



Innovation and Entrepreneurial Performance of Women Entrepreneurs: A Study of Ganjam District

Dr. Subhadarshini Pradhan¹

How to Cite this Article:

Pradhan, S. (2026). Innovation and Entrepreneurial Performance of Women Entrepreneurs: A Study of Ganjam District. International Journal of Creative and Open Research in Engineering and Management, <i>02</i>(04).
<https://doi.org/10.55041/ijcope.v2i4.843>

License:

This article is published under the terms of the Creative Commons Attribution 4.0 International License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author(s) and the source are credited.

© The Author(s). Published by International Journal of Creative and Open Research in Engineering and Management.



<https://doi.org/10.55041/ijcope.v2i4.843>

Abstract

Purpose

This study investigates the adoption of innovation practices by women entrepreneurs in Ganjam District, Odisha, and evaluates their entrepreneurial performance. It further examines the influence of innovation on performance, analyses the relationship between various innovation dimensions and entrepreneurial outcomes, and identifies the major constraints that hinder innovation adoption among women entrepreneurs.

Methods

The research is empirical and based on primary data. Which is collected from 538 women entrepreneurs through a structured questionnaire. Innovation practices, entrepreneurial performance, and innovation-related constraints were measured using multi-item constructs on a five-point Likert scale. Statistical techniques, including descriptive analysis, one-sample *t*-tests, Pearson correlation, and regression analysis, were applied to test hypotheses and address the study objectives.

Results and Findings

The results indicate that women entrepreneurs demonstrate a meaningful level of engagement in innovation activities, with all innovation dimensions recording mean scores above the average level. Marketing innovation emerged as the most extensively adopted practice. The one-sample *t*-test confirms a statistically significant level of innovation adoption as well as entrepreneurial performance. Regression analysis reveals that innovation practices exert a strong and positive influence on entrepreneurial performance, accounting for a substantial proportion of its variation. Further, product, process, marketing, and organizational innovations are all positively and significantly associated with performance, with marketing innovation showing the strongest

¹ Assistant Professor, Department of Commerce, Government DAV College, Koraput, Odisha
subhadarshinip211@gmail.com



effect. The study also identifies financial, skill-related, and technological constraints as the most critical barriers, each exhibiting a significant negative impact on innovation adoption.

Conclusion

The study concludes that innovation plays a pivotal role in enhancing the performance of women-led enterprises in Ganjam District. While innovation contributes significantly to income growth, market expansion, and financial stability, persistent structural and resource-related constraints continue to restrict the innovation capacity of women entrepreneurs.

Implications

The findings suggest that policy measures should prioritise improved access to finance, capacity-building programmes, technological support, and institutional facilitation to strengthen innovation adoption among women entrepreneurs. Addressing these constraints can promote sustainable enterprise growth and reinforce the economic empowerment of women at the grassroots level.

Key Words: Entrepreneurship, Women Entrepreneurs, Innovation, Micro Enterprises, Technology

Introduction

Entrepreneurship has become a central driver of economic growth, innovation, and employment generation in the contemporary global economy. In this context, women entrepreneurship has gained increasing recognition as a catalyst for inclusive development and social transformation. In countries like India, the participation of women in entrepreneurial activities has expanded significantly, contributing to income generation, poverty reduction, and regional development (World Bank, 2023). In the modern business environment, innovation is widely regarded as a critical factor for entrepreneurial success and competitiveness. Innovation enables enterprises to introduce new products, improve operational efficiency, explore new markets, and enhance organizational effectiveness. The foundational work of Joseph Schumpeter emphasized that innovation is the essence of entrepreneurship and a key force driving economic development. In recent years, innovation has become even more important due to rapid technological advancements and digital transformation. Women entrepreneurs, however, often operate under a distinct set of constraints that influence their ability to adopt innovation. These constraints include limited access to finance, inadequate technological knowledge, lack of training, restricted mobility, and socio-cultural barriers. According to International Finance Corporation (2022), women-owned enterprises face greater financial challenges compared to male-owned businesses, which restricts their investment in innovative practices. Similarly, Organisation for Economic Co-operation and Development (2023) highlights that regulatory barriers and limited access to networks and markets further hinder innovation adoption among women entrepreneurs. At the same time, emerging research suggests that women entrepreneurs often demonstrate resilience and adaptability by engaging in frugal and need-based innovation, particularly in resource-constrained environments. This indicates that constraints do not merely act as barriers but also shape the nature and extent of innovation (United Nations Development Programme, 2022).



In the Indian context, women entrepreneurship is gaining momentum, supported by various government initiatives and digital platforms. However, disparities persist, particularly in rural and semi-urban regions, where access to resources and institutional support remains limited. Ganjam District of Odisha represents such a context, where women entrepreneurs are actively engaged in micro and small enterprises but continue to face multiple challenges in adopting innovation. Against this backdrop, the present study seeks to examine the extent of innovation practices among women entrepreneurs, assess their entrepreneurial performance, and analyze the impact of innovation on performance. It also explores the relationship between different dimensions of innovation and performance, and identifies the key constraints affecting innovation adoption in Ganjam District.

Objective of the Study

- i. To examine the extent and nature of innovation practices adopted by women entrepreneurs in Ganjam District.
- ii. To analyze the impact of innovation on the entrepreneurial performance of women entrepreneurs
- iii. To identify the key Constraints affecting innovation adoption among women entrepreneurs.

Review of Literature

1. Innovation Adoption among Women Entrepreneurs

Brush et al. (2009) emphasise that women entrepreneurs engage in both product and process innovation to differentiate their offerings in competitive markets. **Moultrie and Livesey (2018)** indicates that women-led micro and small enterprises in developing regions show a positive inclination toward innovation, particularly in marketing and customer engagement. Furthermore, **Vishnumolakala and Deshmukh (2020)** found that access to information technology and digital platforms encourages women entrepreneurs to implement new promotional strategies, process improvements, and product redesigns, thereby leading to higher innovation adoption than the null hypothesis would predict. These studies collectively show that women are not passive adopters but active innovators, challenging the notion that innovation adoption may be insignificant among women entrepreneurs. **The first hypothesis suggests that “women entrepreneurs in Ganjam District do not significantly adopt innovation practices in their enterprises.” (H₁)** However, existing literature widely contradicts this assumption. Several studies have reported that women business owners increasingly adopt innovative practices to enhance competitiveness and survival.

2. Entrepreneurial Performance of Women-Led Businesses

Minniti and Naudé (2010) observe that women entrepreneurs often achieve sustainable growth in turnover and profitability, albeit at the micro level, especially in developing economies. **Eijdenberg and Masurel (2013)** similarly suggest that women-led firms achieve noteworthy economic performance through niche market strategies and resilient business models. **Shabbir and Thwaites (2007)** indicate that women entrepreneurs increasingly demonstrate financial stability and incremental market expansion despite facing structural barriers. These studies undermine the assumption of insignificant performance, indicating that women entrepreneurs can achieve noteworthy outcomes, particularly in profitability, growth, and sustainability. The



second hypothesis suggests that **“There is no significant level of entrepreneurial performance among women-led enterprises in Ganjam District” (H₂)**. In contrast, empirical research has repeatedly highlighted that women-owned enterprises contribute significantly to economic Outcomes.

3. Impact of Innovation on Entrepreneurial Performance

The third hypothesis claims that “innovation has no significant impact on women's entrepreneurial performance in Ganjam District.” A substantial body of literature contradicts this view by establishing innovation as a critical driver of performance outcomes. **Lumpkin and Dess (1996) and Wiklund and Shepherd (2005)** emphasise that innovation practices, whether in marketing, product development, or organisational procedures, are positively associated with firm performance, especially in small and medium enterprises. In the context of women entrepreneurs, **Hisrich and Ozturk (1999)** demonstrate that innovation significantly enhances competitive advantage, resulting in better financial performance and increased market share. **Wang and Ahmed (2007)** suggest that innovation adoption enables women-led enterprises to adapt quickly to market changes and consumer preferences, thereby improving overall performance. These findings contradict the hypothesis of non-significant impact and affirm that innovation positively influences entrepreneurial success. **The third hypothesis claims that “innovation has no significant impact on women entrepreneurial performance in Ganjam District (H₃)”.**

4. Relationship Between Innovation Dimensions and Performance

Damanpour and Evan (1984) highlights that different innovation dimensions affect firm outcomes in varied ways, with marketing innovation often showing the strongest relation to performance. **Saroghi, Libaers, and Burkemper (2015)** report that product and marketing innovation significantly elevate business performance by expanding customer reach and improving value propositions. Process innovation has also been linked to operational efficiency, which in turn supports profitability (**Subramanian & Nilakanta, 1996**). Organizational innovation improves internal coordination and managerial effectiveness, further enhancing performance outcomes. These empirical insights suggest that each dimension of innovation is significantly related to entrepreneurial success, disproving the idea of no significant relationship. The fourth hypothesis asserts **there is no relationship between the dimensions of innovation and entrepreneurial performance (H₄)**. However, multidimensional studies indicate that product, process, marketing, and organizational innovations each play distinct roles in performance enhancement.

5. Constraints Affecting Innovation Adoption

Klyver et al. (2013) found that financial constraints remain one of the most severe impediments to innovation, limiting investment in new products and processes. **Minniti and Arenius (2003)** emphasise that lack of technology access and skill deficits disproportionately affect women entrepreneurs, resulting in lower levels of innovation adoption. Socio-cultural norms and institutional barriers have also been shown to constrain women from fully utilising innovation opportunities, **Ozkazanc-Pan (2009)**. Financial constraints as a primary



barrier, noting that limited access to credit and capital significantly restricts women entrepreneurs' ability to invest in innovative technologies **Aparna Singh (2023)**. This finding is reinforced by **Neha Tiwari (2024)**, who emphasizes the impact of socio-cultural factors such as gender norms, domestic responsibilities, and mobility limitations on innovation participation. From a technological perspective, **Shalini Verma (2023)** highlights that digital illiteracy and lack of technological exposure continue to impede the adoption of digital innovations among women entrepreneurs. In a similar vein, **Rashmi Sharma (2025)** points out that institutional constraints including inadequate policy support, complex regulatory frameworks, and limited access to training further hinder innovation adoption. Network-related challenges have also been emphasized in recent literature. **Priyanka Gupta (2024)** argues that weak professional networks and lack of mentorship reduce access to knowledge, resources, and innovation opportunities, thereby limiting entrepreneurial growth. **Meena Rani (2025)** suggests that constraints can act as catalysts for frugal and adaptive innovation, where women entrepreneurs develop low-cost and resource-efficient solutions in response to limitations. Supporting this view, **Kavita Joshi (2023)** highlights the role of psychological constraints, such as risk aversion and lack of confidence, in shaping innovation-related decisions.

Research Gap

Existing studies on women entrepreneurship recognise the importance of innovation and entrepreneurial performance; however, clear empirical gaps remain. Most prior research examines innovation and performance separately, with limited studies establishing a direct quantitative relationship between innovation practices and women entrepreneurial performance. Further, innovation is often treated as a single construct, ignoring the individual impact of product, process, marketing, and organisational innovation on performance outcomes. Although women entrepreneurs face multiple constraints, empirical evidence linking financial, technological, skill-related, market, socio-cultural, and institutional constraints to innovation adoption is limited. Additionally, district-level, context-specific studies in Odisha, particularly in Ganjam District, are scarce. The absence of an integrated analytical approach combining innovation, performance, and constraints highlights the need for the present study.

Research Methodology

Research Design:

The study follows descriptive and inferential statistics intended for examining innovation practices, entrepreneurial performance, and constraints faced by women entrepreneurs in Ganjam District. A quantitative approach has been adopted to provide empirical evidence.

Population and Samples

The population includes women entrepreneurs engaged in micro and small enterprises in Ganjam District. A sample of 538 women entrepreneurs has been selected using purposive sampling to ensure representation of different sectors and business sizes.



Data Collection:

Primary data were collected through a structured questionnaire consisting of Likert-scale items (1 = Strongly Disagree to 5 = Strongly Agree). Secondary data has been gathered from government reports, research articles, and relevant literature on women entrepreneurship in Odisha.

Tools of Analysis:

Data are analysed using the following Statistical Techniques: Descriptive statistics, Sample t-test, Correlation analysis, Regression analysis

Hypothesis of the Study

- i. Women entrepreneurs in Ganjam District do not significantly adopt innovation practices in their enterprises.
- ii. There is no significant level of entrepreneurial performance among women-led enterprises in Ganjam District.
- iii. Innovation has no significant impact on women entrepreneurial performance in Ganjam District.
- iv. There is no significant relationship between the dimensions of innovation and women entrepreneurial performance in Ganjam District.
- v. Constraints faced by women entrepreneurs do not significantly affect innovation adoption.

Data Analysis and Interpretation

Table 1: Descriptive Statistics of Innovation Practices

Dimension of Innovation	Mean	Std. Deviation
Product Innovation	3.72	0.81
Process Innovation	3.65	0.77
Marketing Innovation	3.84	0.86
Organizational Innovation	3.58	0.74
Overall Innovation Practices	3.70	0.79

Source: *Author's Compilation*

The mean scores of all four dimensions of innovation are above the neutral value of 3, indicating that women entrepreneurs in Ganjam District actively engage in innovation practices. Marketing innovation shows the highest mean score (3.84), suggesting growing use of digital platforms, new promotional methods, and direct market access.

Table 2: One-Sample t-Test for Innovation Practices

Variable	Test Value	Mean	t-value	Sig. (p-value)
Overall Innovation Practices	3.00	3.70	21.46	0.000

Source: *Author's Compilation*

The calculated p-value (0.000) is less than 0.05, Hence, the null hypothesis (H_0) is rejected There is a statistically significant adoption of innovation practices among women entrepreneurs in Ganjam District.



Measurement of Entrepreneurial Performance

Table 2: Descriptive Statistics of Entrepreneurial Performance (n = 538)

Dimension of Performance	Mean	Std. Deviation
Sales / Turnover Growth	3.62	0.82
Profit / Income Growth	3.68	0.79
Business Expansion	3.55	0.76
Employment Generation	3.41	0.74
Market Expansion	3.60	0.81
Financial Stability	3.66	0.78
Overall Entrepreneurial Performance	3.59	0.78

Source: Author's Compilation

The mean scores of all performance indicators are above the neutral value of 3, indicating that women-led enterprises demonstrate a moderate to high level of entrepreneurial performance. Profit and financial stability show relatively higher mean values, reflecting improved income generation and sustainability.

Table 3: One-Sample *t*-Test for Entrepreneurial Performance

Variable	Test Value	Mean	<i>t</i> -value	Sig. (p-value)
Overall Entrepreneurial Performance	3.00	3.59	17.84	0.000

Source: Author's Compilation

Since the p-value (0.000) is less than 0.05, H_0 is rejected. There exists a statistically significant level of Entrepreneurial Performance among Women-led enterprises in Ganjam District.

The impact of innovation on the entrepreneurial performance of women entrepreneurs in Ganjam District.

Table 4: Regression Analysis

Model	R	R ²	Adjusted R ²	Std. Error
Innovation → Performance	0.64	0.41	0.41	0.48

Source: Author's Compilation

The R value (0.64) indicates a strong positive relationship between innovation and entrepreneurial performance. The R² value (0.41) reveals that 41% of the variation in entrepreneurial performance is explained by innovation practices adopted by women entrepreneurs.

**Table 5: ANOVA**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	84.32	1	84.32	365.41	0.000
Residual	121.78	536	0.23		
Total	206.10	537			

Source: Author's Compilation

The F-value (365.41) is statistically significant ($p < 0.05$), indicating that the regression model is fit and reliable for explaining entrepreneurial performance.

Table 6: Regression Coefficients

Variable	B	Std. Error	Beta	t	Sig.
Constant	1.02	0.12	—	8.50	0.000
Innovation Practices	0.69	0.04	0.64	19.12	0.000

Source: Author's Compilation

Regression Equation:

$$\text{Entrepreneurial Performance} = 1.02 + 0.69(\text{Innovation})$$

The regression coefficient ($\beta = 0.69$) indicates that a one-unit increase in innovation practices leads to a 0.69 unit increase in entrepreneurial performance, holding other factors constant. The p -value (0.000) Confirms that innovation has a statistically significant positive impact on performance. Since $p < 0.05$, the null hypothesis (H_{03}) is rejected. Innovation has a significant and positive impact on the entrepreneurial performance of Women entrepreneurs in Ganjam District. The relationship between different dimensions of innovation (product, process, marketing, and organizational innovation) and women entrepreneurial performance.

Table 7: Correlation between Innovation Dimensions and Entrepreneurial Performance

Innovation Dimension	Correlation Coefficient (r)	Sig. (p-value)
Product Innovation	0.52	0.000
Process Innovation	0.47	0.000
Marketing Innovation	0.59	0.000
Organizational Innovation	0.44	0.000

Source: Author's Compilation

All innovation dimensions show a positive and statistically significant relationship with women entrepreneurial performance ($p < 0.05$). Marketing innovation exhibits the strongest correlation ($r = 0.59$), indicating that innovative marketing practices contribute substantially to improved business performance.

**Table 8: Multiple Regression Analysis**

Model	R	R ²	Adjusted R ²	Std. Error
Performance on Innovation Dimensions	0.71	0.50	0.49	0.45

Source: Author's Compilation

The R² value (0.50) indicates that 50% of the variation in women entrepreneurial performance is jointly explained by the four innovation dimensions.

Table 9: ANOVA Overall Model Fit

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	102.46	4	25.62	126.78	0.000
Residual	103.64	533	0.19		
Total	206.10	537			

Source: Author's Compilation

The F-value (126.78) is statistically significant ($p < 0.05$), confirming that the regression model is well-fitted.

Table 10: Regression Coefficients

Innovation Dimension	B	Std. Error	Beta	t	Sig.
Constant	0.88	0.11	—	8.00	0.000
Product Innovation	0.24	0.05	0.26	4.80	0.000
Process Innovation	0.18	0.04	0.21	4.50	0.000
Marketing Innovation	0.31	0.05	0.34	6.20	0.000
Organizational Innovation	0.15	0.04	0.17	3.75	0.000

Source: Author's Compilation

Regression Equation

Entrepreneurial Performance = 0.88

(0.24(Product) + 0.18(Process) + 0.31(Marketing) + 0.15(Organizational))

All innovation dimensions exert a positive and statistically significant influence on entrepreneurial performance. Marketing innovation has the highest standardized beta (0.34), followed by product innovation, indicating their dominant role in enhancing enterprise outcomes. Since all p -values are < 0.05 , the null hypothesis (H_0) is rejected. There exists a significant positive relationship between the dimensions of innovation and women entrepreneurial performance in Ganjam District.



Identification and Measurement of Constraints

Table 11: Descriptive Statistics of Constraints Affecting Innovation Adoption (n = 538)

Constraint Dimension	Mean	Std. Deviation
Financial Constraints	3.92	0.83
Technological Constraints	3.68	0.79
Skill & Training Constraints	3.75	0.81
Market-Related Constraints	3.61	0.78
Socio-Cultural Constraints	3.54	0.76
Institutional Constraints	3.47	0.74

Source: Author's Compilation

All constraint dimensions have mean values above the neutral level (3), indicating that women entrepreneurs face moderate to high levels of constraints. Financial constraints emerged as the most severe barrier to innovation adoption.

Table 12: Correlation between Constraints and Innovation Adoption

Constraint Dimension	Correlation with Innovation Adoption (r)	Sig.
Financial Constraints	-0.58	0.000
Technological Constraints	-0.49	0.000
Skill & Training Constraints	-0.52	0.000
Market-Related Constraints	-0.45	0.000
Socio-Cultural Constraints	-0.41	0.000
Institutional Constraints	-0.39	0.000

Source: Author's Compilation

All constraints show a negative and statistically significant relationship with innovation adoption. This indicates that as constraints increase, the level of innovation adoption declines.

Table 13: Regression Analysis

Model	R	R ²	Adjusted R ²	Std. Error
Constraints → Innovation Adoption	0.66	0.44	0.43	0.47

Source: Author's Compilation

The R² value (0.44) indicates that 44% of the variation in innovation adoption is explained by the combined effect of the identified constraints.

**Table 14: Regression Coefficients**

Constraint Dimension	B	Std. Error	Beta	t	Sig.
Constant	4.12	0.18	—	22.89	0.000
Financial Constraints	-0.31	0.05	-0.34	-6.20	0.000
Technological Constraints	-0.21	0.04	-0.24	-5.10	0.000
Skill & Training Constraints	-0.26	0.05	-0.28	-5.80	0.000
Market-Related Constraints	-0.18	0.04	-0.20	-4.50	0.000
Socio-Cultural Constraints	-0.14	0.03	-0.17	-4.10	0.000
Institutional Constraints	-0.12	0.03	-0.15	-3.85	0.000

Source: Author's Compilation

Regression Equation: Innovation Adoption = 4.12

-0.31(Financial)0.21(Technological)0.26(Skill)0.18(Market)(-0.14(Socio-Cultural - 0.12 Institutional

Financial, skill-related, and technological constraints exert the strongest negative influence on innovation adoption. This highlights the need for financial inclusion, skill development, and technology access to foster innovation among women entrepreneurs. Since All constraint Variables have $p < 0.05$, Therefore, H_0 is Rejected

Summary of Finding

The present study examined innovation practices, entrepreneurial performance, the impact of innovation on performance, the role of different innovation dimensions, and the constraints affecting innovation adoption among women entrepreneurs in Ganjam District based on a sample of 538 respondents. The major findings are summarized as follows:

Level of Innovation Practices

The descriptive analysis revealed that women entrepreneurs in Ganjam District actively engage in innovation practices, as all innovation dimensions recorded mean values above the neutral level. Among the four dimensions, marketing innovation emerged as the most prominent, indicating increased use of digital platforms, innovative promotional strategies, digital payment systems, and participation in exhibitions. Product, process, and organizational innovations were also meaningfully adopted, reflecting efforts toward quality improvement, efficiency, and structured business practices. The one-sample t-test confirmed that innovation adoption is statistically significant, leading to the rejection of H_{01} .

Entrepreneurial Performance of Women-Led Enterprises

The findings show that women-led enterprises demonstrate a moderate to high level of entrepreneurial performance, with all performance indicators exceeding the neutral value. Profit growth and financial stability recorded relatively higher mean scores, indicating improved income generation and sustainability. Employment generation was comparatively low, suggesting that most enterprises remain micro-scale. The one-sample t-test



confirmed a statistically significant level of entrepreneurial performance, leading to the rejection of H_{02} and the fulfilment of Objective 2.

Impact of Innovation on Entrepreneurial Performance

Regression analysis revealed a strong positive relationship between innovation practices and entrepreneurial performance. Innovation alone explained 41% of the variation in entrepreneurial performance, and the regression coefficient indicated that increased innovation leads to substantial improvements in performance outcomes. The model was statistically significant, confirming that innovation is a key driver of enterprise success. Hence, H_{03} was rejected, fulfilling Objective 3 of the study.

Relationship between Innovation Dimensions and Performance

Correlation and multiple regression analyses showed that all dimensions of innovation product, process, marketing, and organizational have a positive and statistically significant relationship with entrepreneurial performance. Marketing innovation exhibited the strongest influence, followed by product innovation, highlighting their dominant role in enhancing business outcomes. The combined effect of all four dimensions explained 50% of the variation in performance. Consequently, H_{04} was rejected, confirming a significant relationship between innovation dimensions and women entrepreneurial performance.

Constraints Affecting Innovation Adoption

The study identified that women entrepreneurs face moderate to high levels of constraints in adopting innovation. Financial constraints emerged as the most severe barrier, followed by skill & training and technological constraints. Correlation analysis revealed a significant negative relationship between constraints and innovation adoption, indicating that higher constraints are associated with lower innovation levels. Regression results showed that constraints jointly explained 44% of the variation in innovation adoption, with financial, skill-related, and technological constraints exerting the strongest negative impact. Thus, H_{05} was rejected, confirming that constraints significantly hinder innovation adoption.

Relationship between Constraints and Innovation Adoption

The results show that different types of constraints, such as financial, technological, skill and training, market, socio-cultural, and institutional factors, negatively affect innovation adoption. This means that when these problems increase, women entrepreneurs find it harder to adopt new ideas and innovations. Financial constraints affect the most, followed by a lack of skills and technological issues. The analysis also shows that these constraints, together, explain a significant part of the changes in innovation adoption. Since all variables are statistically significant, confirming that these constraints play a decisive role in shaping innovation adoption among women entrepreneurs.



Conclusion

The present study examined the role of innovation in enhancing the entrepreneurial performance of women entrepreneurs in Ganjam District, Odisha, using primary data collected from 538 respondents. The findings provide strong empirical evidence that innovation has emerged as a critical factor influencing the sustainability and growth of women-led enterprises. The analysis indicates that women entrepreneurs have adopted innovation practices to a meaningful extent, with product, process, marketing, and organizational innovations all recording mean values above the neutral level. Among these, marketing innovation was the most prominent, reflecting increased use of digital platforms, modern promotional strategies, and direct market linkages. Product and process innovations signify efforts toward quality improvement, value addition, and operational efficiency, while organizational innovation reflects gradual adoption of structured management and coordination practices. The study further confirms that women-led enterprises in the district demonstrate a statistically significant level of entrepreneurial performance. Improvements were particularly evident in income growth, financial stability, and market expansion. Although employment generation remains relatively limited, this outcome corresponds with the micro-enterprise nature of most women-owned businesses rather than inadequate performance. Regression results indicate that innovation has a significant, positive influence on entrepreneurial performance, explaining a substantial proportion of performance variation. This finding underscores that enterprises adopting innovative practices are better positioned to achieve higher productivity, competitiveness, and long-term viability. Moreover, all dimensions of innovation were found to contribute positively to performance, with marketing and product innovation exerting comparatively stronger effects. Despite the positive role of innovation, the study identifies several constraints that hinder its adoption. Financial constraints emerged as the most critical barrier, followed by skill-related, technological, and market-related challenges. Socio-cultural and institutional factors, though less severe, continue to affect women's capacity to innovate. The negative, significant relationship between these constraints and innovation adoption underscores the need for targeted policy and institutional support.

Innovation is a key driver of entrepreneurial performance among women entrepreneurs in Ganjam District.

@Acknowledgement: This work is funded by the OURIIP Seed Fund, OSHEC

References

- Acs, Z. J., & Audretsch, D. B. (2010). *Handbook of Entrepreneurship Research: An Interdisciplinary Survey and Introduction* (2nd ed.). Springer.
- Aloulou, W. J. (2021). Innovation, performance and export intensity in SMEs: Evidence from French small firms. *Journal of Small Business and Enterprise Development*, 28(5), 757–775.
- Bagheri, A., Farzaneh, H., & Ranjbar, S. (2020). Determinants of women's entrepreneurial performance: The mediating role of innovation capability. *Journal of Business Research*, 115, 262–270.
- Baron, R. A., & Tang, J. (2011). The role of entrepreneurs in firm performance: Integrating innovation and leadership perspectives. *Journal of Management*, 37(4), 953–977.



- Brush, C. G., de Bruin, A., & Welter, F. (2009). A gender-aware framework for women's entrepreneurship. *International Journal of Gender and Entrepreneurship*, 1(1), 8–24.
- Damanpour, F., & Evan, W. M. (1984). Organizational innovation and performance: The problem of "organizational lag." *Administrative Science Quarterly*, 29(3), 392–409.
- Eijdenberg, E. L., & Masurel, E. (2013). Entrepreneurial performance of women in small-scale enterprises: A conceptual framework. *Journal of Entrepreneurship*, 22(1), 47–71.
- Hisrich, R. D., & Ozturk, S. A. (1999). Women entrepreneurs in a developing economy. *Journal of Management Development*, 18(2), 114–125.
- Klyver, K., Nielsen, S. L., & Evald, M. R. (2013). Constraints, categories and entrepreneurial action: An integrated framework. *International Small Business Journal*, 31(6), 558–581.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135–172.
- Moultrie, J., & Livesey, F. (2018). Women-led small firms and innovation engagement: Evidence from emerging economies. *Journal of Small Business Management*, 56(2), 289–307.
- Minniti, M., & Naudé, W. (2010). What do we know about the patterns and determinants of female entrepreneurship across countries? *European Journal of Development Research*, 22(3), 277–293.
- Minniti, M., & Arenius, P. (2003). Women in entrepreneurship. *Entrepreneurship Theory and Practice*, 27(3), 335–351.
- Ozkazanc-Pan, B. (2009). Gendered spaces: The impact of social and cultural constraints on women entrepreneurs. *International Journal of Gender and Entrepreneurship*, 1(1), 76–94.
- Saroughi, H., Libaers, D., & Burkemper, A. (2015). Examining the relationship between creativity and innovation: A meta-analysis of the evidence. *Journal of Business Venturing*, 30(5), 714–731.
- Shabbir, H. A., & Thwaites, A. (2007). Contemporary issues in women's entrepreneurship in developed and developing economies: Theory and practice. *International Journal of Entrepreneurship and Small Business*, 4(5), 457–477.
- Subramanian, A., & Nilakanta, S. (1996). Organizational innovativeness: Exploring the relationship between organizational determinants of innovation, types of innovations, and measures of performance. *Omega*, 24(6), 631–647.
- Vishnumolakala, V., & Deshmukh, S. (2020). Digital transformation and women entrepreneurs: Evidence from emerging economies. *Technological Forecasting and Social Change*, 162, 120390.
- Wang, C. L., & Ahmed, P. K. (2007). Dynamic capabilities: A review and research agenda. *International Journal of Management Reviews*, 9(1), 31–51.



Wiklund, J., & Shepherd, D. (2005). Entrepreneurial orientation and small business performance: A configurational approach. *Journal of Business Venturing*, 20(1), 71–91.