

Investigating Entrepreneurial Skills As A Mediator Between Advisory Intervention Services Of Microfinance Bank And Performance Of Women-Owned Enterprises In North Eastern Nigeria

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Abstract

This paper evaluates entrepreneurial skills as a mediating variable in the relationship between advisory intervention services of microfinance banks and performance of women-owned enterprises in North Eastern Nigeria. The paper adopted descriptive research design which allowed the representative population of 1,262 women entrepreneurs across six states: Borno, Yobe, Taraba, Gombe, Adamawa, and Bauchi, all of whom were beneficiaries of microfinance bank support. Using Taro Yamane's formula, a sample size of 304 was determined and increased to 395 to accommodate a 30% attrition rate. The respondents were selected using stratified random sampling technique to ensure proportional representation across states and institutions. The questionnaire was the instrument used for data collection. Data collected was analysed using descriptive and inferential statistical methods, including means, standard deviation, regression analysis, and mediation analysis, all conducted using SPSS. Evidence from the analysis result showed a significant positive direct effect of advisory services on performance. The mediation analysis using the PROCESS macro showed that entrepreneurial skills fully mediated this relationship. The indirect effect through entrepreneurial skills was strong and significant. The study concludes that entrepreneurial skills are essential in transforming advisory services into measurable business performance improvements.

Keywords: *Microfinance, advisory services, entrepreneurial skills, women entrepreneurs, enterprise performance.*

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I. Introduction

Entrepreneurship is beyond traditional concepts of business creation and is instead a complex force of socioeconomic growth and development, personal citizenship, and innovation. It is usually characterized as the measure through which, on individual and collective levels, there exists a detection of prospects, movement of assets, and development of ventures that provide goods or services with seen market worth. Sajuyigbe et al. (2021) argues that entrepreneurship does not only help in spurring economic dynamism but also instils the culture of solving problems and independence. According to Zainab (2023), an entrepreneurship ecosystem that encourages creativity, risk-taking, and resilience thrives more. Peter and Orser (2024) further say that supported institutionally and at the individual level, the entrepreneurship becomes a transformative process, especially on those groups who used to be excluded in the mainstream economic participation.

The critical point in the operationalization of entrepreneurship is the concept of entrepreneurial skills, or the competencies that allow personalities to transform innovative ideas into sustainable businesses. Such competencies are strategic skills, financial awareness, prospect identification, and action implementation. The importance of acquiring the skills thus stands out all the more as the theme embraces a knowledge orientation in entrepreneurship. As Usman and Abdullah (2021) note, the entrepreneurial success is also dependent on the ability of an individual to plan, adapt, and lead instead of availability of funds. Chinelo and Ayodeji (2022) state that the role of entrepreneurial skills is that the given skills serve as a pipeline into which outsiders intervene (trainers or investors) so that the knowledge introduced can be measured as business results. Therefore, the application of the entrepreneurial skills is more perturbed when placed in the registrar of the manner in which entrepreneurs interact with institutional supports, as well as competition environment.

When it comes to the entrepreneurial skills, their application is of a special interest in the sphere of women entrepreneurship since systematic limitations often limit access to resources and institutional support. The demand of women in entrepreneurial circles continues to grow, and thus, their dependence on the respective competencies is considered critical to success and sustainability. As Musa and Oladipo (2019) note, women with enterprises, especially in developing regions, experience an unequal structural hindrance, which makes skill development a resilient sub factor. According to Zainab (2023), entrepreneurial skills do not only

improve the competence of business activities, but also raise the level of confidence and self-agency of women entrepreneurs. The researcher adds that, when women have both financial and cognitive strength, their businesses have a higher chance of survival and growth, particularly in the volatile economic settings (Godfrey, 2022).

Microfinance institutions have therefore come out as strategic financial and developmental intervention platforms to support such entrepreneurial ambitions especially among women. Starting out as some credit providers, microfinance has developed into a range of services aimed at promoting entrepreneurship among low income groups. According to Peter and Orser (2024), microfinance has in the past few years evolved to become a developmental framework and that it does not only offer capital but also offers structures that can lead to the establishment of an enterprise. As stated by Sajuyigbe et al. (2021), microfinance solves the financing gap which locks the low-income groups, particularly, women out of the mainstream financial systems. Alake and Okogua (2023) add to this perception, proposing that the microfinance serves two functions: it contributes to capital creation as well as to grassroots entrepreneurship. The ability of the micro finance to facilitate entrepreneurial development depends on the advisory services that are inbuilt in its business approach. Such services, i.e. training, mentoring, and business consultancy, allow clients to improve their entrepreneurial efficacy. As argued by Godfrey (2022), clients can use such advisory intervention to gain knowledge needed in the optimisation of loan utilisation, successful enterprise management, and dealing with the current market conditions. In agreement with Godfrey, Chinelo and Ayodeji (2022), the researchers state that such non-financial services often precondition the fact whether microfinance induced the growth of an enterprise or lack thereof. Usman and Abdullah (2021) also note that without such advisory help microfinance might turn out to be transactional as opposed to transformational especially when dealing with first-time or less experienced women entrepreneurs.

The reciprocity between advisory intervention and the entrepreneurial competence shows a certain degree of synergy where success of the facultative conditions is dependent on the capability of recipient. Advisory services provide equipment and the entrepreneurial skills determine its usage. Musa and Oladipo (2019) assert that advisory services should be skewed according to the context of the situation in a manner that is proportional to the level of skill of the beneficiaries to have significant results. According to Zainab (2023), entrepreneurial skills are an umbrella under which the guidance of the institute is filtered through, and followed. Furthermore, Alake and Okogua (2023) corroborate that interventions that are most effective are these in which women not only get information but also understand and use it based on previously acquired skills and abilities.

Therefore, the success of the women-owned businesses cannot be explained solely on the basis of financial resources availability or institutional recommendations; on the contrary, it can be discussed as a result of the cumulative effects of interaction between these sources by the intervening factor of entrepreneurial abilities. According to Usman and Abdullah (2021), entrepreneurial abilities are the powerhouse of transforming external resources into efficiency of business operations, innovation, and market penetration. Chinelo and Ayodeji (2022) continue with this idea and outline the crucial character of customer relations, inventory control, and strategic planning skills in the sustainability of businesses. To a certain extent, Godfrey (2022) notes that profitability, growth rate, and customer retention are often the indicators of the extent to which advisory clarifications are combined with personal skills.

Although, theoretically, the role of entrepreneurial skills as a mediator variable cannot be neglected, quantitative results published and presented by researchers demonstrate that mixed results can be observed among women-owned enterprises that have been provided with similar microfinance. Sajuyigbe et al. (2021) depict the examples of the advisory interventions that did not have a significant effect due to the lack of skills among the recipients. According to Musa and Oladipo (2019), most microfinance efforts fail to build skills in their models because the programmers assume that the recipients have equal abilities to absorb instructions. Over such scrutiny is the warning of Zainab (2023) that it will result in unsustainable businesses and interventions. This research paper therefore fills the gap in knowledge on how the entrepreneurial skills will mediate between the advisory intervention services provided by the microfinance banks and performance of the women entrepreneurs in North Eastern Nigeria where limited socio-economic realities demands specific and skill based development approach. The research study therefore fills the gap of knowledge on investigating entrepreneurial skills as a mediator between advisory intervention services of microfinance bank and the performance of women-owned enterprises in North Eastern Nigeria.

II. Literature Review And Hypotheses Development

Microfinance Institution

The central Bank of Nigeria, (CBN) in its “Regulatory and supervisory Guidelines for microfinance Banks (MFBs), defines MFBs as companies licensed to carry on the business of providing micro finance services such as savings, loans, domestic loans, transfer and other financial services that are needed by the economically active poor and entrepreneurs to set up and establish their businesses. The United Nations

Secretary General, Kofi Anan, (2020) observes that “sustainable access to microfinance helps alleviate poverty by generating income, creating jobs, allowing children to go to school, empowering people and entrepreneurial skills to make choices that best serve their needs”. Microfinance is the provision of financial services to low-income, poor and very poor self-employed people (Otero, 2023). Robinson (2011) as cited in Ogunleye (2020) defines microfinance as small scale financial services that involve mainly savings and credit services to the poor. Over twenty years ago, microfinance simply meant the provision of very small loans (microcredit) to the poor, to help them engage in new productive business activities and/or to grow/expand existing ones. However, overtime, microfinance has come to include a broader range of services. These include mainly credit, savings opportunities, insurance and money transfers, as practitioners came to realize that the poor, who lacked access to traditional formal financial institutions, needed and required a variety of financial products to achieve meaningful improvement in their business activities. Microfinance institutions are institutions established by the federal government in response to the yearning and specification of micro and small businesses across the nation so as to grow the microbusiness sector to global competitive standards. These banks are branchless but they are established to meet both financial and non-financial yearnings of small business within a given society. There are several such banks in major cities across the nation.

Entrepreneurship

Entrepreneurship is an evolving process of generating incremental income. This wealth is created by individuals who undertake considerable financial, temporal, and professional risks to enhance a product or services worth (Seiyaibo, 2020). The product or service may not necessarily be novel or unique; however, the entrepreneur must enhance its value by acquiring and distributing the necessary skills and resources (Samuel, 2019). Entrepreneurship is the exertion of effort towards the creation and development of a firm. In Nigeria, an entrepreneur is an innovator who identifies and capitalizes on opportunities, transforms them into viable concepts, invests value, time, capital, and expertise to actualize these concepts, and accepts the risks associated with competition to obtain rewards (United Nations Development Programme 2019).

Entrepreneurship is associated with innovative and dynamic developments in the Small, Micro, and Medium-Sized Enterprise (SMME) sector (United Nations Development Programme 2019). Entrepreneurship refers to the process of becoming an entrepreneur, defined as "the owner or manager of a business firm who, through risk and initiative, seeks to generate profits" (Dictionary.com 2018). Entrepreneurs function as managers, overseeing the creation and growth of a business. Entrepreneurship is the process by which an individual or group identifies a business opportunity and acquires and utilises the necessary resources to capitalise on it (Seiyaibo, 2020). Jean-Baptiste Say, a French economist of the early 19th century, offered a broad definition of entrepreneurship, asserting that it "transfers economic resources from a region of inferior productivity and output to a region of superior productivity and output" (Ogunlana, 2018).

Taiwo, Feyisayo, and Olamilekan (2020) assert that entrepreneurs create innovative and unique offerings; they modify or adapt values. They can engage in entrepreneurial opportunities irrespective of their company's scale. The capacity to become an entrepreneur depends on four prerequisites. Initially, opportunities or conditions must exist to consolidate resources for monetary benefit (Samuel, 2019). Secondly, entrepreneurship requires distinctive differentiations, such as preferential access to specific individuals or the ability to recognise informational opportunities. Third, embracing risks is necessary. Fourthly, the entrepreneurial process requires the coordination of individuals and resources (Ubong, 2019).

Entrepreneurship is a multidimensional and intricate phenomenon that has gained prominence in the global economy due to shifts in employee credentials, job responsibilities, and psychological contracts within the employment sector (Samuel, 2019). Entrepreneurship fosters economic advancement by distributing novel or established information and inventive concepts that might otherwise remain unutilised for the collective benefit (Taiwo et al., 2020). This study viewed entrepreneurship as the ability of individual to create a business from the scratch or expand an existing business in such a way as being creative to meet modern business environment as well as the competitive global environment.

Entrepreneurial Skills

Entrepreneurial skills are a set of learned skills that enable the start-up, running and existence of businesses. These are competency to integrate cognitive and practical abilities that allow entrepreneurs to identify opportunities, acquire necessary resources, and operate in uncertainty. According to Umar et al. (2019), these skills constitute essential tools of innovation, value, economic, and social development. Essien (2021) expounds that such skills are not just in level of technical expertise but also comprise of creativity, resilience and taking calculated risks, which are equally important to the entrepreneurial efficacy even in dynamic business spheres.

There usually are conceptualizations of entrepreneurial skills based on behavioural and psychological concepts. According to Ibrahim (2020), proactiveness, self-confidence, and problem-solving ability are some of

the personal characteristics factors that influence the formation of entrepreneurial intentions and outcomes together. On the same note, Kamau (2020) states that these attributes define the way people respond and understand opportunities and dangers that exist in their business environments. On the one hand, the strategic planning is supported by the cognitive competencies, whereas on the other hand, psychological traits such as persistence and adaptability are the real pillars of long-standing engagement.

A special focus is also made on technical and managerial competencies that are the bases of enterprise operations. Justina & Uche (2021) establish that the area of financial literacy, marketing expertise, operation forecasting, and staff management are the core attributes of the entrepreneurial ability. The above skills make commencement of new ventures not only possible, but also proficiently done. According to Shamaki et al. (2022), technical competence also contributes to the performance of the business since an optimal use of the available resources promotes profitability and the expansion of the enterprise, especially among micro and small-scale businesses.

Another dimension is expressed as experiential learning and transferring of knowledge. Aliyu (2020) argues that entrepreneurial skills are not born but are nurtured with the assistance of education, mentoring, and opportunity to learn in the business environment. According to Ngbede & John (2023) a good entrepreneurial education not only instils knowledge but practical savvy to ensure that the entrepreneur is able to use his or her theoretical understanding and translate them to practical business approaches. These acquired skills encourage innovation and sustainability in the long-run since people become able to change along with the changes in the demands of the market.

Collectively, these definitions highlight the heterogeneity of the scope of skills tied to entrepreneurship, which encompasses cognitive, behavioural, managerial, and experience-based professionalism. Some areas of focus may change, however, there is a certain agreement upon entrepreneurship as a skill-based process based on personal ability and deliberate intent of learning. Both Umar et al. (2019) and Essien (2021) confirm that the effectiveness of an entrepreneur depends primarily on his/her degree of skills and their diversity.

Women Entrepreneurship

Women entrepreneurship is a concept that refers to the involvement of women in establishing and running businesses. This can range from small-scale enterprises to large organizations, with women taking on the roles of business owners, managers, or decision-makers. Women entrepreneurs are often viewed as critical drivers of economic development, particularly in regions where gender inequality has limited women's access to traditional economic opportunities. In many societies, entrepreneurship provides a pathway for women to achieve financial independence, enhance their social standing, and contribute meaningfully to their families and communities (Abass, 2019). The scope of women entrepreneurship is diverse, encompassing various industries such as agriculture, technology, retail, and services. These women not only create employment opportunities for themselves but also for others, fostering innovation and promoting inclusive growth.

Additionally, women entrepreneurs represent the fastest growing category of entrepreneurship worldwide and have received, especially in recent years, the attention of many academics. Women can make a significant contribution to entrepreneurial activity and economic development in terms of creating new jobs and increasing the gross domestic product (GDP) with positive impacts on reducing poverty and social exclusion (Kelley et al., 2023; Hechevarría et al., 2022). Female entrepreneurs are women who organize and manage an enterprise, especially a business (US Legal 2022). This increase gave rise to wealthy self-made females such as Coco Chanel, Diane Hendricks, Meg Whitman, and Oprah Winfrey. Women entrepreneurship is viewed in this study as women who have established a business or expanding an existing one to meet modern business demands, survive and grow in a competitive environment.

Women-Owned Enterprises in Nigeria

Nigeria has an almost even population between males and females. This is also the trend with respect to the labour force. However, in the micro-business space, the trend is skewed towards men, with women accounting for 41% of business ownership and 3.4% of female employment within micro-enterprises (PwC, 2020). Furthermore, Nwachukwu, Chijioke and Vu (2021) posit that women-owned businesses are not economically developed, compared to those of men as women are considered to have strongly connected to the family, and most work of maintaining the house is assigned to them. Moreover, the researcher contends that the generalization of gender in Nigeria suggests that women are not supposed to engage in stressful and high-risk taking ventures and this has discouraged many Nigerian women from developing, running, and growing successful business ventures. The majority of women entrepreneurs operate in the informal sector, including subsistence farming, food processing, and petty trading (Alake, & Okogua, 2023). However, most of the women entrepreneurs in Nigeria are small in scale with commensurately low earning levels. In Nigeria, traditions, and cultures still play a vital role in women's participation in the labour market and are restricted

from engaging in entrepreneurial activities. Nevertheless, according to Ojinta and Halkias (2022), many women realize the economic effect of their entrepreneurial activities on the families, and they are finding ways of combining their traditional roles with businesses for survival and improving the living standard.

Entrepreneurial Skills as a Mediator between Advisory Intervention Services of Microfinance Banks and the Performance of Women-owned Enterprises

Entrepreneurship as a means of empowering women in the economy is an increasingly strategic goal within global, regional and national development agendas, such as the United Nations Sustainable Development Goals (SDGs). Consequently, most countries including Nigeria have come up with institutional frameworks to accommodate women entrepreneurs through advisory intervention services, which are mostly provided by microfinance banks. These advisory services are intended to enhance business performance, but their effectiveness is frequently mediated by the entrepreneurial skills of the beneficiaries. Advisory services are important to the development of women entrepreneurship in emerging economies but to act on the advice, entrepreneurs must have the competencies to internalize and act upon the advice (Samuel and Njibwakale, 2024).

The advisory services are considered to be the significant intangible resources based on the Resource-Based Theory that small and medium-sized enterprises (SMEs) can use to remain competitive and develop (Sajuyigbe et al., 2021). However, advisory interventions do not necessarily result in better performance when provided. Women entrepreneurs must be equipped with key entrepreneurial skills—such as strategic thinking, communication, decision-making, and adaptability—to interpret and act upon the advice received. In this sense, entrepreneurial skills act as a mediating variable that transforms advisory support into tangible business outcomes. According to Kiggundu and Omotayo (2021), advisory services include mentorship, financial planning, market research, and strategic development. Such services are important sources of knowledge, particularly to women in underserved areas such as North Eastern Nigeria where professional consultancy is not readily available. Nonetheless, the difference of such interventions depends on the capability of women entrepreneurs to utilize this knowledge. As an example, a woman who has been advised on financial planning has to have basic financial literacy and budgeting to balance cash flows. The advisory support might be rendered useless without such underlying skills.

Zakari (2020) insists that frequent interactions with business advisors enhance managerial decision-making and resource optimization especially when the entrepreneur possesses the cognitive and technical ability to incorporate the advice into operations. Here, entrepreneurial skills mediate the relationship by enhancing the entrepreneur's capacity to recognize opportunities, solve problems, and adapt to changing market conditions. On the same note, the advisory services that help in planning the growth or diversification of business demand that the entrepreneur should demonstrate the ability to think creatively and manage risks- the qualities that define how effective the advice will be implemented. In addition, regulatory compliance and innovation is also facilitated by advisory interventions. According to Aliyu and Hassan (2022), advisory assistance assists women in entrepreneurship to overcome tax, license, and labour regulations. However, the results of compliance will have to rely on the willingness and capability of the entrepreneur to work with the regulatory information, which is a factor that needs a combination of literacy, detail-oriented, and administrative expertise. Similarly, Nwosu and Adebayo (2021) mention that the exposure to innovation in the form of advisory services, including the adoption of digital tools, is effective only in case the entrepreneur is receptive, tech-savvy, or trainable. Thus, entrepreneurial skills serve as the link through which knowledge transfer leads to performance gains.

In the research conducted by Nwankwo (2021), the researcher explored the mediating effect of entrepreneurial competence against the affiliation between the advisory services of microfinance banks and the performance of women-owned businesses, that is, in the case of Anambra State, Nigeria. The study was informed by the fact that the number of women-owned businesses that are still experiencing below-optimal growth is increasing even though microfinance advisory service is available to a large population. It aimed at answering the question whether or not acquisition of entrepreneurial skills was a major indicator of converting advisory assistance into business performance. Using descriptive research design, the structured questionnaires were used to collect the data using 428 women entrepreneurs in the retail and service industries. The stratified random sampling created a variety of representation in terms of income bracket and type of business. Structural Equation Modelling (SEM) in AMOS version 24.0 was used to perform data analysis. These results showed that the direct influence of microfinance advisory services on business performance was not significant (0.23, $p > 0.05$) but the indirect influence mediated by entrepreneurial skills was significant (0.61, $p < 0.01$). Sixty seven percent of the respondents who have undergone training in financial literacy, business-planning, and inventory-control workshops reported an increment of at least 35 percent in quarterly profit margins. The research came to the conclusion that entrepreneurship skills are a catalytic pathway that improves the translation of the advisory support into the quantifiable business outcomes. The study suggested that microfinance institutions should

consider including continuous skill-building units in their advisory package and partner with technical partners to provide its clients with women with tailor-made entrepreneurial training.

Following this line of research, Bature and Gambo (2022) investigated the role of microfinance advisory interventions in influencing the performance of women-owned SMEs through the entrepreneurial skill development of women in Bauchi metropolis, Nigeria. The essence was to determine the level to which the gained skills in business management determine the performance of advisory interventions. The scholars utilized correlational design and the respondents included 312 women entrepreneurs registered with three leading micro finance banks in the metropolis with an 89 percent response rate. The data collection methods were the path analysis and multiple regression models on SPSS version 25. The findings demonstrated that advisory interventions caused a positive and insignificant direct effect on the performance of SMEs ($\beta = 0.14$, $p > 0.05$). On the other hand, entrepreneurial activities like marketing strategies, bookkeeping, and customer contact were significant in mediating the relationship (0.48 , $p < 0.01$). It is important to note that 71 percent of the respondents who had already attended at least three advisory sessions had increased their business incomes by more than 40 percent in 12 months. The researchers concluded that microfinance institutions should focus more on skill transfer instead of advisory consultation and advised that entrepreneurial mentorship should be embedded in the activities of the microfinance institutions and training modules in specific sectors which are related to women, who have ventured into agribusiness and textile manufacturing should be introduced.

Yusuf (2023), further developed this literature by undertaking a mixed-method research in Kano State to test the mediating impact of entrepreneurial intermediation, i.e., business skills, in the association between microfinance advisory services and the indicator of success of enterprises run by women. The sampling was done on 400 female entrepreneurs in Dala, Tarauni and Fagge LGAs with the help of convergent parallel design, where the quantitative survey and qualitative in-depth interviews were used. Standardized Likert-scale questionnaires and semi-structured interview were used in data collection. The analysis of hierarchical regressions and mediation analysis was performed using SPSS PROCESS macro. Quantitative findings showed that microfinance advisory services alone did not contribute much on performance ($R^2 = 0.19$), but when entrepreneurial skills were introduced as a mediator, this explained the performance to the extent of $R^2 = 0.52$. Majority of the respondents, who had participated in the entrepreneurship-development programs provided by microfinance advisors, reported an increase of at least 45 percent in the volume of their sales and 50 percent in the number of customers. These findings were supported by the use of qualitative interviews which highlighted the importance of digital marketing and product differentiation as the main growth drivers. The results of the investigation concluded that the potential of the advisory interventions is directed in the growth of the enterprises through entrepreneurial intermediation. The study suggested that the policy should be changed to a consistent entrepreneurship program integrated into the microfinance business and advised that the funding of such activities should be supported by the public-private partnerships on a long-term basis.

In addition, Ejiofor and Dangana (2020) completed an empirical research in Jos North, Plateau State. The research has aimed at ascertaining whether or not the entrepreneurial capacity of women entrepreneurs moderates or mediates the effect of advisory services provided by microfinance banks. The authors used a longitudinal panel design in an 18-month survey of 280 women, who were active clients of two nearby microfinance institutions. Data collection was done through quarterly surveys and financial records of the participants. The methods of analysis were panel regression models and Sobel mediation tests. The findings indicated that the microfinance advisory interventions did not have any significant direct impact on growth indicators like net profit (0.08 , $p = 0.12$) but there was significant indirect effect, which acted through entrepreneurial capacity (0.53 , $p < 0.01$). Over 60 percent of the respondents who learned how to price their products and manage inventory levels indicated that they registered more than 30 percent profit growth in the third quarter. This research found out that advisory activities only perform optimally when they are used together with intensive entrepreneurial capacity-building programmes. Some of the recommendations were that the microfinance institutions should develop entrepreneurship diagnostic instruments to help it understand the skills gaps and then design training to meet such gaps.

Alabi and Tenuche (2024), conducted a similar study to examine how entrepreneurship skills moderate the relationship between the intervention of advisory services of the microfinance banks and the performance of new businesses headed by women in Kogi State. This was aimed at getting an empirical answer to the question of whether advisory services on business registration, management of loans and marketing had the capacity to produce better results with strong entrepreneurial training. In the study, the researcher used a survey design and developed a sample of 350 female entrepreneurs registered in the Kogi Women Enterprise Empowerment Scheme (KWE). The electronic questionnaire and focus group discussion were utilized in data collection, and PLS-SEM analysis using the SmartPLS 3.0 was used. The results demonstrated that microfinance advisory interventions had a small impact on performance metrics turnover and employment growth ($\beta = 0.29$, $p > 0.05$). The relationship was however mediated by entrepreneurial skills with a greater effect ($\beta = 0.62$, $p < 0.01$). About 69 per cent start-ups which received joint advisory and skills training services indicated more than

50 per cent increase in the customer acquisition and 35 per cent in profit margins in six months. The research went ahead to conclude that entrepreneurial skills are mandatory in the conversion of advisory inputs into actual performance outputs. It was recommended that entrepreneurial mentorship must be incorporated into a microfinance structure and that startup simulation labs should be provided to get practical exposure on the same. As a result, it is hypothesized that:

Ho: Entrepreneurial skills do not mediate the relationship between advisory intervention services of microfinance banks and the performance of women-owned enterprises in North Eastern Nigeria

Theoretical Framework

Human Capital Theory

Initially Theorized by Theodore W. Schultz in 1961 and developed by Gary S. Becker in 1964, Human Capital Theory is a theory that was first witnessed in the publication of the book titled, *Human Capital: Theory and Measurement*. This theory is based on the assumption that people are born with the abilities and talents, and by means of an active investment of resources into education, training and health, it is possible to develop it. In his argument, Schultz (1961) suggested that investing on such people is equivalent to investing on physical capital, with the returns brought on in advance by better productivity and economic performance. Becker (1964) proceeded with this argument to state that the human capital includes the skills, knowledge and competency levels that are acquired by individuals, which lead directly to their output in the economic activities.

The main assumption of the Human Capital Theory is that productivity of the labour market members largely depends on the level and quality of improvement and training they got. According to Becker (1964) such investments made in human capital can not only increase individual income but also trigger economic growth as a whole. Those people who invest in themselves by undertaking both informal and formal education develop desirable skills that help them to change in accordance with the changes of the economy. The learned skills would be transformable resources to the individual and the society in general because they would lead to innovation, efficiency, and competitiveness.

Human Capital Theory gives us background information on how acquisition of skills can be converted into economic benefits. It treats the education and training as investments, which have the long term positive results in terms of efficiency, problem solving capabilities, and decision making capabilities. According to Schultz (1961), countries open to developing their human resources better stand a chance of having a sustainable economic growth. He observed that inequality in national development may be usually linked to variations in quality of human capital as opposed to quantity of physical or natural resources that are given to them.

In view of entrepreneurship, Human Capital Theory proposes that the level of achieving entrepreneurship is mostly determined by the level of human capital in hand. Yet, Becker (1964) suggested that people who are better educated and have training (in business) stand more chance of recognizing the entrepreneurial opportunities and also taking the entrepreneurial risks. The entrepreneurs invest in themselves by engaging in perpetual education and acquisition of managerial and technical skills, which give their ability to start, run and grow business ventures. Therefore, the theory emphasizes the need to focus on personal development as one of the preconditions of entrepreneurial performance.

Such theoretical framework also supports the present study that was dealing mainly with the role of entrepreneurial skills acting like the mediating variable between advisory intervention services and the output of women-owned business. The attitude that women entrepreneurs having higher skills of entrepreneurship are in a better position to make use of advisory interventions can be related to the perspective expressed by Becker (1964) that human capital defines the capacity to maximize the advantages of external provision. Hereby, advisory services offered by microfinance banks can be regarded as a form of input, though its success is hugely dependent on the entrepreneurship abilities of the respective person(s) to consume and use the offers.

The Human Capital Theory is therefore a powerful prism through which the interaction between institutional support and entrepreneurial skills as variables could be evaluated and related to the performance of an enterprise. The formulations made by Schultz (1961) and Becker (1964) tend to prove the thesis that microfinance advisory interventions can be equally vital but the existence of such interventions in affecting the business performance remains mediated by the degree of human capital represented by skills and knowledge within the ladies entrepreneurs. Such a mediating capacity could make the potential of external interventions in the context of the enterprise realization, without which the potential may not be supported to the full extent, the importance of entrepreneurial skills as a strategy in supporting input to enterprise success.

III. Methods

This paper adopted descriptive survey research design to examine entrepreneurial skills as a mediator between advisory intervention services of Microfinance bank and the performance of women-owned enterprises in North Eastern Nigeria. The choice of this design was due to the fact that it systematically collects

standardized data using a representative sample, which makes it easy to generate and generalize data. The population comprised 1,262 women entrepreneurs across six states—Borno, Yobe, Taraba, Gombe, Adamawa, and Bauchi—who benefited from microfinance bank interventions, with data sourced from various microfinance banks in these states. Gombe State had the highest representation with 456 beneficiaries, while Bauchi had the lowest with 13. The sample size was determined using Taro Yamane's formula, yielding 304 respondents, which was then increased to 395 to account for a 30% attrition rate. A stratified random sampling technique was adopted to ensure that each state and microfinance bank was proportionally represented.

A structured questionnaire adapted from Kabira (2022) was used as the main instrument for data collection designed using 5-point Likert scale options. To analyse data collection, the descriptive and inferential statistical techniques was incorporated in the analytical methods. The descriptive statistics, including means, and standard deviations was used to analyse the responses obtained. While the hypotheses were tested by inferential procedures which includes only regression analysis, and mediation analysis. The data were analysed using statistical software such as SPSS (Statistical Package for the Social Sciences). The results were presented in tables for easy interpretation.

IV. Results

Descriptive Statistics

Table 1: Descriptive Statistics on the impact of advisory intervention services of Microfinance bank on the performance of women-owned enterprises in North Eastern Nigeria

Variables	Advisory Services
No. of Items	6
Mean (Composite)	4.09
Standard Deviation	0.72
Interpretation	High Agreement

The descriptive statistics in Table 1 indicate that respondents demonstrated a high level of agreement regarding the effect advisory intervention services of Microfinance bank on the performance of women-owned enterprises in North Eastern Nigeria. With a composite mean score of 4.09.

Direct Effects (Regression Analysis)

Table 2: Regression Analysis Showing the advisory intervention services of Microfinance bank on the performance of women-owned enterprises in North Eastern Nigeria

Model Summary				
R	R Square (R ²)	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
0.604	0.365	0.359	0.681	1.934

Coefficients Table

Predictor	Unstandardized Coefficient (B)	Std. Error	Beta (β)	t	Sig. (p-value)
(Constant)	1.11	0.233	—	3.91	0.000
Advisory services	0.25	0.033	0.22	3.92	<0.001

$P < 0.05$; DV = Performance of women-owned enterprises

The regression analysis in table 2 above reveals that advisory intervention services from microfinance banks have a significant positive effect on the performance of women-owned enterprises in North Eastern Nigeria. The model explains 36.5% of the variance in performance ($R^2 = 0.365$), indicating a moderate relationship ($R = 0.604$). The predictor, advisory services, is statistically significant ($B = 0.25$, $\beta = 0.22$, $t = 3.92$, $p < 0.001$), suggesting that a one-unit increase in advisory support leads to a 0.25-unit increase in enterprise performance. The Durbin-Watson value of 1.934 indicates no autocorrelation in residuals, affirming the model's reliability.

Mediation Analysis

Process Macro Mediation Analysis on the mediating effect of Entrepreneurial skills on the relationship between Training programs by micro finance banks and performance of women-owned enterprises.

Table 3: Analysis Summary for ENT skills as the Mediator between training programs and performance of women-owned enterprises

Relationship	Total Effect	Direct Effect	Indirect Effect	Confidence Interval	t-statistics	Conclusion
Advisory services → Entrepreneurial Skills →	0.3839 (0.000)	0.1021 (0.0940)	0.2794	0.1809	0.3837	13.3235 Full mediation

Relationship	Total Effect	Direct Effect	Indirect Effect	Confidence Interval	t-statistics	Conclusion
Performance						

The mediation analysis in Table 4.21 assessed whether entrepreneurial skills mediate the relationship between advisory services provided by microfinance banks and the performance of women-owned enterprises. The total effect of advisory services on performance was statistically significant (0.3839, $p < 0.001$), indicating an overall positive influence. However, the direct effect (0.1021) was not statistically significant ($p = 0.0940$), suggesting that advisory services alone do not significantly impact performance without the influence of other variables. The indirect effect through entrepreneurial skills was substantial (0.2794) and statistically significant, with a confidence interval ranging from 0.1809 to 0.3837, excluding zero. This, alongside the high t-statistic (13.3235), confirmed a significant mediating effect. Therefore, entrepreneurial skills fully mediated the relationship between advisory services and enterprise performance, meaning the impact of advisory services on business outcomes was primarily channelled through the enhancement of entrepreneurial competencies.

V. Discussion Of Findings

The results of the analysis conducted on the current research indicate that there is a strong perception of advisory intervention effectiveness among women-owned businesses in North Eastern Nigeria, as a composite mean score of 4.09 indicates a high level of agreement on the applicability and utility of such services. This agreement is supported by the findings of multivariate regressions, which show that there is a statistically significant and positive direct relationship between advisory services and enterprise performance ($B = 0.25$, 0.22 , $t = 3.92$, $p < 0.001$). To be more precise, the regression model accounts 36.5 % of the variance in performance, which means that the advisory services play a moderately but significantly important role.

Further mediation analysis provides a more detailed insight into this effect. The overall impact of advisory services is still statistically significant (0.3839, $p < 0.001$); the direct one is not (0.1021, $p = 0.0940$). Rather, a robust indirect effect (0.2794) via acquisition of entrepreneurial skills indicates that advisory services only influence when combined with acquisition of business competencies, which indicates complete mediation. Therefore, advisory services are not enough, but their transformative power is influenced entrepreneurial skills.

This trend is in line with existing empirical evidence. According to Nwankwo (2021), there was a weak direct relationship between advisory services and firm outcomes in Anambra State ($\beta = 0.23$, $p > 0.05$), but a significant indirect effect through entrepreneurial skill acquisition ($\beta = 0.61$, $p < 0.01$). In his research, women who received specific training showed a 35 % increase in quarterly profit, which highlights the catalytic effect of skill training in maximising advisory returns. Bature and Gambo (2022) examined Bauchi and found a small direct effect of advisory services ($\beta = 0.14$, $p > 0.05$), but a strong mediating effect via skills, including marketing and bookkeeping ($\beta = 0.48$, $p < 0.01$), with more than 70 % of respondents reporting an income increase of more than 40 % after several advisory sessions.

Similarly, in Kano, Yusuf (2023) used hierarchical regression to demonstrate that advisory services explained only 19 % of the performance variation ($R^2 = 0.19$), but when they were added into the entrepreneurial capacity training, explanatory power rose to 52 % ($R^2 = 0.52$). This finding is in line with the present mediation findings; the indirect effect (0.2794) is greater than the direct effect, which indicates an entrepreneurial skills-transformative role. Ejiofor and Dangana (2020) studied Jos North, Plateau, where the direct impact of advisory support ($\beta = 0.08$, $p = 0.12$) was insignificant but became significant with the help of entrepreneurial capacity ($\beta = 0.53$, $p < 0.01$). These authors emphasized the importance of long-term training, with 60 % of the women who gained pricing and inventory expertise realizing more than 30 % profit improvement in three quarters. The study conducted by Alabi and Tenuche (2024) in Kogi State also drew a similar conclusion, stating that advisory services had a modest impact on key performance indicators alone (0.29, $p > 0.05$) but a strong impact when mediated by entrepreneurial skills (0.62, $p < 0.01$). They demonstrated that 69 % of the participants recorded more than 50 % growth in customer acquisition after joint advisory and skill interventions, which confirmed the fact that skills acquisition forms part of the process in achieving full potential of advisory services.

In a nutshell, the results of this article are consistent with a larger trend across Nigeria as microfinance advisory services have a small direct impact on enterprise performance unless they are supplemented by additional interventions that are skill-specific. Such consistency with the current literature supports the policy need to integrate systematic, skills-based programs into microfinance advisory systems. In this regard, advisory material must focus on formalised skills transfer systems, mentoring, and context-relevant training packages to convert advisory access into quantifiable business achievement among women entrepreneurs.

VI. Conclusion

The results obtained from this study has unveiled the importance of non-financial support, that is, advisory services, in empowering women entrepreneurs in North Eastern Nigeria. The respondents who had sought the advice of microfinance banks showed a resounding agreement on the positive effects such interventions on their businesses. These findings show that, although the importance of capital cannot be underestimated, women entrepreneurs attach as much or even more importance to expert counselling, mentoring, and systematic business advice that will allow them to make informed decisions, accurate planning, and resource-effective management. The statistics therefore highlight the importance of customized support systems that can respond to the specific issues that women face in creating and sustaining ventures, especially in a socio-economically vulnerable environment.

In addition, the study suggests that the actual value of advisory services is in their ability to develop concrete entrepreneurial skills. Women who had self-reported improvement in skills like strategic planning, problem-solving and opportunity identification showed better performance improvement in various business measures. Advisory activities are therefore most effective when they are part of an overall empowerment program aimed at building internal capacity. The implication is that long-term results can only be achieved when financial institutions and other support agencies combine advisory support with strong skills-development programs. Finally, letting women think, act, and grow their businesses like entrepreneurs turns advice into long-term business success.

VII. Implications Of The Study

The findings imply that development strategies aimed at supporting women-owned enterprises should prioritize both guidance and skill development. Advisory services alone are not enough; they need to be structured in a way that builds the internal capacity of women to manage and grow their businesses. Institutions like microfinance banks should adopt a more integrated approach, e.g. pairing financial assistance with mentorship, hands-on training, and ongoing support, to ensure women entrepreneurs can fully leverage the resources available to them for long-term business sustainability.

VIII. Limitations Of The Study

This study is not without limitations. First, the research was geographically limited to North Eastern Nigeria, which may affect the generalizability of the findings to other regions with different socio-economic and cultural dynamics. Second, the study relied primarily on self-reported data from respondents, which may be subject to response bias, such as social desirability or recall errors. More so, while the sample size was statistically adequate, it may not fully capture the heterogeneity of all women-owned enterprises across the six states in the North East. Lastly, the study focused solely on selected microfinance interventions (advisory services), excluding other potential support mechanisms which might also impact enterprise performance.

IX. Suggestions For Future/Further Studies

Future studies should focus on exploring how factors like digital literacy, access to technology, or cultural influences shape the effectiveness of advisory services for women entrepreneurs. It would also be helpful to gather the voices of women through interviews or focus group discussions to better understand their real-life experiences and needs. Conducting similar research in other parts of the country will also provide a broader view and help tailor more inclusive support programs for women-owned businesses nationwide.

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