Roles of Women Empowerments on Entrepreneurial Development in Hong LGA of Adamawa State

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Abstract
This study examined the influence of women empowerment on entrepreneurial development in Hong Local Government Area of Adamawa State. It focused on the effects of access to finance, financial literacy, marketing skills, management skills, and women empowerment on entrepreneurial growth. The study adopted a quantitative research design, and data were collected from women entrepreneurs using structured questionnaires and analyzed using econometric techniques. The findings revealed that access to finance, financial literacy, and marketing skills had positive and statistically significant effects on entrepreneurial development, while women empowerment and management skills had negative but statistically insignificant effects. The model showed good explanatory power, with a McFadden R-squared value of 0.619140, indicating that the explanatory variables accounted for about 61.91% of the variation in entrepreneurial development. The study concludes that improving access to finance, financial literacy, and marketing capabilities is essential for enhancing women's entrepreneurial development in Hong Local Government Area. It recommends strengthening financial support programmes, providing continuous entrepreneurship training, and improving managerial and marketing capacity among women entrepreneurs.

Keywords: *Women empowerment, entrepreneurial development, financial literacy, access to finance, marketing skills, management skills.*

1.1 Introduction

Women entrepreneurship has become a major driver of economic growth, poverty reduction, employment generation, and sustainable development across the world. Globally, women own approximately one-third of all businesses, and more than 274 million women are engaged in entrepreneurial activities. According to the Global Entrepreneurship Monitor (GEM), women account for nearly 49 percent of the world's entrepreneurial population, although they continue to face significant challenges in accessing finance, business education, management training, and markets. The World Bank estimates that eliminating gender disparities in economic participation could add trillions of dollars to the global economy. Nevertheless, women entrepreneurs continue to face barriers such as inadequate financial literacy, poor management capabilities, limited access to credit, and insufficient marketing knowledge, which constrain business growth and sustainability. Recognizing the strategic role of women in economic development, several international organizations have introduced policies and programmes to promote women's entrepreneurship. The United Nations Sustainable Development Goal (SDG) 5, the Women Entrepreneurs Finance Initiative (We-Fi), the International Labour Organization (ILO**)** entrepreneurship programmes, and the World Bank women empowerment initiatives have focused on improving women's access to finance, entrepreneurial training, and market opportunities. Despite these efforts, the International Finance Corporation (IFC) estimates that women-owned Micro, Small and Medium Enterprises (MSMEs) still face a financing gap of over US$1.7 trillion globally. This indicates that although previous interventions have increased awareness and participation, they have not adequately addressed the underlying challenges of financial literacy, business management, market access, and sustainable financing that continue to hinder women's entrepreneurial development (International Finance Corporation 2024). In developing countries, women-owned Micro, Small and Medium Enterprises (MSMEs) contribute significantly to employment generation, poverty reduction, and household income. However, the entrepreneurial performance of women remains constrained by inadequate business knowledge, weak managerial capacity, poor marketing strategies, and limited access to formal financial services. Financial literacy equips entrepreneurs with the ability to prepare budgets, maintain financial records, manage cash flow, evaluate investment opportunities, and make informed financial decisions. Similarly, management skills enable entrepreneurs to plan, organize, coordinate, and control business activities efficiently, while marketing skills help business owners identify customer needs, promote products effectively, build competitive advantages, and access wider markets. Access to finance provides the capital required for business establishment, expansion, innovation, and employment creation. The absence of these competencies continues to limit the growth and sustainability of women-owned enterprises in many developing economies (Global Entrepreneurship Research Association 2024) In Nigeria, women constitute almost half of the country's population and play important roles in agriculture, commerce, manufacturing, and the informal economy. According to the National Bureau of Statistics (NBS) and the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), Nigeria has over 39 million MSMEs, accounting for about 96 percent of all businesses, over 80 percent of national employment, and approximately 50 percent of the country's Gross Domestic Product (GDP). A substantial proportion of these enterprises are owned or managed by women. To strengthen women's participation in entrepreneurship, the Nigerian government has implemented several empowerment programmes, including the National Economic Empowerment and Development Strategy (NEEDS), the National Gender Policy (2006), the Government Enterprise and Empowerment Programme (GEEP) comprising TraderMoni, MarketMoni, and FarmerMoni, the

Central Bank of Nigeria's Agri-Business/Small and Medium Enterprise Investment Scheme (AGSMEIS), the Nigeria for Women Project (NFWP), and interventions by the Bank of Industry (BOI) and SMEDAN (NBS 2021) Although these programmes have provided loans, grants, entrepreneurship training, and business support services to thousands of women entrepreneurs, their impact has remained limited. Many beneficiaries continue to experience difficulties in accessing formal finance due to collateral requirements, high lending conditions, and bureaucratic procedures. Furthermore, most empowerment programmes have focused primarily on financial support, with relatively less attention given to continuous financial literacy education, management capacity development, business mentoring, digital marketing, and post-intervention monitoring. Consequently, many women-owned businesses continue to experience poor record keeping, inadequate financial planning, weak managerial practices, limited market penetration, and low business survival rates. At the state level, Adamawa State Government has also implemented several initiatives aimed at promoting women's economic empowerment and entrepreneurial development. Through the Fintiri Business Wallet Initiative, about 10,000 women received grants of ₦50,000 each to establish or expand small businesses. Similarly, the Poverty Alleviation and Wealth Creation Agency (PAWECA) and other state agencies have organized vocational training, entrepreneurship development programmes, and microcredit schemes targeting women and youth. These interventions have contributed to improving access to startup capital and skills acquisition. However, empirical studies conducted in Adamawa State reveal that many women entrepreneurs still experience significant challenges in sustaining and expanding their businesses. Research has shown that inadequate financial literacy, poor management practices, limited access to affordable finance, and weak marketing capabilities remain major obstacles to business growth. In addition, many women continue to rely on personal savings, family contributions, and cooperative societies because they are unable to meet the lending requirements of formal financial institutions (Yusuf & Muhammad 2024) Hong Local Government Area represents one of the important commercial and agricultural centres of Adamawa State, where women actively engage in farming, food processing, tailoring, retail trading, catering services, hairdressing, and other micro and small-scale enterprises that contribute substantially to household income and local economic development. Despite benefiting from government empowerment programmes, cooperative societies, and interventions by non-governmental organizations, many women-owned enterprises in Hong Local Government Area remain small, informal, and vulnerable to failure. Most entrepreneurs still encounter inadequate financial literacy, poor managerial competence, insufficient marketing skills, and limited access to affordable credit facilities. These challenges have resulted in poor financial record keeping, inefficient resource management, limited business expansion, reduced profitability, and low competitiveness in both traditional and emerging digital markets.

The persistence of these challenges suggests that previous empowerment initiatives, although beneficial, have not sufficiently addressed the entrepreneurial capabilities required for sustainable business development. Much of the emphasis has been placed on providing financial assistance rather than strengthening the knowledge, skills, and competencies necessary for long-term entrepreneurial success. Consequently, there is limited empirical evidence on how financial literacy, management skills, access to finance, and marketing skills collectively influence entrepreneurial development among women in Hong Local Government Area of Adamawa State. This knowledge gap provides the basis for the present study, which seeks to examine the influence of these key empowerment dimensions on the entrepreneurial development of women in the study area. The findings of the study are expected to provide evidence that will assist policymakers, financial institutions, development partners, and non-governmental organizations in designing more effective and sustainable women empowerment programmes (Adamawa State Government 2024).

Statement of the Problem

Over the past two decades, governments and development partners have implemented several policies and programmes to promote women's entrepreneurship through financial support, skills acquisition, and economic empowerment. Globally, initiatives such as the Sustainable Development Goals (SDG 5), the Women Entrepreneurs Finance Initiative (We-Fi), and World Bank programmes have sought to improve women's economic participation. In Nigeria, interventions including the Government Enterprise and Empowerment Programme (GEEP), the Nigeria for Women Project (NFWP), AGSMEIS, BOI, and SMEDAN programmes have also targeted women entrepreneurs. In Adamawa State, the Fintiri Business Wallet Initiative provided grants of ₦50,000 each to about 10,000 women to support small businesses. Despite these interventions, women entrepreneurs continue to experience significant challenges. The International Finance Corporation (IFC, 2022) estimates that women-owned businesses worldwide face a financing gap of over **US$1.7 trillion**, indicating that access to finance remains inadequate. In Nigeria, although MSMEs constitute about 96 percent of businesses and contribute nearly 50 percent of GDP, many women entrepreneurs still rely on personal savings and informal lending because they cannot satisfy collateral and other lending requirements of formal financial institutions (NBS & SMEDAN, 2021). Evidence from Adamawa State further shows that the existing empowerment programmes have not produced the expected entrepreneurial outcomes. Studies revealed that 53 percent of female entrepreneurs identified inadequate finance as their major business challenge, 19 percent reported poor market access, while 13 percent indicated inadequate entrepreneurial and management skills as major constraints to business growth. In addition, about 70 percent of respondents believed that government and financial institutions had not provided adequate support due to strict loan conditions and limited accessibility (Yusuf & Mohammed, 2024). These findings suggest that previous empowerment programmes have focused largely on the provision of financial assistance without adequately strengthening financial literacy, management skills, marketing skills, and sustainable access to finance. Consequently, many women-owned enterprises in Hong Local Government Area remain small, informal, and unable to achieve sustained growth. However, there is limited empirical evidence on the combined influence of financial literacy, management skills, access to finance, and marketing skills on the entrepreneurial development of women in Hong Local Government Area of Adamawa State. This study therefore seeks to fill this gap by examining how these dimensions of women empowerment influence entrepreneurial development in the study area.

2.0 Literature Reviewed

2.1 Theoretical Literature

2.1.1Social Capital Theory

Social Capital Theory was first introduced by Pierre Bourdieu (1986) and was later expanded by James Coleman (1988) and Robert Putnam (1993). The theory explains that social relationships, networks, trust, and shared norms are valuable resources that individuals can use to achieve personal and economic goals. It argues that people who belong to strong social networks are more likely to gain access to information, financial resources, business opportunities, and other forms of support that enhance their productivity and success.

The central tenet of the theory is that social relationships constitute a form of capital that can facilitate collective action and improve individual outcomes. Through family ties, cooperative societies, women's associations, professional networks, and community organizations, entrepreneurs can obtain financial assistance, market information, business advice, training opportunities, and emotional support that contribute to enterprise growth and sustainability.

The implication of Social Capital Theory for this study is that women entrepreneurs in Hong Local Government Area can improve their entrepreneurial development by participating in social and business networks. Membership in cooperative societies, savings groups, women's associations, and entrepreneurship programmes can increase their access to finance, improve financial literacy, strengthen management and marketing skills, and provide opportunities for business expansion. Thus, social capital serves as an important mechanism through which women empowerment initiatives can enhance entrepreneurial performance.

The theory assumes that individuals who possess stronger social networks and higher levels of trust have greater access to valuable resources than those with weak or limited networks. It also assumes that cooperation and mutual support among members of a community create opportunities that may not be available through individual effort alone.

Despite its relevance, Social Capital Theory has been criticized for placing excessive emphasis on the benefits of social networks while overlooking their potential disadvantages. Strong networks may exclude non-members, encourage favoritism, or restrict access to opportunities for outsiders. In addition, the theory does not adequately account for structural barriers such as poverty, gender discrimination, weak institutions, and restrictive government policies, which may continue to limit entrepreneurial development even when strong social networks exist.

2.1.2 Financial Literacy Theory

Financial Literacy Theory was developed by Annamaria Lusardi and Olivia S. Mitchell (2007). The theory posits that individuals who possess adequate financial knowledge and skills are better equipped to make informed financial decisions that improve their economic well-being and business performance. It emphasizes that financial literacy goes beyond the ability to read and write; it includes understanding financial concepts such as budgeting, saving, borrowing, investment, record keeping, cash flow management, interest rates, inflation, and risk diversification. The theory argues that financially literate individuals are more likely to plan effectively, manage resources efficiently, and make sound financial decisions that contribute to long-term entrepreneurial success. The central tenet of the theory is that financial knowledge influences financial behavior and decision-making. Entrepreneurs who understand financial management are more likely to allocate resources efficiently, maintain accurate financial records, access credit responsibly, and make profitable investment decisions. Consequently, financial literacy enhances business sustainability, profitability, and growth. The implication of Financial Literacy Theory for this study is that women entrepreneurs in Hong Local Government Area who possess higher levels of financial literacy are more likely to manage their businesses effectively and achieve greater entrepreneurial development. Financial literacy enables women to prepare budgets, manage cash flow, maintain proper records, evaluate loan opportunities, and utilize financial resources efficiently. Therefore, improving financial literacy is expected to strengthen entrepreneurial performance and increase the sustainability of women-owned enterprises.

The theory assumes that individuals are rational decision-makers who will make better financial choices when they possess adequate financial knowledge and skills. It also assumes that access to financial education translates into improved financial behaviour and ultimately leads to better entrepreneurial outcomes. Despite its relevance, the theory has been criticized for assuming that financial knowledge alone is sufficient to improve business performance. In reality, entrepreneurs may possess adequate financial literacy but still face challenges such as limited access to finance, poverty, poor infrastructure, restrictive government policies, and socio-cultural barriers that hinder business growth. Thus, financial literacy should be complemented by supportive institutional policies and access to financial resources to achieve sustainable entrepreneurial development.

2.1.3 Empowerment Theory

Empowerment Theory was developed and advanced by Marc A. Zimmerman (1995), building on earlier works in community psychology, particularly the ideas of Julian Rappaport (1981), who introduced empowerment as a process through which individuals and communities gain control over issues affecting their lives. The theory explains empowerment as a process that enables individuals to acquire knowledge, skills, resources, and confidence needed to participate effectively in decision-making and improve their social and economic conditions. The central tenet of Empowerment Theory is that individuals become more capable and productive when they have access to resources, opportunities, and the ability to exercise control over decisions affecting their lives. Zimmerman (1995) identified three major dimensions of empowerment: intrapersonal empowerment (individual confidence, motivation, and belief in one's ability), interactional empowerment (knowledge and understanding of available resources and opportunities), and behavioural empowerment (taking actions to achieve desired goals). The theory emphasizes that empowerment is not simply the provision of resources but also the development of capacities that enable individuals to use those resources effectively. The implication of Empowerment Theory for this study is that providing women entrepreneurs in Hong Local Government Area with financial literacy, management skills, access to finance, and marketing skills can enhance their ability to establish, manage, and expand their businesses. Empowered women are expected to make better financial decisions, improve business operations, access market opportunities, and participate more actively in economic activities. Therefore, women empowerment programmes should focus not only on financial support but also on building entrepreneurial capabilities for sustainable business development. The theory assumes that individuals have the potential to improve their circumstances when they are provided with adequate knowledge, skills, resources, and opportunities. It also assumes that empowerment is a participatory process in which individuals actively engage in solving their own problems rather than depending entirely on external assistance. However, Empowerment Theory has been criticized for placing strong emphasis on individual capacity while giving less attention to broader structural barriers such as poverty, gender inequality, cultural restrictions, weak institutions, and limited economic opportunities. Critics argue that providing skills and resources alone may not guarantee empowerment if social and economic systems continue to restrict women's participation and access to opportunities.

2.2 Empirical Literature

2.2.1 Women Empowerment and Entrepreneurial Development

Andriamahery and Qamruzzaman (2022) conducted the access to finance, technical know-how, and financial literacy offer women empowerment through women's entrepreneurial development?"* The study examined how access to finance, technical knowledge, and financial literacy contribute to women's empowerment through entrepreneurial development. The study focused on women-owned small and medium enterprises and adopted a quantitative research design. Data were collected from women entrepreneurs through structured questionnaires, and the responses were analysed using statistical techniques. The variables examined included access to finance, technical know-how, and financial literacy as independent variables, women empowerment as a mediating variable, and entrepreneurial development as the dependent variable. The findings revealed that access to finance, technical knowledge, and financial literacy significantly improved women empowerment and entrepreneurial sustainability. The study concluded that financially literate women with adequate resources are more capable of making effective business decisions and achieving enterprise growth. It recommended that governments and financial institutions should design policies that enhance women's access to affordable finance, entrepreneurship training, and financial education Popoola (2025) examined the scoping review of the impact of financial literacy empowerment on the growth of female entrepreneurship in Nigeria."* The study focused on female entrepreneurs in Nigeria and assessed the contribution of financial literacy empowerment to business growth. The study employed a scoping review methodology by examining existing empirical studies published between 2019 and 2024. The major variable examined was financial literacy empowerment, while female entrepreneurship growth served as the outcome variable. The findings indicated that financial literacy significantly influences women's ability to manage business resources, maintain financial records, make investment decisions, and access financial services. However, the study noted that many women entrepreneurs still experience challenges such as inadequate financial education and limited institutional support. The study recommended the implementation of gender-sensitive financial literacy programmes and stronger entrepreneurial support systems to promote sustainable female entrepreneurship. Yusuf and Mohammed (2024) investigated the relationship between financial literacy and small business performance in Adamawa State, Nigeria. The study aimed to determine how financial literacy influences the performance of small businesses within Adamawa State. A survey research design was adopted, and data were collected from entrepreneurs using structured questionnaires. The study considered financial knowledge, financial behaviour, financial attitude, and financial skills as independent variables, while small business performance was the dependent variable. The results showed that all dimensions of financial literacy had a significant positive effect on business performance. Entrepreneurs with better financial knowledge demonstrated improved budgeting, record keeping, and financial management practices. The study recommended continuous financial education and capacity-building programmes for small business owners to improve enterprise sustainability. Anifowose and Chummun (2025) conducted the gender, financial inclusion, and women entrepreneurship: assessing the impact of digital financial technology on business performance in Nigeria."* The study examined how financial inclusion and digital financial technologies influence women's entrepreneurial performance in Nigeria. The study employed a quantitative approach using data collected from women entrepreneurs. The variables included financial inclusion, digital financial technology, and digital skills as explanatory variables, while business performance was the dependent variable. The findings revealed that access to digital financial services improved women's ability to obtain financial resources and enhanced business performance. However, limited digital skills and gender-related barriers reduced the benefits of financial technology. The study recommended improving digital financial literacy and expanding women's access to formal financial services.

Nwankwo and Eze (2022) examined the access to finance and performance of women-owned small businesses in Nigeria."* The study focused on the role of financial access in improving the performance of women-owned enterprises. A survey research design was employed, and questionnaires were administered to women entrepreneurs. The study used access to finance as the independent variable and business expansion, profitability, and employment creation as measures of enterprise performance. The findings revealed that access to affordable credit significantly influenced business growth and sustainability. However, the study identified collateral requirements, high interest rates, and complex loan procedures as major barriers limiting women's access to formal financial institutions. The study recommended the development of women-friendly financial policies and simplified lending procedures. Aderemi and Akinyemi (2021) studied the entrepreneurship training and performance of women-owned enterprises in Nigeria. The study investigated the influence of entrepreneurship training on women's business performance. The researchers adopted a descriptive survey design among women entrepreneurs. Entrepreneurship training was the independent variable, while enterprise performance was the dependent variable. The findings indicated that entrepreneurship training improved business planning, decision-making ability, and management practices among women entrepreneurs. However, the study observed that many training programmes lacked continuous mentoring and follow-up support. It recommended that entrepreneurship training should be combined with mentorship and business advisory services to achieve sustainable outcomes. Ibrahim and Abdullahi (2023) investigated the marketing skills and performance of women entrepreneurs in northern Nigeria."* The study examined the extent to which marketing skills influence the performance of women-owned enterprises. A questionnaire-based survey method was adopted, with marketing skills serving as the independent variable and customer attraction, market expansion, and sales growth serving as measures of business performance. The study found that women entrepreneurs with strong marketing skills performed better in product promotion, customer retention, and market expansion. However, limited knowledge of digital marketing and branding reduced the competitiveness of many women-owned businesses. The study recommended training programmes focused on digital marketing, branding strategies, and customer relationship management. Okafor and Eze (2024) carried out the management skills and entrepreneurial sustainability among women-owned enterprises in Nigeria."* The study examined how managerial competencies affect the sustainability of women-owned businesses. The study adopted a survey research design, with planning skills, decision-making ability, record keeping, and managerial competence as independent variables and entrepreneurial sustainability as the dependent variable. The findings revealed that management skills significantly influenced business survival, growth, and profitability. The researchers recommended continuous managerial training and business advisory services for women entrepreneurs to improve enterprise performance. Aninze (2023) conducted the women empowerment through microfinance and enterprise development in Nigeria. The study assessed the role of microfinance services in promoting women's empowerment and enterprise development. The research adopted an empirical approach using data collected from women who benefited from microfinance programmes. Microfinance access was the major independent variable, while women empowerment and enterprise development were the dependent variables. The findings showed that microfinance improved women's participation in entrepreneurship and increased their economic contribution. However, the study noted that financial support alone was insufficient without entrepreneurial knowledge and management skills. The study recommended integrating microfinance programmes with entrepreneurship training and mentoring services. Jatto, Vincent, and Tani (2025) examined effectiveness of women-specific financial empowerment initiatives in facilitating access to capital among women entrepreneurs. The study focused on women entrepreneurs and assessed whether women-focused empowerment programmes improved access to business capital. The study employed a survey research method, with women-specific financial empowerment initiatives as the independent variable and access to business capital as the dependent variable. The findings indicated that targeted financial empowerment programmes improved women's access to capital. However, the study emphasized that financial support alone cannot guarantee entrepreneurial success without complementary skills in financial management, marketing, and business operations. It recommended that empowerment programmes should integrate finance with entrepreneurship training and business development support.

3.1 Research design

The survey research design was adopted for this study. A survey can be used to investigate the characteristics, behaviors, or opinions of a group of people. These research tools can be used to ask questions about demographic information about characteristics such as sex, religion, ethnicity, and income. Survey research design is a non-experimental design in which the phenomenon of interest has already occurred and cannot be manipulated in any way. In other word, it is used in a situation in which variation in the independent variables occurred naturally and no random assignment or manipulations are possible. This methodology involves the collection of data to correctly and objectively described existing phenomenon. Studies that make use of this approach are employed to obtain a picture of the present conditions of particular phenomenon.

For this work, the survey research design is considered most appropriate because of the nature of the study. It is primary in nature and relied on only the use of questionnaire for data collection. The major goal of the survey is to investigate the impact of women empowerment on entrepreneurial development in Hong Local Government area. They survey design will help to examine the relationship between microfinance institutions and extraneous variables influencing it.

3.2 Method of data analysis

A probit regression analysis was employed for the analysis of data. The probit model is a statistical probability model with two categories in the dependent variable. Probit analysis is based on the cumulative normal probability distribution. The binary dependent variable, *y*, takes on the values of zero and one. The probit model can be specified as shown below:

$$Yi = F(Xi\beta) + \varepsilon i \qquad (3.1)$$

Yi = 1, if adopted

0, otherwise

Where:

$\varepsilon \sim N(0,1)$; β = maximum likelihood; ε = error term; X = set of independent variables included in the model. Since estimates of the probit model provide only direction of effects, the marginal effects are usually calculated to interpret the actual change in probability of independent variables.

$$\text{Marginal effects} = \beta i\phi(z) \qquad (3.2)$$

where,

βi = coefficients of the variables; $\phi(z)$ = cumulative normal distribution value associated with the mean dependent variable from the probit estimation. The probit equation is expressed as;

$$\text{Ln (ETD)}=\ln (\hat{Y}/1-\hat{Y})= \boldsymbol{\beta 0} + \boldsymbol{\beta_1}AF + \boldsymbol{\beta_2}WE + \boldsymbol{\beta_3}FL+ \boldsymbol{\beta_4}MS + \boldsymbol{\beta_5}\mathbf{MGTS} \qquad (3.3)$$

Where:

ETD = Entrepreneurial development

AF = Access to finance

WE = Women empowerment

FL = Financial literacy

MS= Marketing skills

MGTS= Management skills
$\hat{Y}$is the predicted probability of the event which is coded with 0= Non-performance; 1= otherwise (performance)
1- $\hat{Y}$= is the predicted probability of the other decision
X= is the predictor variable representing other independent variables for internal and external variables.
The variables are measured by using the responses of the respondents in the questionnaire. The responses were coded with 0= No; 1= Yes.

4.1 Presentation of Data

TABLE 4.1:
Summary of respondents

Questionnaire	Responses	Total	Percentage (%)
Number of questionnaires returned	279	279	97.6
Number of questionnaires not returned	07	07	2.4
Total	286	286	100

Source: Field survey by the Author, 2024

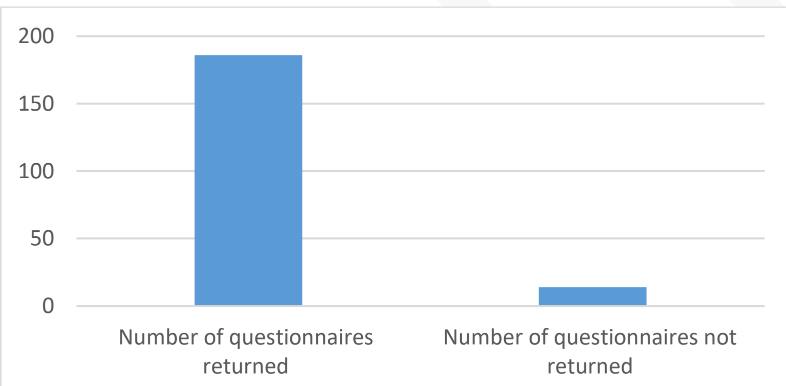

Figure 4: A bar chart showing the number of questionnaires returned and not returned

Table 4.1 and fig 4 shows that four hundred (200) questionnaires were administered to respondents and out of this number, 186 questionnaires were returned while 14 questionnaires were not returned. The total number of questionnaires returned was 196 representing 93.0 per cent while the total number of questionnaires not returned were 7, representing 7.0 per cent of the respondents who did not return their questionnaire.

Table 4.2
Sex of Respondents

Respondents	Frequency	Percentage (%)
Male	105	56.5
Female	81	43.5
Total	186	100

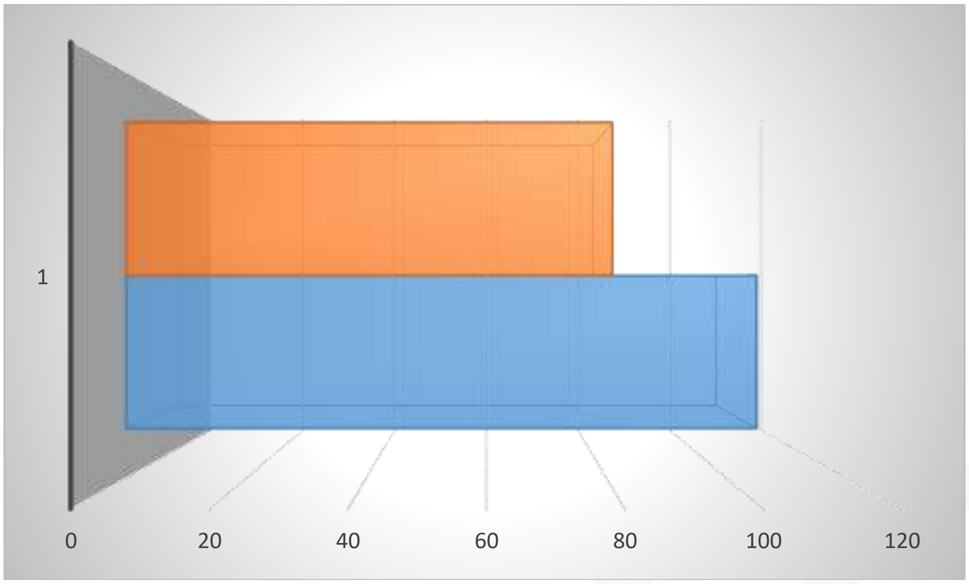

Fig 5: A bar chart showing the sex of respondents

Table 4. 2 and figure 5 above shows that male respondents were greater in number with a total of 105 representing 56.5 percent while female respondents were 81 representing 43.5 percent of the total number that constitute 186 respondents of the study from retrieved questionnaires. The percentage was derived by dividing the frequency of each gender by the total number of respondents, the outcome was multiplied by 100 per cent.

Table 4.3:
Age of Respondents

Age	Frequency	Percentage (%)
Under 18	16	8.60
18 – 24	23	12.36
25 - 34	26	13.9
35 – 44	28	15.05
45– 54	41	22.04
55 – 64	36	18.35
Above 65	16	8.60
Total	186	100

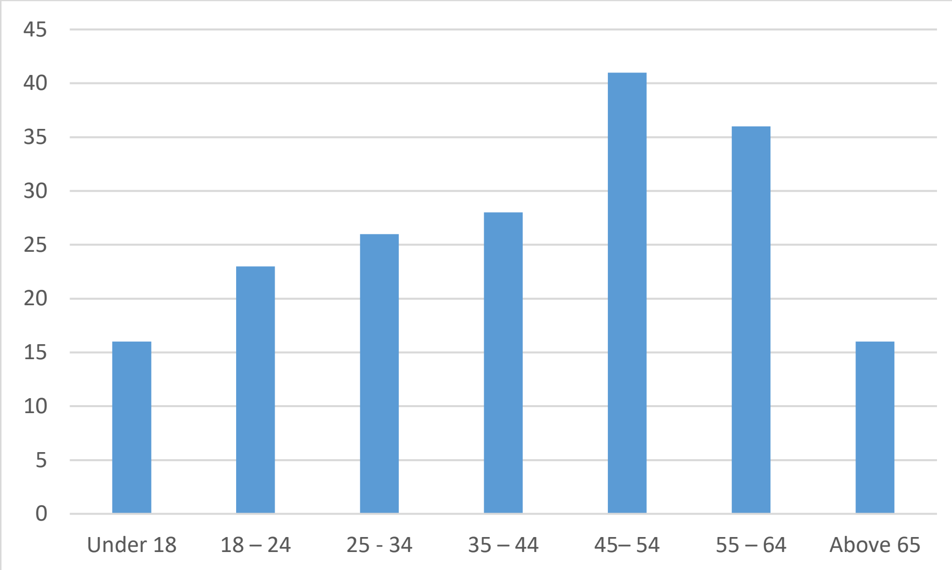

Figure 6. A bar chart showing the age of respondents

Table 4.3 Fig 6 above shows those who fall between the ages of 45-54 years constitute majority of the respondents with 41 representing 22.04 percent. Those under 18 years were 16 representing 8.60 per cent while those between the ages 18 and 24 years were 23 representing 12.36 per cent. Respondents between the ages of 34 to 44 were 28 representing 15.05 per cent. Furthermore, respondents between 55-64 years recorded 36 respondents representing 18.35 percent, while those above 64 years recorded 16 respondents representing 8.60 percent.

Table 4.4:
Educational Qualification of Respondents

Qualification	Frequency	Percentage (%)
High School	60	32.5
Bachelor’s degree	84	45.2
Master’s degree	7	3.8
Doctorate degree	5	2.7
Others	30	16.1
Total	186	100

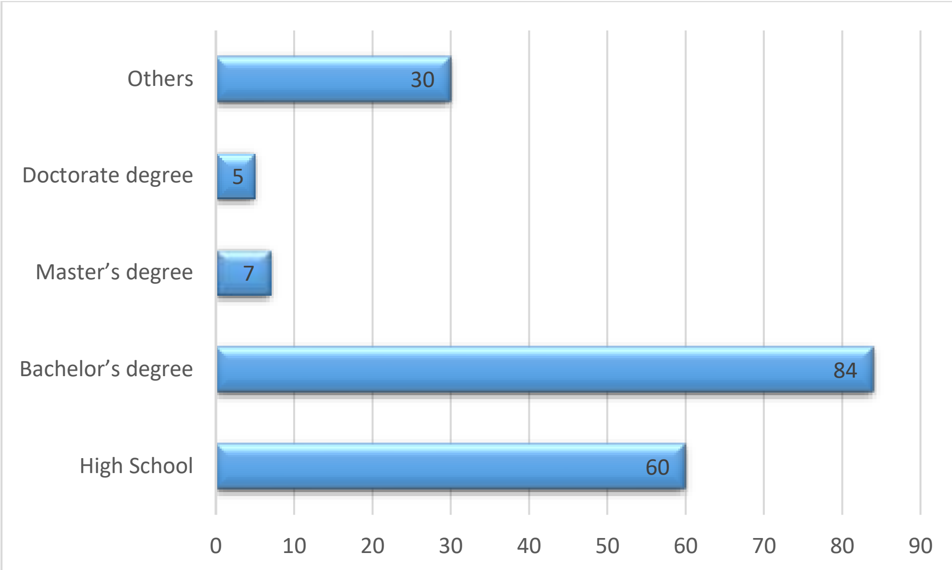

Fig 7: Showing the Educational qualification of respondents

Table 4.4 and figure 7 above shows that majority of the respondents were holders of Bachelor's degree with 84 representing 45.2 percent. High school graduate followed with 60 representing 32.5 percent. Respondents with Master's degree were 7 representing 3.8 percent, those with Doctorate degree recorded 5 respondents representing 2.7 percent while respondents with other educational qualifications were 30 representing 16.1 percent.

4.2 Analysis

Table 4.5: Probit regression result

Dependent Variable: ETD
Method: ML - Binary Probit (Newton-Raphson / Marquardt steps)
Date: 06/13/24 Time: 17:08
Sample: 1 186
Included observations: 186
Convergence achieved after 3 iterations
Coefficient covariance computed using observed Hessian

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.776215	0.258965	2.997374	0.0486
AF	0.408313	0.188708	2.163729	0.0445
WE	-0.143134	0.190217	-0.752480	0.4518
FL	0.610290	0.190752	3.199387	0.0320
MS	0.637515	0.193719	3.290926	0.0267
MGTS	-0.166596	0.190555	-0.874266	0.3820

McFadden R-squared	0.619140	Mean dependent var	0.537634
S.D. dependent var	0.499927	S.E. of regression	0.500049
Akaike info criterion	1.418714	Sum squared resid	45.00884

Schwarz criterion	1.522771	Log likelihood	-125.9404
Hannan-Quinn criter.	1.460882	Deviance	251.8809
Restr. Deviance	256.7960	Restr. log likelihood	-128.3980
LR statistic	7.915104	Avg. log likelihood	-0.677099
Prob(LR statistic)	0.026329		
Obs with Dep=0	86	Total obs	186
Obs with Dep=1	100		

Source: Researcher's computation, 2024.

From the estimated results, the explanatory variables show mixed relationships with the dependent variable. AF has a coefficient of 0.408313, indicating that a one-unit increase in entrepreneur development (ETD) leads to an increase of 0.408313 units in the access to finance, holding other factors constant. The probability value of 0.0445 is less than the 5% level of significance (0.05), implying that AF is statistically significant. The positive coefficient conforms to the economic a priori expectation, suggesting that an increase in AF contributes positively to the dependent variable, ceteris paribus. Women empowerment (WE) has a coefficient of −0.143134, indicating that a one-unit increase in entrepreneur development (ETD) reduces the women empowerment (WE) by 0.143134 units, ceteris paribus. However, the probability value of 0.4518 is greater than 0.05, indicating that WE are not statistically significant at the 5% level. The negative coefficient suggests an inverse relationship between women empowerment (WE) and the dependent variable, which may either conform to or contradict the economic a priori expectation depending on the underlying theoretical relationship. Nevertheless, the estimated effect is statistically insignificant. FL has a coefficient of 0.610290, showing that a one-unit increase in entrepreneur develoment results in an increase of 0.610290 units in the financial literacy, holding other variables constant. The probability value of 0.0320 is below the 5% significance level, indicating that FL is statistically significant. The positive coefficient is consistent with the economic a priori expectation, implying that an increase in FL has a positive effect on the dependent variable, ceteris paribus. MS has a coefficient of 0.637515, indicating that a one-unit increase in entrepreneur development leads to an increase of 0.637515 units in the marketing skill, all things being equal. The probability value of 0.0267 is less than 0.05, showing that MS is statistically significant at the 5% level. The positive coefficient agrees with the economic a priori expectation, suggesting that MS positively influences the dependent variable.

MGTS has a coefficient of −0.166596, indicating that a one-unit increase in entrepreneur development (ETD) decreases the management skill (MGTS) by 0.166596 units, holding other factors constant. The probability value of 0.3820 is greater than 0.05, implying that MGTS is not statistically significant at the 5% level. The negative coefficient indicates an inverse relationship between MGTS and the dependent variable; however, the effect is statistically insignificant. This suggests that changes in MGTS may either increase or decrease the dependent variable depending on the prevailing economic conditions and theoretical relationship, but the estimated impact in this model is negative and not statistically meaningful.

The McFadden R-squared value of 0.619140 indicates that approximately 61.91 percent of the variation in the dependent variable is explained by the explanatory variables included in the model**.** This suggests that the model has a relatively good explanatory power. The probability value of the

LR statistic (0.026329) is less than the 5% significance level, indicating that the model is statistically significant overall. This implies that the explanatory variables jointly have a significant effect on the dependent variable and that the model provides a better fit than the restricted model containing only the intercept. The LR statistic of 7.915104 further confirms that the unrestricted model performs better than the restricted model. The log likelihood value of −125.9404 indicates the model's goodness of fit, with higher values generally implying improved model performance when compared with alternative specifications. The Akaike Information Criterion (AIC) of 1.418714**,** Schwarz Criterion of 1.522771**,** and Hannan-Quinn Criterion of 1.460882 provide measures for model selection, where lower values indicate a more efficient model specification relative to competing models. The S.E. of regression value of 0.500049 shows the average deviation of the observed values from the estimated values, while the sum squared resid value of 45.00884 represents the total squared prediction errors of the model.

5.1 Summary

This study examined the impact of access to finance on entrepreneurial development in Hong Local Government Area of Adamawa State. The study assessed the extent to which access to finance influences key dimensions of entrepreneurial development, including women empowerment (WE), financial literacy (FL), marketing skills (MS), and management skills (MGTS).

The estimated results revealed that access to finance has a positive and statistically significant effect on entrepreneurial development. Specifically, access to finance (AF) has a coefficient of 0.408313 and a probability value of 0.0445, indicating that a one-unit increase in access to finance leads to an increase of 0.408313 units in entrepreneurial development, holding other factors constant. The probability value being less than 0.05 confirms that access to finance significantly contributes to entrepreneurial growth. The findings further revealed that access to finance has a negative but statistically insignificant effect on women empowerment (WE), with a coefficient of −0.143134 and a probability value of 0.4518. This suggests that although improved access to finance is associated with a decline in women empowerment within the estimated model, the relationship is not statistically strong enough to establish a significant effect. Similarly, access to finance has a positive and statistically significant relationship with financial literacy (FL), having a coefficient of 0.610290 and a probability value of 0.0320. This implies that increased access to financial resources enhances entrepreneurs' ability to acquire financial knowledge, manage funds effectively, and make better financial decisions. The result also indicates that access to finance positively affects marketing skills (MS), with a coefficient of 0.637515 and a probability value of 0.0267. This demonstrates that access to financial resources enables entrepreneurs to improve their marketing activities, promote their products, and expand their market opportunities.

However, management skills (MGTS) showed a negative and statistically insignificant relationship with access to finance, with a coefficient of −0.166596 and a probability value of 0.3820. This indicates that access to finance alone may not automatically improve managerial capabilities among entrepreneurs without additional managerial training and support.

In a nutshell, the findings suggest that access to finance plays a significant role in enhancing entrepreneurial development, particularly in improving financial literacy and marketing skills, but additional interventions are required to strengthen women empowerment and management capabilities.

5.1 Summary of Findings

This study examined the influence of women empowerment on entrepreneurial development in Hong Local Government Area of Adamawa State. Specifically, the study investigated how access to finance, women empowerment, financial literacy, marketing skills, and management skills contribute to entrepreneurial development among women entrepreneurs in the study area.

The empirical results revealed that access to finance (AF) has a positive and statistically significant effect on entrepreneurial development, with a coefficient of 0.408313 and a probability value of 0.0445, which is below the 5% level of significance. This indicates that improved access to financial resources significantly enhances entrepreneurial activities among women entrepreneurs. The finding suggests that availability of finance enables women to establish, expand, and sustain their businesses through increased investment capacity and improved business operations.

The result further showed that women empowerment (WE) has a negative but statistically insignificant relationship with entrepreneurial development, with a coefficient of −0.143134 and a probability value of 0.4518. This implies that although women empowerment is theoretically expected to improve entrepreneurial outcomes, the effect observed in the study area was not strong enough to produce a statistically significant impact. This may be associated with limitations in the effectiveness of existing empowerment programmes, inadequate follow-up support, or limited translation of empowerment opportunities into sustainable business growth.

Financial literacy (FL) was found to have a positive and statistically significant effect on entrepreneurial development, with a coefficient of 0.610290 and a probability value of 0.0320. This indicates that women entrepreneurs with better financial knowledge are more capable of managing business resources, preparing financial records, making investment decisions, and improving business performance.

Similarly, marketing skills (MS) showed a positive and statistically significant influence on entrepreneurial development, with a coefficient of 0.637515 and a probability value of 0.0267. This suggests that entrepreneurs with improved marketing abilities are more likely to attract customers, promote their products, expand their market reach, and improve business growth.

However, management skills (MGTS) recorded a negative and statistically insignificant relationship with entrepreneurial development, with a coefficient of −0.166596 and a probability value of 0.3820. This implies that access to finance and empowerment opportunities alone may not automatically improve managerial capabilities among women entrepreneurs without continuous business training, mentorship, and advisory support.

The overall model performance was satisfactory, as indicated by the **McFadden R-squared value of 0.619140**, showing that approximately **61.91%** of the variations in entrepreneurial development were explained by the explanatory variables included in the model. The LR statistical probability value of **0.026329** confirmed that the model was statistically significant, indicating that the explanatory variables jointly influenced entrepreneurial development.

5.2 Conclusion

Based on the findings, the study concludes that women empowerment plays an important role in promoting entrepreneurial development in Hong Local Government Area of Adamawa State, although the effectiveness of empowerment depends on the availability of relevant resources, skills, and institutional support. Access to finance, financial literacy, and marketing skills were found to be significant determinants of entrepreneurial development among women entrepreneurs. The significant positive effect of access to finance indicates that financial availability remains a critical factor in business establishment, expansion, and sustainability. Women entrepreneurs who have access to affordable financial resources are better positioned to invest in their businesses and improve their economic activities.

The positive and significant influence of financial literacy demonstrates that entrepreneurial success requires more than financial availability. Women entrepreneurs need adequate knowledge of budgeting, record keeping, savings, investment decisions, and financial management to effectively utilize available resources.

The significant contribution of marketing skills further indicates that business growth depends on entrepreneurs' ability to identify customers, promote products, adopt effective marketing strategies, and compete in the marketplace.

However, the insignificant effects of women empowerment and management skills suggest that existing empowerment initiatives in Hong Local Government Area may not have sufficiently addressed deeper entrepreneurial challenges. Providing financial support without continuous training, mentorship, and managerial development may limit the long-term impact of empowerment programmes.

Therefore, the study concludes that sustainable entrepreneurial development among women in Hong Local Government Area requires an integrated empowerment approach that combines financial support with financial literacy education, management training, marketing development, and continuous institutional support.

5.3 Recommendations

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

1. **Improvement of Access to Finance:** Government agencies, financial institutions, and development organizations should provide women entrepreneurs with easier access to affordable credit facilities by reducing excessive collateral requirements, simplifying loan procedures, and developing women-friendly financing schemes.

2. **Strengthening Financial Literacy Programmes:** Women empowerment programmes should place greater emphasis on financial literacy training, including bookkeeping, budgeting, savings management, investment planning, and effective utilization of business funds to improve entrepreneurial performance.

3. **Promotion of Marketing Skills Development:** Government and entrepreneurship support organizations should organize regular training programmes on marketing strategies, digital marketing, branding, customer relationship management, and market expansion techniques to enable women entrepreneurs to compete effectively.

4. **Provision of Management Training and Mentorship:** Since management skills showed an insignificant effect, empowerment programmes should incorporate continuous managerial training in areas such as business planning, decision-making, inventory management, leadership, and business sustainability. Mentorship programmes should also be established to guide women entrepreneurs.

5. **Review of Women Empowerment Policies:** Existing women empowerment programmes should be evaluated and redesigned to address practical challenges faced by women entrepreneurs in rural areas. Programmes should move beyond financial assistance and focus on long-term capacity building and enterprise development.

6. **Strengthening Cooperative and Support Networks:** Women entrepreneurs should be encouraged to participate in cooperative societies, business associations, and entrepreneurship networks where they can access information, financial support, training opportunities, and market linkages.

7. **Regular Monitoring and Evaluation of Empowerment Programmes:** Government and development agencies should establish effective monitoring mechanisms to assess whether empowerment initiatives are producing sustainable business outcomes among women beneficiaries in Hong Local Government Area.

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