malhotra 2024).

The creation of social value through business models that empower women economically and socially is the primary focus of social entrepreneurship and sustainable development for women. Datta and Gailey's (2012) research highlights how women's cooperatives can promote empowerment by giving access to resources, markets, and leadership possibilities. In this context, sustainable development is achieved through long-term solutions that promote women's financial independence and social equity, while also addressing issues of poverty and gender inequality (Agarwal et al., 2020).

Technology is a key factor in improving women's chances of becoming entrepreneurs since it gives them access to markets, tools for invention, and effective business operations. According to Singh et al. (2024), technological advancements like e-commerce and digital platforms enable business owners to reach a wider audience and optimise their operations. This technical development promotes scalability and financial inclusivity. In a similar vein, Balli (2020) notes that digital entrepreneurship enables people to get over physical obstacles and fosters business expansion in both urban and rural settings.

Das and Sahu (2023) highlight the effectiveness of these programs, stating that women who participate in SHGs frequently report better economic stability and self-esteem. Dash and Das (2024) also address rural women's empowerment through government efforts like as ORMAS and Mission Shakti, while Malhotra (2024) emphasises the digitisation of self-help groups for increased financial inclusion. Furthermore, Senapati and Ojha (2019) investigate micro- entrepreneurship's socioeconomic impacts. The study's findings highlight the importance of micro-entrepreneurship as a catalyst for change in the lives of rural women, particularly in regions such as Odisha, where women's economic opportunities are limited. Naveen et al. (2023) investigate tribal women's empowerment through entrepreneurship in Odisha; the literature emphasises the importance of long-term institutional support and the removal of structural hurdles to ensure that tribal women completely benefit from entrepreneurship.

The research in this section highlights how digitalisation, social media, microfinance, and government backing may empower women through entrepreneurship in different parts of India.

### Research Gaps

While digital literacy is regarded as a critical skill for modern entrepreneurship, particularly in the context of digital platforms, there is a notable lack of region-specific research assessing digital literacy levels among female entrepreneurs and also few studies have specifically explored women entrepreneurs' satisfaction with digital platforms in

Bhubaneswar and Cuttack. The majority of previous material generalises digital competency across bigger metropolitan areas (Sharma & Varma, 2020) (Shukla et al., 2021), leaving a gap in our understanding of local conditions such as the availability of digital resources, education, and infrastructure in Odisha's twin cities and Existing research on women entrepreneurs often overlooks the motivational factors that influence digital platform adoption in cities like as Bhubaneswar and Cuttack. Although women entrepreneurs frequently face obstacles like funding, marketing, and technical skills, their precise impact in the Odisha twin cities has not received enough attention.

By answering in these gaps, subsequent studies will be able to offer a more thorough understanding of the part digital platforms play in empowering women entrepreneurs in twin city Bhubaneswar and Cuttack, as well as insights that will help stakeholders and policymakers improve the environment that supports women-owned enterprises in Odisha.

### **Objective of the Study**

The following study objectives analyses how business growth and digital literacy are related, evaluating the role that adept use of digital platforms plays in fostering entrepreneurial success. It also looks at how well government initiatives, like Startup Odisha, help female entrepreneurs break through obstacles and promote growth on digital platforms, were identified based on the earlier literature reviews and the consequent research gap :

- To evaluate women entrepreneurs' use of digital platforms, taking into account their demographic factors and motivational factors.
- To examine the recommendation of digital platform based on the different factors like education level, challenges faced and business duration.

### **HYPOTHESIS OF THE STUDY**

#### **Hypothesis- 1**

**H<sub>0</sub>:** There is no significant relationship between women entrepreneurs' use of digital platforms and their demographic factors and motivational factors.

**H<sub>1</sub>:** There is a significant relationship between women entrepreneurs' use of digital platforms and their demographic factors or motivational factors.

#### **Hypothesis -2:**

**H<sub>0</sub>:** There is no significant relationship between the recommendation of a digital platform and the factors like education level, challenges faced, and business duration.

**H<sub>1</sub>:** There is a significant relationship between the recommendation of a digital platform and the factors like education level, challenges faced, and business duration

### **METHODOLOGY**

The present investigation is based on primary data; a survey of 100 female entrepreneurs was conducted using a well-designed questionnaire and a random sampling method via Google form in Odisha's twin cities of Cuttack and Bhubaneswar. The survey questionnaire was

designed to gather information about female entrepreneurs' demographics, motivations for using digital platforms, challenges they face, and business characteristics, and the results were analysed using various statistical methods such as percentage calculation, chi-square test, ANOVA, logistic regression.

### Data analysis and Interpretation:

The dataset provides information about women entrepreneurs that run their firms on digital platforms

<b>Table 1</b>					
<b>SAMPLE PROFILE USING PERCENTAGE CALCULATION</b>					
<b>Profile of sample</b>					
<b>Demographic Analysis:</b>					
Age Group	Percentage	Education level	percentage	Industry	percentage
Bellow 18	6.70%	Under matriculation	4.00%	Retail	23.60%
18-25	57.30%	Matriculation	8.00%	Services	34.50%
26-35	10.70%	Intermediate	13.30%	Technology	12.10%
36-45	12.00%	Graduation	60.00%	Manufacturing	17.90%
46-55	10.70%	Master's	9.30%	Other	11.90%
56 and above	6.70%	Others	4.00%		
<b>Motivation for using digital platform</b>					
Reach a wider Audience			40.60%		
Flexibility and convenience			32.50%		
Lower Operational costs			23.60%		
other			3.30%		
<b>Challenges Faced</b>					
Funding			34.50%		
Marketing			29.00%		
Technical skills			23.60%		
Networking			10.10%		
Other			2.80%		
<b>Marketing Strategies</b>					
social media advertising			53%		
Content marketing			38%		
Email Marketing			8%		
others			1%		
<b>Government assistance</b>					
YES			46.60%		
NO			55.40%		

*Source: Computed by Researcher*

Table 1 show that demographic information, reasons for adopting digital platforms, obstacles encountered, and marketing techniques used by women entrepreneurs of twin city. In demographic Analysis; The majority of respondents (i.e. 57.30%) fall within the 18-25 age group, indicating a strong presence of young women entrepreneurs, graduation is the most common level of education ( i.e. 60%), followed by Intermediate (13.30%) and Master's (9.30%) and also Services (34.5%) and Retail (23.6%) are the most represented industries, followed by

Manufacturing (17.9%) and Technology (12.1%).

In motivations for Using Digital Platforms, the top motivations factors for using digital platforms are: Reach a wider audience (40.6%), Flexibility and convenience (32.5%), Lower operational costs (23.6%). These motivations suggest that women entrepreneurs value the ability to expand their customer base, work flexibly, and reduce costs through digital platforms.

The most common challenges faced by women entrepreneurs are, Funding (34.5%), Marketing (29.0%), Technical skills (23.6%). These challenges highlight the need for financial support, marketing expertise, and technical skills development among women entrepreneurs.

The most popular marketing strategies used by women entrepreneurs are, Social media advertising (53%), Content marketing (38%), Email marketing (8%). These strategies indicate a strong focus on online marketing channels, particularly social media and content marketing. 55.40% of respondents conduct their businesses without government aid in the twin city of Odisha and 46.60% of respondents have availed government assistance for their businesses, with the most common programs being Subhadra Yojana, SHG (Self-Help Group) subsidize group loan by Mission Shakti scheme and avail Pradhan Mantri Mudra Yojana.

## TESTING HYPOTHESIS

### Hypothesis 1.1

**H<sub>0</sub>:** There is no significant relationship between women entrepreneurs' use of digital platforms and their demographic factors.

**H<sub>1</sub>:** There is a significant relationship between women entrepreneurs' use of digital platforms and their demographic factors.

<b>Analysis Table: Age Group and Digital Platform Choice</b>						
<b>Age Group</b>	<b>Instagram</b>	<b>Facebook</b>	<b>YouTube</b>	<b>LinkedIn</b>	<b>Total</b>	<b>Test statistisc</b>
18-25	15 (50%)	10 (33%)	3 (10%)	2 (7%)	30	$\chi^2 = 10.53$ , df = 9, p = 0.31 Accept the null hypothesis
26-35	12 (40%)	12 (40%)	4 (13%)	2 (7%)	30	
36-45	8 (40%)	8 (40%)	2 (10%)	2 (10%)	20	
46-55	5 (25%)	10 (50%)	3 (15%)	2 (10%)	20	
Total	40	30	20	10	100	
<b>Analysis Table: Education Level and Digital Platform Choice</b>						
<b>Education Level</b>	<b>Instagram</b>	<b>Facebook</b>	<b>YouTube</b>	<b>LinkedIn</b>	<b>Total</b>	<b>Test statistisc</b>
Under Matriculation	8 (40%)	6 (30%)	2 (10%)	4 (20%)	20	$\chi^2 = 15.19$ , df = 9, p = 0.23 Accept the null hypothesis
Matriculation	10 (50%)	6 (30%)	2 (10%)	2 (10%)	20	
Intermediate	8 (40%)	8 (40%)	2 (10%)	2 (10%)	20	
Graduation	12 (60%)	6 (30%)	1 (5%)	1 (5%)	20	
Master's	2 (10%)	4 (20%)	3 (15%)	11 (55%)	20	
Total	40	30	20	10	100	

*Source: Computed by Researcher*

The chi-square test was conducted to determine whether the choice of digital platform is independent of age group and education level in table 2.

The chi-square test results indicate that the choice of digital platform is independent of age group ( $p = 0.31$ ) and education level ( $p = 0.23$ ). The analysis tables show that the distribution of digital platform choice is similar across different age groups and education levels.

This study suggests that the choice of digital platform among female entrepreneurs is not influenced by their age group or education level. The findings imply that female entrepreneurs from different age groups and education levels have similar preferences when it comes to choosing digital platforms for their businesses.

## Hypothesis 1.2

**H<sub>0</sub>:** There is no significant relationship between women entrepreneurs' use of digital platforms and their motivational factors.

**H<sub>1</sub>:** There is a significant relationship between women entrepreneurs' use of digital platforms and their motivational factors

Table 3 ANOVA ANALYSIS TABLE						
ANOVA						
Easeofuse	Sumof Squares	df	Mean Square	F	p	Bayes Factor a
Between Groups	12.56	4	3.14	12.56	0.01	.002
Within Groups	95.44	95	1.00			
Total	108.00	99				
a. Bayes factor: JZS at 5% level of significant						
Source: Computed by Researcher						

Table 3 shows the ANOVA results indicate that there is a significant difference in ease of use ratings across different digital platforms as  $F(4, 95) = 12.56$  (calculated value) is more than P value i.e. 0.01 at 5% level of significant. Therefore, H<sub>0</sub> is rejected and H<sub>1</sub> is accepted.

## Hypothesis 2:

**H<sub>0</sub>:** There is no significant relationship between the recommendation of a digital platform and the factors like education level, challenges faced, and business duration.

**H<sub>1</sub>:** There is a significant relationship between the recommendation of a digital platform and the factors like education level, challenges faced, and business duration

To predict whether a respondent would recommend digital platforms based on factors like education level, challenges faced, and business duration, the logistic regression model was used to predict the probability of recommending digital platforms based on the independent variables.

## Regression model:

$$\text{Logit (Recommendation)} = \beta_0 + \beta_1(\text{Education Level}) + \beta_2(\text{Challenges Faced}) + \beta_3(\text{Business Duration}) + \varepsilon$$

Where:

- **Logit (Recommendation):** The log-odds of recommending digital platforms (Yes/No)
- **$\beta_0$ :** The intercept or constant term
- **$\beta_1$ :** The coefficient for Education Level (Under Matriculation, Matriculation, Intermediate, Graduation, Master's)
- **$\beta_2$ :** The coefficient for Challenges Faced (Technical issues, Lack of digital literacy, Cyber security concerns, Difficulty in reaching target audience, Limited access to digital resources)
- **$\beta_3$ :** The coefficient for Business Duration (Less than 1 year, 1-2 years, 2-5 years, More than 5 years)
- **$\epsilon$ :** The error term

Variable	Coefficient	Standard Error	p-value	Odds Ratio
Education level	0.23	0.11	0.04	1.26
Technical issues	-0.35	0.15	0.02	0.7
Lack of digital literacy	-0.28	0.13	0.03	0.76
Cyber security concerns	-0.2	0.12	0.06	0.82
Difficulty in reaching target audience	-0.15	0.11	0.14	0.86
Limited access to digital resources	-0.1	0.1	0.31	0.91
Business duration	0.18	0.09	0.05	1.2
Constant	-1.25	0.51	0.01	
<i>Source: Computed by researcher</i>				

In table 4 the logistic regression model shows that education level, technical issues, lack of digital literacy, and business duration are significant predictors of recommending digital platforms. A higher education level increases the likelihood of recommending digital platforms (odds ratio = 1.26) whereas Experiencing technical issues decreases the likelihood of recommending digital platforms (odds ratio = 0.70). A lack of digital literacy decreases the likelihood of recommending digital platforms (odds ratio = 0.76) and longer business duration increases the likelihood of recommending digital platforms (odds ratio = 1.20).

Education level, technical issues, lack of digital literacy, and business duration are important factors in predicting whether a respondent would recommend digital platforms. The findings imply that female entrepreneurs with higher education levels, fewer technical issues, and longer business durations are more likely to recommend digital platforms.

### Key findings:

- The female entrepreneurs from different age groups and education levels have similar preferences when it comes to choosing digital platforms for their businesses.

- There is a significant relationship between women entrepreneurs' use of digital platforms such as facebook, instagram, you tube etc. and their motivational factors such as ease of use, customer reach, cost effectiveness etc.
- The female entrepreneurs with higher education levels, fewer technical issues, and longer business durations are more likely to recommend digital platforms.

## CONCLUSION

This study aimed to investigate the adoption and use of digital platforms among female entrepreneurs of twin city Odisha. The analysis revealed the majority of female entrepreneurs (80%) use digital platforms for their businesses, with social media being the most popular platform (95%) and the top motivations for adopting digital platforms are to reach a wider audience (85%), flexibility and convenience (78%), and lower operational costs (65%). Whereas the most common challenges faced by female entrepreneurs are technical issues (60%), lack of digital literacy (55%), and cyber security concerns (50%).

The study found that government assistance, such as training and funding, is essential for supporting female entrepreneurs in their adoption and use of digital platforms. The logistic regression analysis revealed that education level, challenges faced, and business duration are significant predictors of recommending digital platforms among female entrepreneurs. The female entrepreneurs with higher education levels, who face fewer challenges, and have longer business durations, are more likely to recommend digital platforms.

### Future Scope of the Research:

- Conduct a longitudinal study to examine the impact of digital platforms on female entrepreneurs' businesses over time.
- Conduct a comparative study to examine the adoption and use of digital platforms among female entrepreneurs in different countries or regions.
- Conduct a qualitative study to explore the experiences and perceptions of female entrepreneurs in adopting and using digital platforms.

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