

Research Paper



Assessing the impact of financial inclusion initiatives on the performance of women-owned enterprises in Gombe State, Nigeria

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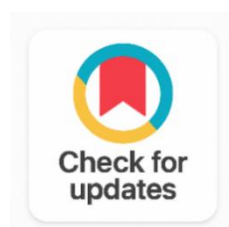
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ABSTRACT

The study investigated the impact of some financial inclusion programmes on the performance of women-owned businesses in Gombe state, Nigeria. The study was conducted on the aspects of NFIS, Conditional Cash Transfers (CCT), Digital Financial Services (DFS), Micro, Small and Medium Enterprises Development Fund (MSMEDF), and Women Entrepreneurs Finance Initiative (We-Fi). A descriptive survey design was used. The study adopted census method which involved 232 women entrepreneurs who were registered by the Nigerian Association of Small-Scale Industrialists (NASSI) Gombe State Chapter. A total of 232 questionnaires were sent, 209 questionnaires were returned and 204 valid questionnaires were analysed. The data were gathered using a structured questionnaire and subsequently analysed using descriptive statistics and multiple linear regression. The internal consistency, measured by the Cronbach's-Alpha coefficient, showed satisfactory values of 0.818. The regression model was statistically significant ($F = 27.152$, $p < 0.001$), $R = 0.638$, and $R^2 = 0.407$ meaning that the five financial inclusion initiatives explained 40.7% of the total variation in enterprise performance. NFIS ($\beta = 0.232$, $p = 0.025$), DFS ($\beta = 0.251$, $p = 0.038$), and MSMEDF ($\beta = 0.367$, $p < 0.001$) had significant positive effects, while CCT ($\beta = 0.032$, $p = 0.742$) and We-Fi ($\beta = 0.074$, $p = 0.304$) were positive but statistically insignificant. The research finds that financial inclusion can be a force to boost women entrepreneurs' enterprises if financial inclusion is translated into productive enterprise investment and usable financial resources. It suggests broadening the availability of secure digital financial services, enhancing access to gender-appropriate enterprise finance, increasing financial education, and minimizing unneeded collateral restrictions, and connecting financial services to business development assistance.

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1. INTRODUCTION

Financial inclusion has gradually become a crucial part of development policy since it has the potential to affect the capacity of households and enterprises to raise funds, manage liquidity, cope with economic shocks, and invest productively. Financial access such as savings, credit, payment, insurance and other financial products can help alleviate financial constraints and enhance the ability of small businesses to finance working capital and take advantage of expansion opportunities. Access to formal financial services can thus be a key determinant in business continuity and growth for micro and small businesses, where formal financial services are often in limited supply due to limited internal resources [1], [2].

Financial inclusion has a clear impact on women's enterprises. Women are actively involved in agriculture, trading, food processing, tailoring, manufacturing and service industry in micro, small and medium enterprise (MSME) in Nigeria. These businesses add to household income, jobs and local economy. Men though are often more constrained in their ability to access and utilise formal finance, compared to their female counterparts as women entrepreneurs. These include lack of collateral, low financial literacy, low access to information, high transaction costs, higher lending risk perception, household responsibilities and socio-cultural barriers [1], [3]. Thus, merely making financial services available formally doesn't ensure that women entrepreneurs can access the financial means to enhance their productivity.

The Nigerian policy landscape has thus far experienced a number of attempts to increase financial access. These involve the National Financial Inclusion Strategy (NFIS), digital financial services, agent banking, targeted intervention funds, microfinance programmes and initiatives that are specifically targeted at improving women's access to finance. The ultimate goal is to shift marginalized people and businesses into the mainstream of the financial system and empower them to access financial services to support productive activities. Digital finance has also increased the scope of financial inclusion by providing an opportunity for entrepreneurs to make payments, receive transfers, save and transact without relying on traditional banking systems entirely [2], [4].

Despite this, there is a differential in financial inclusion geographically and by socio-economic groups. Women entrepreneurs in under-served areas can encounter extra limitations such as low incomes, lack of financial skills, insufficient information, and financial affordability issues and challenges meeting conventional lending criteria. The obstacles are significant for northern Nigeria, where agriculture and informal trade and enterprise play significant roles in economic activities. These issues need to be considered against the background of the role of women in the agricultural production, processing, sale and small-scale commercial activities in Gombe State, particularly in food activities such as tailoring and sale of food items. Some of these businesses are very small and might be very sensitive to the availability of low-cost financing [2], [5].

The issue isn't that financial services may not be available, it is that women's business ownership may not be able to access, utilise and reap the benefits of them. A business owner might not be able to get credit that is reasonably priced. In the same way, an entrepreneur might have access to a digital payment service but not the financial skills or digital proficiency needed to make the payments productively. Eligibility criteria, lack of knowledge of the scheme, cumbersome application processes and collateral requirements can also limit the impact of targeted financing schemes on reaching potential beneficiaries. The concept of financial inclusion must, therefore, be viewed in two aspects: access and effective use.

This distinction is highlighted by the diversity of women's businesses. A short-term working capital may be needed for some businesses, and longer term investment finance for equipment, premises or expansion may be needed for other businesses. There can be varying types of enterprises with varying developmental stages and thus varying needs for financing. Digital payments and working capital for short-term requirements could be very helpful to a young retail venture, while an established manufacturing

company may need more extensive investment finance. Thus, the outcome of a financial inclusion project could vary from one to the other depending on the level of financial and operational needs of the project's target groups.

Empirical evidence to date suggests that access to finance has a positive impact on women's enterprise outcomes, but the size and impact of the link varies across contexts. In Nigeria and other developing countries, evidence shows that access to finance, digital financial services, financial literacy, and institutional support and targeted enterprise programmes can play a role in supporting business growth and empowerment [4], [5], [6], [7], [8]. Meanwhile there are other critical constraints such as high cost of borrowing, low awareness, poor infrastructure and socio-cultural barriers that do not allow for easy access to credit [9], [10], [11].

Although there is a body of literature, the combined impact of multiple financial inclusion mechanisms on women's businesses in the distinct institutional and economic context of Gombe State has received little attention. Previous research tends to focus on a specific part of financial inclusion, like credit access, financial literacy or digital finance. Others study women entrepreneurs in other geographical setting making it difficult to know whether the results of their research is applicable to Gombe State. The present study aims to fill this gap by exploring five facets of financial inclusion (NFIS, CCT, DFS, MSMEDF and We-fi) and their one-to-one association with women owned enterprise performance.

The study, therefore, aims at finding out if the financial inclusion programs being implemented have a significant impact on the performance of women-owned businesses in Gombe State. In particular, it analyzes the impact of NFIS, CCT, DFS, MSMEDF and We-Fi on enterprise performance. The study is based on the Resource Based View (RBV) theory that is valuable in giving a theoretical explanation on how enterprises' access to financial and technological resources can positively improve their productive capacities. The results should inform policy interventions, financial and development partners to support the economic participation and sustainability of women's businesses in Nigeria.

2. RELATED WORK

2.1 Conceptual Review

Financial inclusion is the ability of individuals and enterprises to access, use and pay for the right financial service at the right time and right price. It is not limited to having a bank account, but includes savings, credit, insurance, payment services, digital financial services and financial education [6], [7]. Such services can be beneficial to women's businesses by helping to enhance working capital management, investment, cash flows and ability of women businesses to weather financial shocks.

Financial inclusion initiatives are the policy, institutional and technological approach that aims at enhancing access to financial services. These are the National Financial Inclusion Strategy (NFIS), Conditional Cash Transfers (CCT), Digital Financial Services (DFS), MSME Development Fund (MSMEDF) and Women Entrepreneurs Finance Initiative (We-Fi) in Nigeria. The overall framework for expanding access to formal financial services is provided by NFIS and can support women entrepreneurs to build financial history and access payment and credit facilities and savings. While CCT primarily serve a welfare goal, they can also help to alleviate household liquidity constraints and provide some scope for enterprise investments. DFS could cut transaction costs and geographical constraints by facilitating digital payments, transfers and other financial transactions, but network constraints, digital literacy and transaction costs and trust can influence the extent to which these are used. Whereas, MSMEDF aims to be more enterprise oriented focusing on financing working capital, financing the expansion of businesses, and financing equipment, while We-Fi addresses gender-specific constraints on women's entrepreneurship and access to finance. These initiatives are effective, however, when they are known, accessible, affordable, eligibility criteria is met, geographical coverage is adequate and support is continuous and sufficient.

Enterprise performance refers to the success of an enterprise in achieving its economic and operational goals. These indicators include sales and profit growth, productivity, generation of jobs, growth of the market, innovation, business continuity and overall business viability [8], [9]. Performance is the interplay of internal characteristics (entrepreneurial competence, entrepreneurial experience, financial skills, record keeping) and external characteristics (market demand, infrastructure, government policies,

technology and competition) for women businesses. Availability of suitable financial resources is more crucial in enabling entrepreneurs to keep stocks, buy machines, pay operating costs and capitalise on market opportunities. Digital finance can also help to optimise performance by enabling quicker and more efficient transactions as well as reducing their cost, and financial literacy can help improve their budgeting, borrowing, and investment decisions.

Women owned enterprises are enterprises in which women own, manage or have significant control. They are active in agriculture, retail trade, manufacturing, food processing and services and make a significant and often overlooked contribution towards household welfare and employment and to local economic activity. However, women entrepreneurs may face more financial constraints due to less collateral ownership, less financial information, financial illiteracy and gender barriers. They may also be deprived of productive resources and business opportunity due to household responsibilities and socio-cultural norms. Some of these constraints can be mitigated through inclusion improvement programmes and the development of alternative financing mechanisms, digital payment systems, and savings facilities, and enterprise support. Formal availability does not always equal effective access, however, when programmes have restrictive collateral requirements, complex documentation, high collaterals or significant travel.

2.2 Theoretical Framework: The Resource Based View Theory

The theoretical underpinning of this study is based on the Resource Based View (RBV) espoused by Barney [12]. The theory offers an explanation of the difference in organizational performance in terms of the difference in the resources and capabilities controlled by firms. Resources that are valuable, scarce and hard to imitate and substitute may be a foundation for a sustainable competitive advantage.

The RBV can be applied to women owned businesses because finance is an integral part of the productive resource base of the business. Finance facilitates entrepreneurs buying inputs, holding inventories, buying equipment, hiring labour, and taking advantage of investment opportunities. This can therefore lead to restricting business activities and the productive potential of enterprise due to financial constraints. Financial inclusion programmes can also be seen as ways to facilitate access to these resources. The institutional setting for financial access is enhanced through NFIS, the technological and transactional dimension through DFS, the enterprise dimension through MSMEDF and the specifically targeted financial constraints through CCT and We-Fi.

The RBV also acknowledges that the availability of resources alone is not a guarantee of better performance. Resources need to be available, deployed in the right way and in conjunction with appropriate organisational skills. Financial literacy, entrepreneurial capacity, digital facilities, market conditions and socio-cultural factors could all shape the ability to make financial opportunities more productive for women businesses in Gombe State. Based on this theory, it is therefore expected that there is an improvement in the performance of the enterprises when the financial inclusion is effective, thus it is also suitable for this study to examine the individual and combined effects of NFIS, CCT, DFS, MSMEDF and We-Fi on women-owned enterprises.

2.3 Empirical Review

[13] Studied the access to finance and performance of WOSMEs in Borno state, Nigeria. The study employed descriptive and correlation-regression techniques to determine the relationships between access to finance and the other variables. The findings indicate that access to finance showed positive correlation/relationship with the revenue performance, employment, market reach, operational efficiency and competitiveness of the businesses. But the level of collateral and the seriousness of cost of credit limited women's access to formal credit. The study suggested other forms of collateral and greater institutional assistance.

To study the financial inclusion and women's economic empowerment of SMEs in Ethiopia, [14] followed a mixed-method approach and applied structural equation modelling. The results showed that there was a positive correlation between women's economic empowerment and financial inclusion. Collateral requirements, limited start-up resources, high costs of credit, and bureaucratic requirements and

low literacy levels limited participation, while government policy played an intermediary role. The study shows that greater availability of financial resources alone is not enough to achieve limited results.

[15] Studied the factors affecting women owned enterprises in informal sector in India. The study revealed that enterprise duration, entrepreneurial experience, productive resources, use of machinery, and enterprise capacity and ICT adoption were associated with formal financial inclusion using chi-square and logistic regression techniques. The research suggested that attention be paid to financial access, technology adoption, and enterprise capacity building simultaneously.

[16] Analysed the performance of women owned businesses in Wakiso District, Uganda. They found that economic empowerment, competence development, market information and social networks had a positive impact on enterprise performance. Yet, financial constraints, policy restrictions, socio-cultural restriction and lack of entrepreneurial skills were significant constraints. The study reinforces the thesis of providing financial support together with skills, information and institutional support.

[17] Studied the government policy and financial support programmes for women entrepreneurship in Nigeria. It has identified positive linkages between access to credit, education, involvement in government programmes, expansion of business, income generation and saving. But the lack of policy awareness, administrative problems and gender barriers reduced the effectiveness of government interventions.

[18] Studied women's leadership, financial literacy and the performance of SMEs in Nigeria. Their results showed that financial literacy and women's leadership had positive relationship with enterprise performance. Knowledge of finance improved budgeting; financial planning; investment choice and risk management and improved productivity and sustainability of businesses [19].

The empirical literature indicates that financial inclusion has a positive impact on enterprise performance, but does not do so automatically or in the same manner. The benefits depend on the kind of financial products used, their design, their affordability, their reach to the people and their entrepreneurship skills, and the institutional context in which they are used.

2.4 Gap in the Literature

The current literature contains three main gaps. First, the empirical literature tends to concentrate on one aspect of financial inclusion, e.g., access to credit, digital finance, financial literacy. Very little research has focused on compound impacts of combined financial inclusion measures on women-owned enterprises.

Second, there is a geographical divide. Some Nigerian studies have explored the women entrepreneurs within the following areas; Borno, Abuja and Lagos, and some international studies have looked into Ethiopia, India and Uganda. While these studies give evidence that is useful, the results are not automatically applicable to Gombe State as financial infrastructure, institutional arrangements, enterprise structure and socio-economic conditions are different across locations.

Third, there is a methodological gap. Descriptive statistics, correlation analysis, logistic regression, and structural equation modelling and mixed method approaches have been used in previous studies. The lack of empirical evidence that compares multiple financial inclusion mechanisms and identifies statistically which interventions are more associated with enterprise performance is still a need.

The present study fills these gaps by discussing NFIS, CCT, DFS, MSMEDF, and We-Fi on a single analytical framework based on the evidence of registered women-owned enterprises in Gombe State. This approach allows to separate initiatives that can be expected to be associated with strong independent links to enterprise performance and those that are expected to be associated with relatively less strong enterprise performance links.

3. METHODOLOGY

3.1 Research Design

This study is of descriptive survey research design which is used to investigate the impact of financial inclusion initiatives on women owned enterprises' performance in Gombe state. Studies that seek to obtain accurate information about existing conditions, practices, opinions and demographic variables

are appropriate for descriptive survey design [20]. This design is helpful for systematic collection of data and generalisation of the findings to the larger population. This is because the type of instrument used to collect factual data, which are structured instruments, that directly get information from the respondents themselves, and the study environment and variables are not manipulated.

3.2 Study Area

The study takes place in 'Gombe State' in the north-eastern part of Nigeria. The state has eleven Local Government Areas (LGAs): Akko, Balanga, Billiri, Dukku, Funakaye, Gombe, Kaltungo, Kwami, Nafada, Shongom and Yamaltu/Deba (National Bureau of Statistics [21]). The aim of the research is to focus on women owned enterprises in these LGAs. They are engaged in various industries such as agriculture, trade, manufacturing and service industries, and are essential for the economic progress of the region. Women entrepreneurs, despite their contributions, sometimes meet with obstacles like the difficulty of accessing funds, inadequate infrastructure, lack of business training etc. A number of financial inclusion mechanisms including mobile banking, microfinance institutions, cooperative societies and informal savings groups are expected to reduce some of these challenges.

3.3 Population of the Study

All 232, registered women owned enterprises in Gombe State as reported by Nigerian Association of Small-Scale Industrialists, Gombe State chapter were the study population. Due to the relatively small population size and manageable size of the study area, a full enumeration (census) approach was used rather than sampling. The approach avoided sampling bias, improved the representativeness and accuracy of results, and ensured the complete picture of women owned businesses by sector and location in the State.

3.4 Model Specification

The research design for this study is Multiple Linear Regression (MLR) model. A suitable model is utilised as it predicts the individual and combined effect of various financial inclusion variables on enterprise performance indicators such as profit growth, sales turnover, business expansion and employment generation. The model is estimated using the Ordinary Least Squares (OLS) estimation method, which is an appropriate and robust method for empirical analysis based on a survey, and satisfies important assumptions of linear relations, normality, lack of multicollinearity, and homoscedasticity [22].

Model Specification

The form of the model is:

$$WEP = f(NFIS, CCT, DFS, MSMEDF, WeFi)$$

The explicit econometric form of the model is given as:

$$WEP = \beta_0 + \beta_1 NFIS + \beta_2 CCT + \beta_3 DFS + \beta_4 MSMEDF + \beta_5 WeFi + \varepsilon$$

Where:

WEP = Women-Owned Enterprise Performance

NFIS = National Financial Inclusion Strategy

CCT = Conditional Cash Transfers

DFS = Digital Financial Services / Mobile Money

MSMEDF = Micro, Small and Medium Enterprises Development Fund with Gender Quota

WeFi = Women Entrepreneurs Finance Initiative Program

β_0 = Constant Term

$\beta_1 - \beta_5$ = Regression Coefficients

ε = Error Term

3.5 Sources and Methods of Data Collection

This study was based on primary data obtained from all 232 registered women business owners in Gombe State using structured questionnaires. Questionnaire items included closed ended and Likert scale questions relating to access to financial services, financial products usage, business challenges and

enterprise performance. A pilot test with 10 women entrepreneurs was carried out to improve the instrument and questionnaires were administered face-to-face by trained research assistants to increase the accuracy, consistency and reliability of data, which in line with the objectives of the study.

3.5.1 Instrument Design

The study used a structured questionnaire consisting of closed-ended and 5-point Likert scale questions to collect standardized data on respondents' characteristics, financial inclusion initiatives, and enterprise performance. Data were analysed with SPSS version 25. To improve the instrument, a pilot study was conducted with 20 woman entrepreneurs outside the study area and content validation was done by experts and reliability assessment was carried out by Cronbach's Alpha coefficient with minimum acceptable value of 0.70 and it was found to be adequate for the study.

3.6 Method of Data Analysis

The analysis is conducted and structured three stages:

3.6.1 Descriptive Statistics

Data characteristics of the study were summarized and presented in concise and clear manner using descriptive statistics. Frequencies and percentages were used to describe respondents' demographic characteristics and their access to financial services, while means and standard deviations were used to analyze scaled variables of enterprise performance, perceived effectiveness of financial inclusion initiative, and financial service usage. These techniques enabled the description of data distribution, central tendencies, variability and emerging trends that formed a basis for further inferential data analysis.

3.6.2 Inferential Statistics

Multiple Linear Regression (MLR) was used to test the study's hypothesis and investigate the impact of financial inclusion programs on the performance of women entrepreneurs in Gombe State. Multiple independent variables were simultaneously included in the model, and the regression coefficients (β) expressed the direction and strength of the relationships, while the p-values provided statistical significance. The percentage of variance in the enterprise performance accounted for by the explanatory variables was assessed using the coefficient of determination (R^2), and this indicated the basis for hypothesis testing.

4. RESULTS AND DISCUSSION

4.1 Data Presentation

This section presents the data collected for the study on the impact of financial inclusion initiatives on the performance of women-owned enterprises in Gombe State. The study population comprised 232 registered women-owned enterprises obtained from the Nigerian Association of Small-Scale Industrialists (NASSI, 2025).

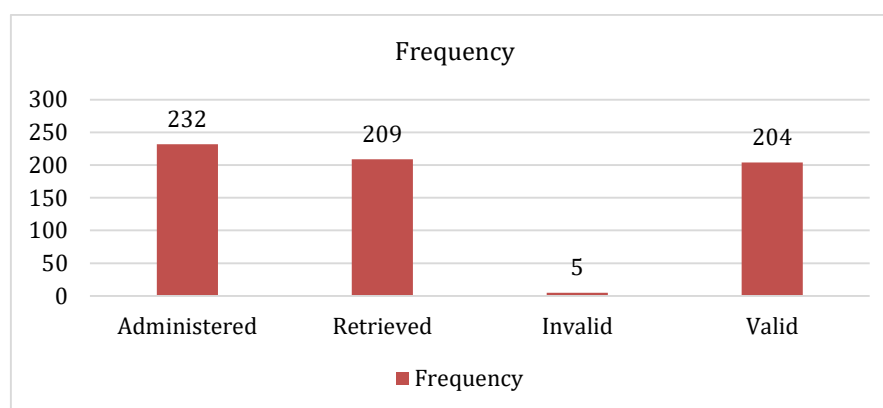


Figure 1. Shows the Simple Bar of Frequency by Questionnaire Status

As shown in Figure 1, A total of 232 questionnaires were administered, of which 209 were returned, representing a high response rate. After data screening, 5 improperly completed questionnaires were discarded, leaving 204 valid responses for the analysis. These valid responses formed the basis for addressing the study's objectives.

4.2 Socio-Demographic Characteristics

Table 1. Responses from Respondents on Socio-demographic Characteristics: Age, Marital Status and Educational Qualification

Variables	Frequency	Percent
Age		
Below 20	20	9.8
21-30	84	41.2
31-40	60	29.4
41-50	26	12.7
Above 50	14	6.9
Total	204	100.0
Marital status		
Married	112	54.9
Single	61	29.9
Divorced	8	3.9
Widowed	23	11.3
Total	204	100.0
Educational qualification		
No formal education	5	2.5
Primary	27	13.2
Secondary	58	28.4
Tertiary	91	44.6
Vocational Training	23	11.3
Total	204	100.0

Table 1 shows that the results, the majority of the respondents were of the economically active age group. The highest number of women were aged between 21 and 30 (41.2%) and the next largest group was aged between 31 and 40 (29.4%). 12.7% were women aged 41-50 years, and 9.8% were younger than 20, and 6.9% older than 50 years of age. The concentration among younger and middle-aged indicates that the enterprises were mostly run by women of working age. 54.9% of the respondents were married women, 29.9% single women. The widowed (11.3%) and divorced (3.9%) respondents were the second and third most common marital status respectively. The high percentage of married women among the respondents indicates that women business may be an important source of income to the household but marital status does not determine the effect of the role of women in the household on enterprise results. The educational distribution was relatively good. 44.6% of the women were tertiary educated and 28.4% were secondary educated. There were 11.3% who had been through vocational training, 13.2% through primary education and only 2.5% who had not had any formal education. In total 72.9% had at least secondary education. This educational attainment may help to understand financial products, digital services, record keeping and programme eligibility requirements.

Table 2. Responses from Respondents on Socio-Demographic Characteristics: Business Sector, Years in Business and Firm Size (Number of Employees)

Variables	Frequency	Percent
Business Sector		

Agriculture	59	28.9
Cathering	1	0.5
Clothing and Accessories	1	0.5
Enginearing services	1	0.5
Manufacturing	19	9.3
Services	48	23.5
Tailoring	2	1.0
Trade/Retail	72	35.3
Total	204	100.0
Years in Business		
1-3 Years	75	36.8
4-6 Years	57	27.9
Above 6 years	48	23.5
Less than 1 year	24	11.8
Total	204	100.0
Firm Size (Number of Employees)		
1-4 Employees	123	60.3
5-9 Employees	49	24.0
10-19 Employees	26	12.7
20 and Above	6	2.9
Total	204	100.0

As shown in Table 2, the results shows that most women-owned enterprises in Gombe State operate in the trade and retail sector (35.3%), followed by agriculture (28.9%), services (23.5%), manufacturing (9.3%), and other businesses (2.9%). The majority of the enterprises have been in operation for 1–3 years (36.8%) and are predominantly micro-enterprises employing 1–4 workers (60.3%). These findings indicate that women-owned businesses are generally young and small-scale, emphasizing the need for financial inclusion initiatives to improve access to credit, savings, and digital financial services that support business growth, employment creation, and sustainability.

4.3 Descriptive Data Analysis

4.3.1 Descriptive Statistics

Table 3. Descriptive Analysis of the Impact of Financial Inclusion Initiatives on the Performance of Women-Owned Enterprises in Gombe State

Variables	Mean	Std. Deviation	N
WEP	20.7500	3.40259	204
NFIS	10.6324	2.11659	204
CCT	10.5000	2.45451	204
DFS	10.7010	2.02540	204
MSMEDF	15.5931	3.77262	204
WeFi	18.1716	3.27025	204

There were 204 valid responses whose descriptive statistics are shown in Table 3. The mean score for Women Enterprise Performance (WEP) was 20.75 (SD = 3.40) suggesting high performance in enterprise performance overall. The most positive mean with score 18.17 was achieved by Women Entrepreneurs Finance Initiative (We-Fi) as a financial inclusion initiative, followed by MSMEDF with 15.59, while the other financial inclusion initiatives (DFS, NFIS and CCT) achieved positive mean scores (10.70, 10.63 and 10.50 respectively). The relatively low to moderate standard deviations suggest that the responses were mostly consistent, which is an indication that the respondents viewed financial inclusion initiatives as positively contributing to the performance and sustainability of women owned enterprises in Gombe State.

4.4 Multiple Regression Analysis

4.4.1 Impact of Financial Inclusion Initiatives on the Performance of Women-Owned Enterprises in Gombe State

Table 4. Multiple Regression Analysis on the Impact of Financial Inclusion Initiatives on the Performance of Women-Owned Enterprises in Gombe State

Variable	Coefficient	Standard Error	t-stat	Sig.
Constant	8.194	1.321	6.205	0.000
NFIS	0.232	0.099	2.350	0.025
CCT	0.032	0.099	0.322	0.742
DFS	0.251	0.120	2.087	0.038
MSMEDF	0.367	0.069	5.312	0.000
WeFi	0.074	0.074	1.031	0.304
F-Statistic		27.152 (sig. 0.000)		
R		0.638		
R^2		0.407		
R^2 adjusted		0.392		
Durbin Watson Stat.		1.682		

As shown in Table 4, the multiple regression results indicate that financial inclusion initiatives significantly influence the performance of women-owned enterprises in Gombe State. Specifically, the National Financial Inclusion Strategy (NFIS) ($\beta = 0.232$, $p = 0.025$), Digital Financial Services (DFS) ($\beta = 0.251$, $p = 0.038$), and the Micro, Small and Medium Enterprises Development Fund (MSMEDF) ($\beta = 0.367$, $p = 0.000$) have positive and statistically significant effects, with MSMEDF exerting the strongest influence. In contrast, Conditional Cash Transfer (CCT) and Women Entrepreneurs Finance Initiative (We-Fi) show positive but statistically insignificant effects ($p > 0.05$). The overall regression model is statistically significant ($F = 27.152$, $p = 0.000$), explaining 40.7% of the variation in enterprise performance ($R^2 = 0.407$), while the Durbin–Watson statistic (1.682) confirms the reliability of the model.

4.5 Discussion of Findings

The results show that financial inclusion programmes have a significant impact on improving the performance of women-owned businesses in Gombe State, which includes their access to financial services, growth opportunities, efficiency and sustainability. The performance of enterprises benefited significantly from the implementation of the National Financial Inclusion Strategy (NFIS) and Digital Financial Services (DFS); and there was a positive effect albeit not statistically significant from Conditional Cash Transfer (CCT) and Women Entrepreneurs Finance Initiative (We-Fi); and the MSME Development Fund (MSMEDF) had a positive effect. The study also found that the key challenges were high interest rates, collateral requirements, lack of financial literacy, lack of awareness, cultural factors and weak banking infrastructure. The results highlight the importance of improving the implementation of financial programmes for women, increasing women's financial literacy, expanding access to affordable credit, and strengthening financial inclusion policies to foster sustainable enterprise development and inclusive economic growth.

5. CONCLUSION

The study finds that the performance of women-owned businesses in Gombe State can be improved through financial inclusion programmes; National Financial Inclusion Strategy (NFIS), Digital Financial Services (DFS) and the MSME Development Fund (MSMEDF) are significant tools that help improve the growth of businesses, business productivity and sustainability. The Conditional Cash Transfer (CCT) and Women Entrepreneurs Finance Initiative (We-Fi) proved to be beneficial, but were not statistically significant because of implementation issues. The study suggests more effectively promoting

financial literacy, building the size of digital financial services, improve the accessibility of low-cost financial credit, streamline financial loan procedures, increase women-friendly financial programmes and develop financial infrastructure for sustainable entrepreneurship, financial empowerment and inclusive economic development.

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Author Contributions Statement

Name of Author	C	M	So	Va	Fo	I	R	D	O	E	Vi	Su	P	Fu
Yahaya Ismail	✓	✓	✓	✓	✓	✓		✓	✓	✓			✓	
Ben Obi		✓		✓		✓		✓	✓	✓	✓	✓	✓	
Oladele O. Aluko	✓		✓	✓	✓		✓			✓	✓		✓	

C : Conceptualization

M : Methodology

So : Software

Va : Validation

Fo : Formal analysis

I : Investigation

R : Resources

D : Data Curation

O : Writing - Original Draft

E : Writing - Review & Editing

Vi : Visualization

Su : Supervision

P : Project administration

Fu : Funding acquisition

Conflict of Interest Statement

The authors declare that there is no conflict of interest.

Informed Consent

Informed consent was obtained from all individual participants included in the study.

Ethical Approval

This study was conducted in accordance with the ethical standards of the University of Abuja and followed national research ethics guidelines. Ethical clearance was obtained prior to the commencement of data collection.

Data Availability

The data supporting the findings of this study are available from the corresponding author upon request.

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