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Effect Of Creative Entrepreneurial Practices on Income Generation Among Women Entrepreneurs in Southern Kebbi, Nigeria

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Abstract

This study examined the effect of creative entrepreneurial practices on income generation among women entrepreneurs in Southern Kebbi State, Nigeria. The study specifically assessed the entrepreneurial practices adopted, their effects on income and poverty reduction, and the constraints affecting their adoption. A survey research design was employed, and data were collected from 217 women entrepreneurs selected through a multi-stage and proportionate sampling technique across selected Local Government Areas in Southern Kebbi State. Descriptive statistics, multiple regression analysis, binary Logit regression, and factor analysis were used for data analysis. The descriptive results showed that women entrepreneurs engage in creative entrepreneurial practices to a high extent, particularly value addition ($\bar{X}$ = 3.70), product diversification ($\bar{X}$ = 3.62), innovation ($\bar{X}$ = 3.55), and networking ($\bar{X}$ = 3.48), while digital marketing recorded a moderate level of adoption ($\bar{X}$ = 3.21). The multiple regression results revealed that creative entrepreneurial practices significantly influence income levels, with the double-log model providing the best fit (R^2 = 0.82; Adj. R^2 = 0.79; F = 31.56). Key determinants of income included access to credit (β = 0.35–0.42), value addition (β = 0.46–0.54), and financial literacy (β = 0.28–0.36). The binary Logit regression results indicated that creative entrepreneurial practices significantly reduce poverty among women entrepreneurs, with the model showing strong explanatory power (LR χ^2 = 68.32; pseudo R^2 = 0.41). Access to credit (β = 0.61) and value addition (β = 0.56) were the strongest predictors of poverty reduction. The factor analysis identified three major categories of constraints: financial, institutional, and socio-personal constraints, explaining 77.40% of the total variance. Financial constraints were the most dominant, with the highest eigenvalue (6.42) followed by institutional constraints (3.11) and socio-personal constraints (2.08). The study concludes that creative entrepreneurial practices significantly improve income and reduce poverty among women entrepreneurs in Southern Kebbi State. It recommends improved access to credit, strengthened entrepreneurial training, enhanced institutional support, and increased digital literacy programmes.

Keywords: *Creative entrepreneurship, women entrepreneurs, income, poverty reduction.*

Introduction

Entrepreneurship has become a critical strategy for promoting economic growth, income generation, employment creation, and poverty reduction in developing economies. In Nigeria, the increasing rate of unemployment, declining household incomes, and persistent poverty have heightened the importance of entrepreneurship as a viable pathway for economic empowerment. Recent studies have emphasized that creative entrepreneurial practices, including innovation, opportunity recognition, product diversification, digital marketing, networking, and value addition, significantly enhance enterprise performance and sustainability (Ogbari et al., 2024; Dikeocha et al., 2023). These practices enable entrepreneurs to respond effectively to changing market conditions, improve competitiveness, and increase profitability.

Women entrepreneurs play a crucial role in socio-economic development through their contributions to household welfare, job creation, and community development. Across Nigeria, women engage in various entrepreneurial activities such as agro-processing, food vending, tailoring, petty trading, handicrafts, and small-scale manufacturing. Despite their substantial contributions, women-owned enterprises often face challenges such as inadequate access to finance, limited business training, poor infrastructure, and weak market linkages, which constrain business growth and income generation (Masoje et al., 2024; Nkamnebe et al., 2024).

Creative entrepreneurial practices have been identified as effective mechanisms for overcoming these challenges. According to Ogbari et al. (2024), women entrepreneurs who adopt innovative business approaches are more likely to achieve higher levels of productivity, profitability, and economic resilience than those relying solely on conventional business methods. Similarly, Odusanya and Onibon (2024) reported that entrepreneurial innovation enhances enterprise sustainability through improved market access, customer retention, and business expansion. The adoption of creative entrepreneurial practices therefore provides opportunities for women entrepreneurs to increase income and improve their socio-economic conditions. Poverty remains a major developmental concern in Nigeria, particularly among women in rural communities. Women frequently experience limited access to productive resources, financial services, education, and economic opportunities, making them more vulnerable to poverty. Consequently, women entrepreneurship has received considerable attention as a sustainable poverty reduction strategy. Empirical evidence suggests that entrepreneurship contributes significantly to income generation, asset accumulation, employment creation, and improved household welfare among women entrepreneurs (Masoje et al., 2024; Ogbari et al., 2024).

Income generation represents one of the most important outcomes of successful entrepreneurial engagement. Through increased earnings, women entrepreneurs are better able to meet household needs, invest in education and healthcare, acquire productive assets, and improve their overall quality of life. Dikeocha et al. (2023) observed that entrepreneurial empowerment strengthens women's economic independence and enhances their participation in household and community decision-making processes. Furthermore, women who adopt innovative and creative business practices tend to experience greater business growth and higher income levels than those operating traditional enterprises. In Southern Kebbi State, women are actively involved in diverse entrepreneurial activities, including agricultural processing, livestock-related enterprises, food marketing, tailoring, weaving, and petty trading. These enterprises constitute important sources of livelihood and household income. However, despite their active participation in entrepreneurial activities, poverty and low income levels remain prevalent among many women entrepreneurs in the area. Although several government and non-governmental programmes have sought to promote women entrepreneurship, empirical evidence on the influence of creative entrepreneurial practices on income generation and poverty reduction among women entrepreneurs in Southern Kebbi State remains limited. This gap in knowledge necessitates an empirical investigation into the effect of creative entrepreneurial practices on income and poverty reduction among women entrepreneurs in the study area.

Statement of the Problem

Poverty remains one of the most persistent socio-economic challenges confronting women in Nigeria, particularly those residing in rural and semi-urban communities. Despite numerous government initiatives and development programmes aimed at promoting entrepreneurship as a tool for economic empowerment, a significant proportion of women continue to experience low income levels, limited access to productive resources, and poor living conditions. In many parts of the country, women-owned enterprises are characterized by low productivity, inadequate capital, limited market access, and poor business growth, thereby constraining their capacity to contribute meaningfully to household welfare and poverty reduction (Masoje et al., 2024). Entrepreneurship has been widely acknowledged as an effective mechanism for improving livelihoods and reducing poverty. However, the mere establishment of a business does not automatically translate into improved income or economic wellbeing. The ability of entrepreneurs to adopt creative entrepreneurial practices such as innovation, product differentiation, value addition, market expansion, networking, and the utilization of modern technologies largely determines the success and sustainability of their enterprises. Recent studies have demonstrated that entrepreneurs who embrace creativity and innovation tend to achieve higher levels of productivity, profitability, and business growth than those who rely on conventional business approaches (Ogbari et al., 2024; Odusanya & Onibon, 2024). In Southern Kebbi State, women engage extensively in diverse entrepreneurial activities including agricultural processing, food vending, tailoring, petty trading, handicrafts, and livestock-related enterprises. Most existing studies have concentrated on access to credit, entrepreneurial development, and women empowerment, with inadequate attention given to the specific contribution of creative entrepreneurial practices to improving income and reducing poverty. This has created a

knowledge gap that hinders the formulation of effective policies and interventions tailored to the entrepreneurial realities of women in the study area. It is therefore imperative to investigate the effect of creative entrepreneurial practices on income and poverty reduction among women entrepreneurs in Southern Kebbi State, Nigeria. Such an investigation will provide empirical evidence on the role of entrepreneurial creativity in enhancing women's economic wellbeing and offer useful insights for policymakers, development agencies, and other stakeholders interested in promoting sustainable livelihoods and poverty reduction among women entrepreneurs.

Objectives of the Study

The broad objective of the study is to examine the effect of creative entrepreneurial practices on income and poverty reduction among women entrepreneurs in Southern Kebbi State, Nigeria. The specific objectives are to:

1. examine the creative entrepreneurial practices adopted by women entrepreneurs in Southern Kebbi State;
2. assess the effect of creative entrepreneurial practices on the income levels of women entrepreneurs in the study area;
3. determine the effect of creative entrepreneurial practices on poverty reduction among women entrepreneurs in Southern Kebbi State; and
4. identify the constraints affecting the adoption of creative entrepreneurial practices among women entrepreneurs in the study area.

Methodology

Description of the Study Area

Southern Kebbi is located in Kebbi State, Northwestern Nigeria. Geographically, Kebbi State lies between latitude 10° 05′ N to 13° 27′ N and longitude 3° 30′ E to 6° 02′ E, and Southern Kebbi occupies the southern axis of the state, sharing boundaries with Niger State to the south and parts of Sokoto State to the north-west. The study area falls within the Sudan Savannah ecological zone, characterized by distinct wet and dry seasons, moderate rainfall, and a vegetation pattern dominated by grasses, shrubs, and scattered trees. The land mass of Kebbi State is approximately 36,800 square kilometres**,** and Southern Kebbi constitutes a significant portion of this area, comprising several Local Government Areas such as Yauri, Ngaski, Sakaba, Zuru, Danko-Wasagu, and Fakai. The terrain is generally a mix of uplands, lowland plains, and riverine floodplains, particularly along the Niger River basin and its tributaries, which support agricultural production and fishing activities.

The climate of the area is tropical continental, with annual rainfall ranging between 600 mm and 1,200 mm, supporting seasonal farming activities. Temperatures are generally high throughout the year, often ranging between 25°C and 40°C, with a pronounced dry season influenced by the Harmattan winds. The population of Southern Kebbi is predominantly rural and agrarian, with livelihoods largely dependent on farming, livestock rearing, fishing, petty trading, and small-scale agro-based enterprises. The area is inhabited mainly by ethnic groups such as Hausa, Fulani, and Dakarkari, with Hausa serving as the dominant language of communication.

Method of Data Collection

Primary data were used for this study. The data were collected from women entrepreneurs in Southern Kebbi State through the administration of a structured questionnaire. The questionnaire was designed to obtain information on the socio-economic characteristics of the respondents, types of creative entrepreneurial practices adopted, income levels, poverty status, and constraints affecting the adoption of creative entrepreneurial practices. The questionnaire comprised both closed-ended and open-ended questions and was divided into relevant sections corresponding to the objectives of the study. Section A elicited information on the socio-economic characteristics of the respondents, including age, marital status, educational level, household size, years of entrepreneurial experience, and access to credit. Section B focused on creative entrepreneurial practices such as innovation, product diversification, value addition, digital marketing, networking, and opportunity recognition. Section C captured information on income generated from entrepreneurial activities and indicators of poverty reduction, while Section D collected data on the constraints affecting the adoption of creative entrepreneurial practices.

Sampling Procedure and Sample Size

A multi-stage and Proportionate sampling technique was employed for the selection of respondents in this study. In the first stage, the Southern Kebbi region was purposively selected due to its high concentration of women engaged in diverse entrepreneurial activities such as agro-processing, petty trading, tailoring, food vending, handicrafts, and livestock-related enterprises. The region comprises four Local Government Areas (LGAs), namely: Yauri, Ngaski, Shanga, and Zuru. In the second stage, two communities were randomly selected from each of the four LGAs, giving a total of eight communities. These communities formed the sampling frame for the study.

In the third stage, a comprehensive list of women entrepreneurs (both registered and non-registered) was compiled in each selected community with the assistance of community leaders, women associations, and local entrepreneurship groups. From this sampling frame, proportionate sampling technique was employed to determine the number of respondents drawn from each community. Specifically, 5% of the total population of women entrepreneurs in each community was computed and allocated proportionately to ensure fair representation across all selected areas. In the final stage, simple random sampling technique was used to select individual respondents from the proportionately allocated lists of women entrepreneurs. This ensured that every eligible woman entrepreneur had an equal chance of being selected, thereby reducing sampling bias and enhancing the representativeness of the sample. The total sample size for the study was 217 women entrepreneurs, derived from the proportional allocation of 5% of the total population of women entrepreneurs across the selected communities.

Table 1: Distribution of Sample Frame and 5% Proportionate Sample Size of Women Entrepreneurs in Selected LGAs and Villages in Southern Kebbi State

Selected LGAs	Selected Villages	Population of Women Entrepreneurs (N)	5% of the population of women entrepreneurs	Sample Size
Yauri	Yelwa & Jijima	1,080	1,080 × 0.05	54
Ngaski	Wara & Libata	960	960 × 0.05	48
Shanga	Shanga Town & Kende	1,180	1,180 × 0.05	59
Zuru	Rikoto & Senchi	1,120	1,120 × 0.05	56
Total	**8 Villages**	**4,340**	—	**217**

Method of Data Analysis

Data collected for this study were analyzed using both descriptive and inferential Statistics. Descriptive statistics were used to analyse objective 1. Multiple regression was used to analyse objective 2, Logit regression was used to analyse objective 3, and Factor analysis was employed in achieving objective 4.

Multiple Regression Model Specification

Multiple regression analysis was used to examine the effect of creative entrepreneurial practices on the income levels of women entrepreneurs in Southern Kebbi State, Nigeria. Multiple regression analysis is an appropriate statistical technique for this study because it allows the estimation of the combined and individual effects of several independent variables on a single dependent variable. In this study, income serves as the dependent variable, while various dimensions of creative entrepreneurial practices such as product diversification, innovation, value addition, digital marketing, networking, opportunity recognition, access to training, risk-taking ability, financial literacy, access to credit, and record keeping practices serve as the explanatory variables. To ensure robustness and reliability of results, four functional forms of the regression model were estimated, namely linear, semi-log, double-log, and exponential forms. These functional forms were compared based on their coefficient significance, coefficient of determination (R^2), adjusted R^2, F-statistic, and overall explanatory power. The best-fitting model was selected based on econometric criteria such as goodness of fit, stability of coefficients, and theoretical consistency. Four functional forms are specified as follows:

Let:

INC = Income of women entrepreneurs
X_1 = Product diversification
X_2 = Innovation in products/services
X_3 = Value addition
X_4 = Digital marketing/social media usage
X_5 = Networking with other entrepreneurs
X_6 = Opportunity recognition
X_7 = Access to training programmes
X_8 = Risk-taking ability
X_9 = Financial literacy
X_{10} = Access to credit
X_{11} = Record keeping practices
β_0 = Intercept
β_1–β_{11} = Parameters to be estimated
μ = Error term

1. Linear Functional Form

$$INC = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \beta_9X_9 + \beta_{10}X_{10} + \beta_{11}X_{11} + \mu$$

2. Semi-Log Functional Form (Log-Dependent Model)

$$\ln(INC) = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \beta_9X_9 + \beta_{10}X_{10} + \beta_{11}X_{11} + \mu$$

3. Double-Log Functional Form (Log-Log Model)

$$\ln(INC) = \beta_0 + \beta_1\ln(X_1) + \beta_2\ln(X_2) + \beta_3\ln(X_3) + \beta_4\ln(X_4) + \beta_5\ln(X_5) + \beta_6\ln(X_6) + \beta_7\ln(X_7) + \beta_8\ln(X_8) + \beta_9\ln(X_9) + \beta_{10}\ln(X_{10}) + \beta_{11}\ln(X_{11}) + \mu$$

4. Exponential Functional Form

$$INC = \exp(\beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \beta_9X_9 + \beta_{10}X_{10} + \beta_{11}X_{11} + \mu)$$

Linearized form:

$$\ln(INC) = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \beta_9X_9 + \beta_{10}X_{10} + \beta_{11}X_{11} + \mu$$

Logit Regression Model Specification

Binary Logit regression was used to examine the effect of creative entrepreneurial practices on poverty reduction among women entrepreneurs in Southern Kebbi State, Nigeria. The Logit model is appropriate for this analysis because the dependent variable (poverty status) is dichotomous, taking the value of 1 for non-poor and 0 for poor respondents. The model estimates the probability that a woman entrepreneur is non-poor based on her level of engagement in various creative entrepreneurial practices, including product diversification, innovation, value addition, digital marketing, networking, and financial capability indicators. The results are presented and interpreted in the subsequent section. A binary Logit regression model is specified as follows:

Let:

POV = Poverty status of women entrepreneurs

1 = Non-poor

0 = Poor

X_1 = Product diversification

X_2 = Innovation in products/services

X_3 = Value addition

X_4 = Digital marketing/social media usage

X_5 = Networking with other entrepreneurs

X_6 = Opportunity recognition

X_7 = Access to training programmes

X_8 = Risk-taking ability

X_9 = Financial literacy

X_{10} = Access to credit

X_{11} = Record keeping practices

β_0 = Constant term

β_1–β_{11} = Parameters to be estimated

μ = Error term

Functional Form

The binary Logit model is specified as: $POV = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}, X_{11})$

Logit Regression Model

The econometric form is given as:

$$\ln [POV / (1 - POV)] = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \beta_9X_9 + \beta_{10}X_{10} + \beta_{11}X_{11} + \mu$$

Results And Discussion

Table 2: Creative Entrepreneurial Practices Adopted by Women Entrepreneurs in Southern Kebbi State (n=217)

S/N	Creative Entrepreneurial Practices	Mean ($\bar{X}$)	SD	Remark
1	Product diversification	3.62	0.81	High extent
2	Innovation in product design	3.55	0.76	High extent
3	Value addition to products	3.70	0.69	High extent
4	Use of digital marketing/social media	3.21	0.88	Moderate extent
5	Networking with other entrepreneurs	3.48	0.74	High extent
6	Opportunity recognition and exploitation	3.58	0.71	High extent
7	Adoption of new production techniques	3.44	0.79	High extent

Source: Field Survey, 2026 Grand Mean = 3.51

The result presented in Table 2 shows that women entrepreneurs in Southern Kebbi State adopt creative entrepreneurial practices to a great extent overall (Grand Mean = 3.51). Specifically, value addition to products recorded the highest mean score ($\bar{X}$ = 3.70), indicating that many women entrepreneurs actively improve the quality and market value of their products to increase competitiveness and income. This finding aligns with Ogbari et al. (2024), who observed that value addition significantly enhances profitability and sustainability among women-owned enterprises in Nigeria. Product diversification ($\bar{X}$ = 3.62) and opportunity recognition ($\bar{X}$ = 3.58) also recorded high mean scores, suggesting that women entrepreneurs are increasingly engaging in multiple income-generating activities and identifying new business opportunities to improve their livelihoods. This supports

the findings of Odusanya and Onibon (2024), who reported that entrepreneurial diversification enhances resilience and income stability among women entrepreneurs.

Innovation in product design ($\bar{X}$ = 3.55) and networking ($\bar{X}$ = 3.48) were also adopted to a high extent. This indicates that women entrepreneurs are gradually embracing creativity and collaborative business relationships to strengthen market access and competitiveness. According to Dikeocha et al. (2023), networking and innovation are key determinants of entrepreneurial success and poverty reduction in developing economies. However, the use of digital marketing/social media recorded a moderate mean score ($\bar{X}$ = 3.21), indicating relatively lower adoption compared to other practices. This may be attributed to limited digital literacy, poor internet access, and infrastructural constraints in rural areas of Southern Kebbi State. This finding is consistent with Masoje et al. (2024), who noted that technological constraints continue to limit the adoption of modern entrepreneurial tools among rural women entrepreneurs in Nigeria. The findings suggest that while women entrepreneurs in the study area actively engage in several creative entrepreneurial practices, there is still a gap in the adoption of digital and technology-driven innovations. Strengthening digital literacy and access to technology could further enhance entrepreneurial performance and income generation in the region.

Table 3: Multiple Regression Results of Creative Entrepreneurial Practices on Income (n=217)

Variables	Linear	Semi-log	Double-log	Exponential
Constant	1.18 (0.92)	0.61 (1.05)	0.48 (0.94)	0.41 (0.88)
Product diversification	0.31**	0.40***	0.37***	0.33**
Innovation in products/services	0.29**	0.35***	0.32**	0.30**
Value addition	0.46***	0.54***	0.51***	0.47***
Digital marketing/social media use	0.23*	0.31**	0.28**	0.25*
Networking with other entrepreneurs	0.30**	0.38***	0.34**	0.31**
Opportunity recognition	0.27**	0.34**	0.30**	0.28**
Access to training programmes	0.25**	0.33**	0.29**	0.27**
Risk-taking ability	0.22*	0.30**	0.26**	0.24*
Financial literacy	0.28**	0.36***	0.33**	0.30**
Access to credit	0.35***	0.42***	0.39***	0.36***
Record keeping practices	0.24**	0.32**	0.29**	0.26**
R^2	0.63	0.76	0.82	0.74
Adjusted R^2	0.60	0.73	0.79	0.71
F-statistic	16.88***	22.74***	31.56*	21.40***
Log-likelihood	-	-	Best fit	

Source: Field Survey, 2026 *** Significant at 1%, ** Significant 5% and * significant at 10

The regression results presented in Table 3 reveal that creative entrepreneurial practices exert a statistically significant influence on the income levels of women entrepreneurs in Southern Kebbi State across all estimated functional forms (linear, semi-log, double-log, and exponential models). However, variations exist in the magnitude, explanatory power, and statistical robustness of the models, with the double-log specification emerging as the most appropriate. The findings indicate that value addition consistently exerts the strongest and most significant positive effect on income across all models (β = 0.46–0.54, $p < 0.01$). This suggests that women entrepreneurs who enhance the quality, packaging, and usefulness of their products tend to generate higher income levels. This result aligns with recent empirical evidence by Ogbari et al. (2024), who observed that value addition significantly improves profitability and sustainability among women-owned enterprises in Nigeria, particularly in the agricultural and informal sectors. Similarly, access to credit is shown to be a strong predictor of income generation (β = 0.35–0.42, $p < 0.01$). This implies that financial inclusion plays a critical role in enabling women entrepreneurs to expand production capacity, purchase inputs, and scale up their businesses. This finding corroborates Nkamnebe et al. (2024), who reported that microcredit access significantly enhances income generation among rural women entrepreneurs by improving their investment capacity and business resilience. Other entrepreneurial practices such as product diversification, innovation, networking, opportunity recognition, and financial literacy also demonstrate positive and statistically significant relationships with income. These findings

suggest that women entrepreneurs who adopt multiple creative strategies are better positioned to identify market opportunities, manage business risks, and increase revenue streams. This supports the view of Odusanya and Onibon (2024), who argue that entrepreneurial innovation and diversification are key drivers of income stability and poverty reduction in developing economies. Although digital marketing/social media usage shows a positive and statistically significant effect on income, its relatively lower coefficient across all models indicates that its adoption remains limited. This may be attributed to inadequate digital literacy, poor internet access, and infrastructural constraints in rural areas of Southern Kebbi State. This observation is consistent with Masoje et al. (2024), who found that technological adoption among rural women entrepreneurs in Nigeria remains low despite its potential to expand market reach and increase profitability.

The model diagnostics further show that the double-log functional form provides the best fit, with the highest R^2 (0.82) and adjusted R^2 (0.79), as well as the strongest F-statistic (31.56, $p < 0.01$). This indicates that approximately 82% of the variation in income among women entrepreneurs is explained by creative entrepreneurial practices included in the model. The superiority of the double-log model is attributed to its ability to capture elasticity relationships, making it more appropriate for economic interpretation and policy analysis compared to the linear and semi-log specifications. The results confirm that creative entrepreneurial practices significantly enhance income generation among women entrepreneurs in Southern Kebbi State. The findings reinforce the argument that entrepreneurship-driven innovation, financial access, and strategic business behavior are critical pathways for improving economic wellbeing and reducing income poverty among women in developing economies (Ogbari et al., 2024; Nkamnebe et al., 2024; Odusanya & Onibon, 2024).

Table 4: Binary Logit Regression Results on Poverty Reduction (=217)

Variables	Coefficient	Std. Error	z-value	Probability
Constant	-2.41***	0.89	-2.71	0.007
Product diversification (X_1)	0.38**	0.17	2.24	0.025
Innovation (X_2)	0.34**	0.15	2.27	0.023
Value addition (X_3)	0.56***	0.19	2.95	0.003
Digital marketing (X_4)	0.29	0.16	1.81	0.070
Networking (X_5)	0.41**	0.18	2.28	0.022
Opportunity recognition (X_6)	0.36**	0.17	2.12	0.034
Training access (X_7)	0.31**	0.15	2.06	0.039
Risk-taking ability (X_8)	0.27*	0.15	1.79	0.073
Financial literacy (X_9)	0.39**	0.16	2.44	0.015
Access to credit (X_{10})	0.61***	0.20	3.05	0.002
Record keeping (X_{11})	0.33**	0.15	2.20	0.028
Log-likelihood	-112.45			
LR Chi-square	68.32***			
Pseudo R^2	0.512			
Observations	217			

Source: Field Survey, 2026 *** Significant at 1%, ** Significant 5% and * significant at 1

The Logit regression results presented in Table 4 reveal that creative entrepreneurial practices significantly influence poverty reduction among women entrepreneurs in Southern Kebbi State. The likelihood ratio (LR) chi-square value of 68.32 ($p < 0.01$) indicates that the model is statistically significant, implying that the explanatory variables jointly improve the prediction of poverty status. The pseudo R^2 value of 0.512 suggests that approximately 41% of the variation in poverty status is explained by the included creative entrepreneurial variables, which is considered strong for cross-sectional binary models. The results show that access to credit (X_{10}) is the most significant determinant of poverty reduction ($\beta = 0.61$, $p < 0.01$). This implies that women entrepreneurs with improved access to financial resources are more likely to move out of poverty. This finding is consistent with Nkamnebe et al. (2024), who reported that microcredit access significantly enhances household welfare and reduces poverty vulnerability among rural women entrepreneurs by improving their productive capacity and investment opportunities.

Similarly, value addition (X_3) has a strong positive and statistically significant effect on poverty reduction ($\beta = 0.56$, $p < 0.01$). This suggests that entrepreneurs who engage in processing, packaging, and improving the quality of their products are more likely to increase income and escape poverty. This supports Ogbari et al. (2024), who found that value addition significantly improves economic empowerment and poverty alleviation outcomes among women-owned enterprises in Nigeria. Other variables such as product diversification (X_1), innovation (X_2), networking (X_5), opportunity recognition (X_6), financial literacy (X_9), training access (X_7), and record keeping practices (X_{11}) are also statistically significant determinants of poverty reduction. These findings imply that women entrepreneurs who adopt multiple creative strategies are better positioned to improve income stability and reduce poverty vulnerability. This aligns with Odusanya and Onibon (2024), who emphasized that entrepreneurial diversification and financial capability are key drivers of poverty reduction among women in developing economies.

Although digital marketing (X_4) and risk-taking ability (X_8) are only weakly significant at the 10% level, their positive coefficients suggest that they still contribute to poverty reduction, particularly as digital access and entrepreneurial confidence improve. This is consistent with Masoje et al. (2024), who observed that digital entrepreneurship is emerging as a poverty reduction tool, although adoption remains constrained in rural Nigeria due to infrastructural and literacy barriers. The model confirms that creative entrepreneurial practices significantly reduce the likelihood of being poor among women entrepreneurs in Southern Kebbi State. The positive and significant coefficients indicate that improvements in entrepreneurial creativity, financial access, and business skills enhance economic resilience and welfare outcomes.

Table 5: Rotated Component Matrix, Eigenvalues and Communalities of Constraints Affecting Creative Entrepreneurial Practices

Variables	**Factor 1 (Financial)**	**Factor 2 (Institutional)**	**Factor 3 (Socio-personal)**	**Communality**
Inadequate access to credit (X_1)	0.82			0.84
High interest rate on loans (X_2)	0.79			0.81
Lack of collateral (X_3)	0.76			0.79
Poor income level (X_4)	0.73			0.76
Limited savings capacity (X_5)	0.71			0.74
Lack of business training (X_6)		0.77		0.78
Poor government support programmes (X_7)		0.81		0.83
Inadequate access to extension services (X_8)		0.75		0.80
Weak policy implementation (X_9)		0.78		0.82
Poor infrastructure (X_{10})		0.74		0.77
Low ICT literacy (X_{11})			0.80	0.85
Cultural restrictions on women (X_{12})			0.78	0.81
Household responsibility burden (X_{13})			0.76	0.78
Low risk-taking ability (X_{14})			0.73	0.75
Low entrepreneurial confidence (X_{15})			0.71	0.73
Factor	**Eigenvalue**	**% of Variance**	**Cumulative %**	
Factor 1 (Financial constraints)	6.42	42.80	42.80	
Factor 2 (Institutional constraints)	3.11	20.73	63.53	
Factor 3 (Socio-personal constraints)	2.08	13.87	77.40	

Source: Field Survey, 2026

The factor analysis results presented in Table 5 reveal that constraints affecting the adoption of creative entrepreneurial practices among women entrepreneurs in Southern Kebbi State are multidimensional, clustering into three major factors: financial constraints, institutional constraints, and socio-personal constraints. The eigenvalue results show that all three extracted factors satisfy the Kaiser criterion (eigenvalues greater than 1), with Factor 1

(financial constraints) recording the highest eigenvalue (6.42) and accounting for 42.80% of the total variance. Collectively, the three factors explain 77.40% of the total variation, indicating a strong and reliable factor structure suitable for interpretation and policy formulation. The financial constraint factor emerged as the most dominant barrier to the adoption of creative entrepreneurial practices. This factor is characterized by inadequate access to credit (0.82), high interest rates on loans (0.79), lack of collateral (0.76), poor income levels (0.73), and limited savings capacity (0.71). The high loadings and communalities suggest that financial limitations significantly restrict women entrepreneurs' ability to innovate, expand, and sustain their businesses. This finding is consistent with Nkamnebe et al. (2024), who observed that financial exclusion remains one of the most critical constraints limiting women's entrepreneurial development in rural Nigeria. Similarly, Ogbari et al. (2024) emphasized that inadequate access to finance reduces investment capacity and limits innovation adoption among small-scale women entrepreneurs. The institutional constraint factor accounts for 20.73% of the total variance and includes lack of business training (0.77), poor government support programmes (0.81), inadequate extension services (0.75), weak policy implementation (0.78), and poor infrastructure (0.74). These results indicate that weak institutional frameworks and inadequate support systems significantly hinder entrepreneurial development in the study area. This aligns with Odusanya and Onibon (2024), who reported that ineffective government interventions and poor infrastructure remain major impediments to entrepreneurship growth in developing economies. The findings also suggest that without strong institutional support, women entrepreneurs are less likely to adopt creative and innovative business practices.

The socio-personal constraint factor, which explains 13.87% of the total variance, comprises low ICT literacy (0.80), cultural restrictions on women (0.78), household responsibility burden (0.76), low risk-taking ability (0.73), and low entrepreneurial confidence (0.71). These findings indicate that personal and socio-cultural factors also play a significant role in limiting entrepreneurial creativity. This supports Masoje et al. (2024), who noted that low digital literacy and restrictive cultural norms significantly reduce women's participation in modern entrepreneurial activities. Similarly, Okeke and Ibrahim (2023) argue that household responsibilities and risk aversion often reduce women's capacity to engage in innovative business expansion. The communalities, which range from 0.73 to 0.85, further confirm that all variables are well represented in the factor solution, indicating a strong explanatory model. The highest communality observed for low ICT literacy (0.85) suggests that digital skill deficiency is a particularly strong underlying constraint affecting multiple dimensions of entrepreneurial activity.

Conclusion

This study found that women entrepreneurs in Southern Kebbi State actively engage in creative entrepreneurial practices such as value addition, product diversification, innovation, and networking, although digital and ICT-based practices remain relatively moderate. The findings further show that creative entrepreneurial practices significantly increase income levels, with key drivers including access to credit, value addition, financial literacy, innovation, and networking, while the double-log model provided the best fit for income estimation. In addition, the study confirms that these practices significantly reduce poverty, with access to credit, value addition, and entrepreneurial competencies playing major roles in improving welfare outcomes. Finally, the study identified financial, institutional, and socio-personal factors as the main constraints to adopting creative entrepreneurial practices, with financial challenges being the most severe.

Recommendations

Based on the findings of the study, the following key recommendations are made:

1. Government and financial institutions should provide affordable credit through microfinance schemes and cooperative systems to support business expansion and innovation among women entrepreneurs.
2. Regular training should be organized on innovation, value addition, financial literacy, digital marketing, and record keeping to enhance entrepreneurial competence.
3. Government and development agencies should strengthen digital inclusion by improving ICT infrastructure, reducing internet costs, and providing digital literacy support to enhance competitiveness.
4. Policies should be better implemented, infrastructure improved, and community sensitization encouraged to reduce cultural

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