

The Impact of Small and Medium Enterprises (SMEs) on Poverty Reduction in North-Western Nigeria

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Abstract

This paper examines empirically the impact of small and medium enterprises (SMEs) on poverty reduction in North-Western Nigeria. The study adopts a cross-sectional research design. It employed a quantitative survey research method using questionnaires as an instrument for data collection. A multistage sampling method was applied in selecting the sample of 538 respondents for questionnaires distribution. SPSS and PLS-SEM tools were used to screen and analyze the data. The findings of the study revealed that the impact of SMEs is positively significant to poverty reduction (Consumption pattern, Expenditure pattern, Job Creation, and Income generation). Revealing that SMEs positively affect the reduction of poverty in Northern Nigeria. The results of this study have implications for policymakers in policy formulation for government intervention on SMEs development in Northern Nigeria, which is characterized by low development due to insecurity and acute poverty. Hence, the study recommends government design a policy for SMEs intervention on SMEs development in Northern Nigeria, which is characterized by low development due to insecurity and acute poverty. The study is limited to the influence of one independent variable, namely SMEs. Also, the study is limited to one region in Nigeria (North-western Nigeria). Future researches are recommended to include other regions for the generalization of findings. Based on this limitation, it is recommended that future research include additional variables such as Entrepreneurship orientation.

Keywords: SMEs, Poverty Reduction, Job Creation, Employment Generation, Consumption Pattern, North-Western Nigeria.

Introduction

World Bank defined poverty is pronounced deprivation in well-being, and comprises many dimensions. It includes low incomes and the inability to acquire the basic goods and services necessary for survival with dignity. Poverty also encompasses low levels of health and education, poor access to clean water and sanitation, inadequate physical security, lack of voice, and insufficient capacity and opportunity to better one's life (Bank & Nation, 2020).

Poverty is multidimensional (absolute and relative poverty), UN uses the Multidimensional Poverty Index (MPI), to gauges poverty by looking at things like nutrition, child mortality, school attendance, and access to basic amenities, (World Bank, 2023). Absolute poverty is the state in which people do not have access to basic essentials including clean water, food, shelter, and medical care. Absolute poverty, according to the World Bank, is defined as subsisting on less than \$2.15 a day as of 2023.

Relative poverty, on the other hand, is a condition in which people or households make much less than the median income in their community, which causes inequality and social exclusion (Tsauni, 2024). In addition, It refers to a situation where a person's needs are not being met in comparison with the rest of his or her society (Alters, 2009; Onagunisiaka, Fuadah and Mohammad, 2014 as cited by (Odalonu, 2022).

According to 2023 World Bank report, revealed that more than 700 million people globally, mostly in South Asia and Sub-Saharan Africa, remain in absolute poverty despite economic progress. In addition to the above, Tsauni, 2024 observed that the total number of people living in extreme poverty globally stands at 712 million in 2022, an increase of 23 million people compared to 2019 (Bank & Nation, 2020). The worldwide incidence has been challenging and on the rising trend since the Covid-19 pandemic, worsened further by factors such as rising inflation, the Russia-Ukraine conflict, Israeli-Palestine conflict, debt crises, slow economic growth, fragility and conflict and climate change World Bank, (2022). The World Bank reported that rising inflation and low economic growth in Nigeria pushed a further 2.8 million people into poverty in 2023. Galal, (2025) added that in 2024, around 429 million people in Africa lived in extreme poverty. Thus, Nigeria has been classified as a high-poverty middle-income country, with over 40 per cent of the population living below the country's poverty line and over 60% of Nigerians are further labeled as multidimensional poor, with higher incidence of multidimensional poverty compared to the monetary poverty (Tsauni, 2024).

In response to the above, researchers, policymakers, and development practitioners advocate poverty reduction to improve human globally, particularly in sub-Saharan Africa, where the problem is more severe (Lemnge et al., 2024). Poverty reduction simply refers to all formal activities geared towards lowering the prevalence and rate of poverty in the country. In other words, it is a process by which deliberate actions are taken in order to ensure that people who are unable to meet up with the basic necessities of life are supported and assisted to achieve same (Odalonu, 2022).

Over the years, the Nigerian government has implemented various poverty reduction programmes aimed at alleviating the widespread socio-economic challenges faced by its citizens. These includes National Directorate of Employment was established in 1986, Better Life Programme 1987, Family Economic Advancement Programme (FEAP) 1997, National Poverty Eradication Programme (NAPEP) 2001, National Economic Empowerment and Development Strategy (NEEDS) 2003, Subsidy Reinvestment and Empowerment Programme (SURE-P), launched in 2012, National Social Investment Programme (NSIP) 2015, N-Power 2016, Conditional Cash Transfer, GEEP, and HGSP all in 2016 to reduce poverty and enhance human capital. Despite these programmes still poverty persist.

For instance, the population of Nigeria as at 2021 was 284 million. It was reported that the rate of poverty in Nigeria keeps rising despite the enormous human and natural resources. The apparent disconnection between Nigeria's endowment in natural resources and the

level of poverty has become worrisome to all. Currently, Nigeria is ranked amongst the poorest nations in the world. Statistics from a recent survey by the World Poverty Clock indicates that 93.7 million Nigerians now live in extreme poverty.

In Nigeria Small and medium enterprises (SMEs) create job opportunities among the low skilled people and therefore hold the key to employment creation and income generation. Small and medium enterprises have made great contributions in eradicating poverty in Nigeria. SMEs are regarded as the engine of economic growth to any nation's development. The main advantage of the sector is its ability to employ at low capital cost (Orji et al., 2019). SMEs are main drivers of innovation, job creation, poverty reduction, wealth creation, income distribution and reduction in income disparities. It is in the light of this that this study intends to assess the effects of Small and Medium Enterprise on poverty reduction in Nigeria.

This study contributes to knowledge by providing empirical insights into the role of Small and Medium Enterprises (SMEs) in poverty reduction in North western Nigeria, a region where poverty persists despite numerous government interventions. In addition, this study will contribute to policy making by offering evidence-based insights on how SMEs can serve as a strategic instrument for poverty reduction in North western Nigeria.

Problem Statement

Poverty remains a pressing socio-economic challenge in Nigeria despite decades of government interventions and abundant natural resources (Petersen et al., 2018). Poverty is viewed by the World Bank as a multidimensional deprivation encompassing income, education, health, and access to basic amenities, poverty continues to rise, with over 93.7 million Nigerians living in extreme poverty and more than 60% categorized as multidimensionally poor (Hussaini & Noma, 2019). World Bank Group report of 2023 revealed that global and national crises such as inflation, conflict, weak economic growth, and climate change have further deepened this condition, undermining the effectiveness of several poverty reduction programs implemented in Nigeria since the 1980s.

Small and Medium Enterprises are recognized globally as engines of economic growth and development, play a crucial role in job creation, income generation, and wealth distribution, especially among low-skilled populations like North-western Nigeria (Usman & Adam, 2017). However, the extent to which SMEs effectively contribute to poverty reduction in Nigeria particularly North western region of the country remains underexplored, creating the need for an empirical assessment of their role in alleviating poverty and improving living standards in the country.

Hence, the main objective of this study is to examine the impact of Small and Medium Enterprise on Poverty Reduction in North-Western Nigeria. The specific objectives are to:

- i. Examine the impact of Small and Medium Enterprise on job creation in the North-Western region of Nigeria
- ii. Assess the impact of Small and Medium Enterprise on Income generation in the North-Western region of Nigeria

- iii. Determine the impact of Small and Medium Enterprise on Consumption in the North-Western region of Nigeria
- iv. Evaluate the impact of Small and Medium Enterprise on Expenditure pattern in the North-Western region of Nigeria

The following research questions will guide the study:

- i. Does Small and Medium Enterprise have any impact on job creation in the North-Western region of Nigeria?
- ii. Does Small and Medium Enterprise have any impact on Income generation in the North-Western region of Nigeria?
- iii. Does Small and Medium Enterprise have any impact on Consumption in the North-Western region of Nigeria?
- iv. Does Small and Medium Enterprise have any impact on Expenditure pattern in the North-Western region of Nigeria?

Literature Review

Concept of Poverty

Previous scholars have defined poverty from different perspectives. For instance, Valavanidis and (Tsagkanos et al., 2018) viewed poverty as denial of choices and opportunities, a violation of human dignity. The authors further revealed lack of basic capacity (feed, school, clinic, clothing a family and as well having access to credit) to participate effectively in society as part of poverty. Furthermore, (Tsauni, 2024)) sees Poverty as a condition in which an individual is unable to meet the minimum requirements to sustain livelihood. These requirements include adequate food, portable water, decent shelter, health care and education.

In a different perspective. (Bank & Nation, 2020) Reported that poverty encompasses more than just insufficient income and productive resources for sustainable living. It manifests in various forms, including low educational attainment, poor health and nutritional outcomes, restricted access to essential services, social prejudice and marginalization, limited participation in decision-making and unsafe living conditions. (Bank & Nation, 2020) Reported poverty to encompass low levels of health and education, poor access to clean water and sanitation, inadequate physical security, lack of voice, and insufficient capacity and opportunity to better one's life. (World Bank, 2023) categorised poverty into multidimensional (i.e., absolute and relative poverty).

Absolute Poverty

Absolute poverty is the state in which people do not have access to basic essentials including clean water, food, shelter, and medical care. Absolute poverty, according to the World Bank, is defined as subsisting on less than \$2.15 a day (World Bank, 2023). Conversely, absolute poverty is defined as a state of lacking the bare necessities required for a minimal standard of living. Being unable to meet that threshold signifies deprivation

(Deonandan, 2019). Absolute Poverty Line measured as household daily per capita consumption expenditure of US\$1 (equivalent to N720.00)(Idris Isah Abubakar, 2024).

.in another perspective Absolute poverty is also referred to as subsistence poverty is grounded on the idea of subsistence – the basic condition that must be met in order to sustain a physically healthy existence. Individuals or groups who lack basic needs of food, shelter and clothing fall under this category(Oba and Onuoha, 2013). absolute poverty or absolute destitution refers to the minimum standard of living that is considered adequate in a particular area at a particular time. According to this concept, someone whose standard of living is below an adequate standard of living is considered poor (Listiani et al., 2024).

Hence, absolute poverty, which reflects the inability to meet basic survival needs such as food, shelter, water, and healthcare, remains a critical challenge in north-western Nigeria where millions live below the World Bank poverty threshold. Small and Medium Enterprises can play a transformative role in addressing this form of poverty by providing income-generating opportunities that will lift individuals and households above subsistence levels. By creating jobs for low-skilled workers, stimulating local production, and enhancing access to affordable goods and services, Small and Medium Enterprises directly improve household consumption capacity and living standards. In this way, Small and Medium Enterprises not only serve as engines of economic growth but also as practical tools for reducing absolute poverty by enabling people to secure the basic necessities required for a dignified and healthy existence.

Relative Poverty

Relative poverty is used in positioning the individual or household compared with the average income in the country, such as poverty line set at one half of the mean income or at the 40th percentile of the distribution and which often varies with the level of average income(Oba and Onuoha, 2013). Relative Poverty Line measured as household daily per capita consumption expenditure of US\$2 (equivalent to N1440.00). Therefore, any household with daily per capita consumption expenditure less than N720.00 (US\$1) (Idris Isah Abubakar, 2024).

In another perspective Relative poverty measures define the segment of the population that is poor in relation to the set income of the general population. Such a poverty line is set at one-half of the mean income, or at the 40th percentile of the distribution. There are two main kinds of relative measures. Average income, this is the average income of the poorest 40 percent of the population and/or the average income of the poorest 10 or 20 percent of the population. The second is the number or population of people whose incomes are less than or equal to predetermined percentage of the mean income say 50% or less of the mean income (Olowa, 2012).

Genty, 2022 observed that relative poverty is projected to drop by as much as 15 percent but the absolute number will increase by almost 2 million, meaning over half the population will still be living in extreme poverty by 2030. Relative poverty line is based on social consensus regarding the poorest members of society. Once an agreement is reached, a

poverty line can be set. For example, the bottom 20 percent of society are ranked based on their income or expense (Listiani et al., 2024).

Therefore, relative poverty, which positions individuals or households in comparison to the average income or expenditure of the wider population, highlights inequality and social exclusion rather than mere subsistence. In Nigeria, where a significant proportion of the population earns far below the national average, Small and Medium Enterprises can serve as a vital instrument for bridging this income gap. By fostering entrepreneurship, generating employment, and expanding access to economic opportunities, Small and Medium Enterprises empower disadvantaged groups to increase their earnings and move closer to the median income levels.

Beyond income generation, Small and Medium Enterprises also contribute to reducing inequality by creating inclusive growth pathways that allow marginalized communities to participate in productive activities. Thus, Small and Medium Enterprises not only help to alleviate absolute poverty but also play a strategic role in tackling relative poverty by reducing disparities in income distribution and enhancing social mobility.

Concept of SMEs

Small and medium enterprises vary in classification across different government agencies and institutions, with no universally accepted standard. These definitions are generally based on criteria such as capital investment, number of employees, and annual turnover. For instance, the Third National Development Plan classified a small-scale business as one with fewer than ten employees or an investment in machinery and equipment not exceeding ₦600,000.

SMEDAN (2020) describe SMEs as a small enterprise as a business employing 10 – 49 people with annual turnover of five to forty-nine million naira and a medium enterprise, as a business employing 40 – 199 people with annual sales of fifty to four hundred million naira. SMEs are defined by the Central Bank of Nigeria (CBN) as businesses with a maximum asset base of NGN 200 million, without the need for working capital or land, and with between 10 and 300 employees (GBAGOLO, 2024).

Furthermore, Abuabdir, 2024 observed that Small and Medium Enterprises are vital to Nigeria's economic development, contributing significantly to employment, income generation, and innovation. In Nigeria, SMEs are categorized based on the number of employees, with micro enterprises having fewer than 10 employees, small enterprises employing 10 to 49 people, and medium enterprises employing between 50 and 249 people (National Bureau of Statistics, 2022). Thus, this study adopts central bank of Nigeria SMEs definition for the clarity.

Theoretical Review

This study uses the Resource-Based Theory (RBT) as its theoretical lens to comprehend how SMEs contribute to poverty reduction in order to obtain a more thorough knowledge.

According to RBT, which was first created by Wernerfelt in 1984 and then further enhanced by Barney in 1991, an organization's internal resources are the primary sources of long-term competitive advantage. Resources are divided into three categories under the theory: intangible (like brand reputation and expertise), human (like labor and entrepreneurial talent), and material (like financial capital and equipment).

In the context of SMEs in Kebbi, Sokoto, and Kano, Resource Based Theory provides a framework for examining how certain enterprises are more successful in reducing poverty than others. For example, an SME with skilled labor, innovative business practices, and access to credit is better positioned to scale operations and create jobs compared to one lacking these resources.

From the above it revealed that Resource-Based Theory provides a useful insight for linking Small and Medium Enterprises to poverty reduction, as it emphasizes the role of internal resources in achieving sustainable competitive advantage and broader socio-economic outcomes. Small and Medium Enterprises in regions like Kebbi, Sokoto, and Kano can generate greater employment opportunities, stimulate income growth, and enhance access to essential goods and services, thereby reducing both absolute and relative poverty. For instance, Small and Medium Enterprises equipped with skilled labor, entrepreneurial talent, innovative practices, and access to financial capital are better positioned to expand operations, increase productivity, and integrate marginalized groups into economic activities. This directly contributes to poverty reduction by raising household incomes, improving standards of living, and reducing inequality. Thus, Resource-Based Theory underscores how strengthening the internal capabilities of Small and Medium Enterprises not only secures their long-term survival but also positions them as key actors in poverty alleviation strategies in Nigeria.

Methodology

The study adopts a cross sectional research design. It employed quantitative survey research method using questionnaires as an instrument for data collection; in examine the effect of poverty on the performance of SMEs in North-western Nigeria from 2020 to 2024. Survey research is more economical in terms of effort, researcher time and cost-effective than most other methods of research such as experimental research and case study research (Bhattacharjee, 2012).

According to Krejcie and Morgan, (1970) 384 sample sizes is recommended as minimum for the study area with infinity population. However, to account for non-responsiveness, Sekaran and Bougie (2009) advice the addition of 40-50% of the sample making the total sample to be 538 for the informal small and medium enterprise. Hence, 538 questionnaires were distributed to respondents out of which 269 questionnaires were distributed in Kano state which cover kano state metropolis that include kano municipal, Fagge, Gwale, Tarauni, Nasarawa, and Dala and 135 from Sokoto Metropolis, which is made up of two LGAs (Sokoto North and Sokoto South) were covered, while 134 SMEs in Birnin Kebbi Metropolis was covered in Kebbi State.

Multistage sampling method was applied in selecting the sample. For instance Strata sampling method was adopted to select the the states that will participate in the study in North western Nigeria and convenience method of sampling were deployed to get the available respondents individuals who were willing and able to participate in the study (Bhattacharjee, 2012). This study will employed SPSS and PLS-SEM for data analysis (Hair et al., 2011). Regression analysis will be employed to test the proposed hypothesis for the study (Abdi, 2010).

The survey method, utilizing a structured questionnaire as the data collection tool, was considered among the most suitable method of gathering primary data. This technique is widely applied by organizational researchers seeking to collect information from large populations that cannot be directly observed (Hussaini & Dikko, 2025; Keeter, 2005; Mazzocchi, 2008; Ye et al., 2013). It is also regarded as one of the most effective means of obtaining data on social and personal characteristics, as well as beliefs (Babbie, 2008; Hussaini et al., 2024; Sekaran & Bougie, 2016).

Conceptual Framework

This study adopts a framework that links the four key dimensions of poverty reduction (job creation income generation, consumption pattern, and expenditure pattern) showing relationship between SMEs and poverty reduction. The research framework for this research is figure 1 below depict the relationship among SMEs and Poverty reduction:

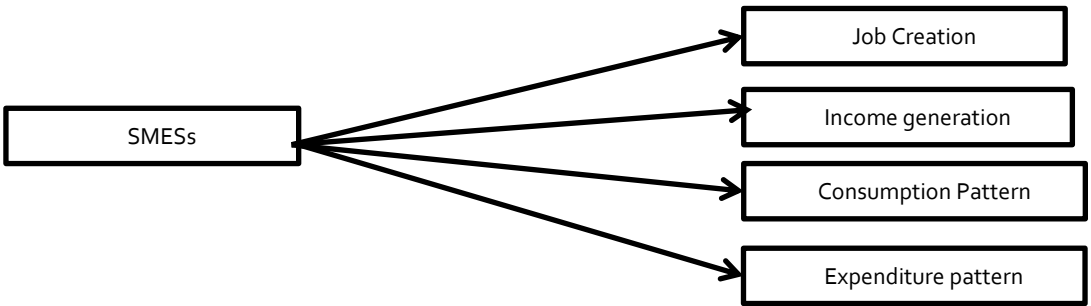


Figure 1: Research Framework

Sources: Author 2025

Data Analysis

Table 1: Demographic Profile of the respondents

Description	Number	percentage
Gender of the Respondents		
Male	269	80.3
Female	66	19.7
Position in Business		

Description	Number	percentage
Owner	222	66.3
Manager	91	27.2
Staff	22	6.6
Age of the Respondent		
18-25 Years	54	16.1
26-35 Years	191	57.0
36-45 Years	66	19.7
46-55 Years	19	5.7
Above 55 Years	5	1.5
Years in Operation		
Less than 1 year	62	18.5
Less than 3 year	119	35.5
Less than 5 year	3	21.8
Above 5 years	81	24.2
Number of Employees		
Less Than 5	287	85.7
5-20	30	9.0
21-46	18	5.4
Education		
Primary	21	6.3
SSCE	67	20.0
ND/NCE	143	42.7
HND/BSc	104	31.0

Sources: Field work 2025

Table 1 above shows that the respondents for this study consisted of 269 male (80.3%) and 66 female (19.7%). This implies that the majority of the (Heads) in SMEs are male since the percentage of the male are higher than the percentage of a female in the Nigerian small and medium enterprises. For the educational background of the respondents, the descriptive statistics revealed that 143 (42.7%) of the respondents have ND/NCE as the highest educational attainment which has the highest percentage. This is followed by a bachelor degree or equivalent with (31.0%). With 6.3% of the respondents having primary education as their highest education level. This indicates our respondents have the educational background to answer the questionnaires. Hence, the academic qualification of the respondents is quite impressive and attests to the calibre of SMEs ownership or management in Northern Nigeria.

Similarly, on position the descriptive analysis reveals most of the participants are owners of the business (66.3%) because of their availability in the business/shop most of the time to monitor and manage the business, while 22.7% were managers, likewise 6.6% were staff. The lower percentage of staff is due to the nature of business. This clearly shows that our target respondents have been reached. While on the age of the respondents, on average

the age group of the research participants is within the range of 25-35 years old representing (57%) which is the productive age in the public/private sector, hence they are likely to be more resourceful and effective which enhances competency level of the business.

Measurement Model Analysis

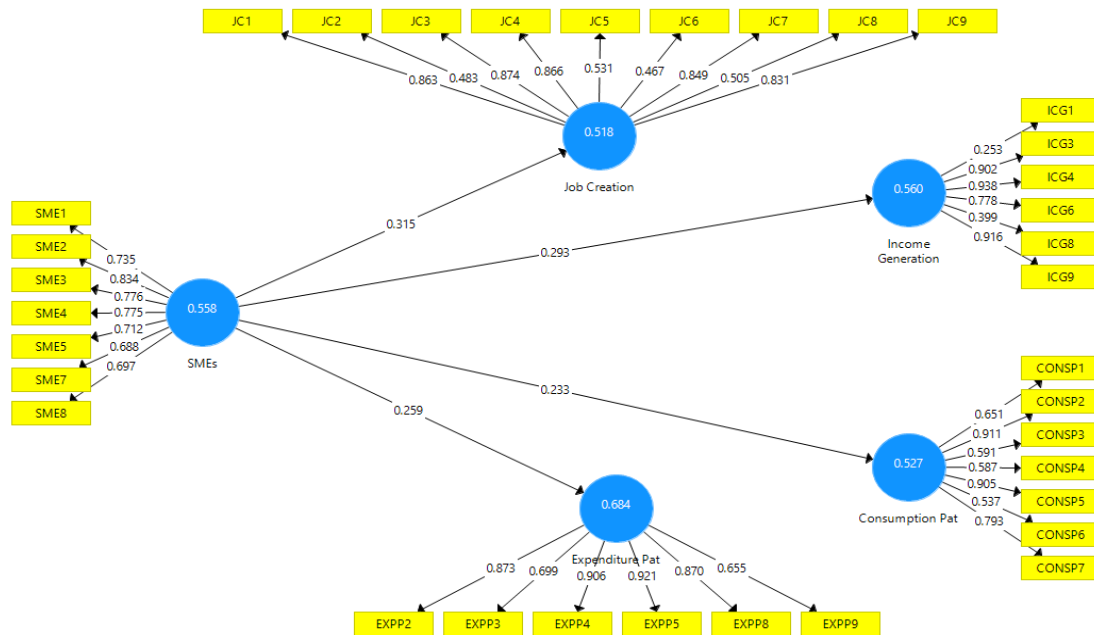


Figure 2: Measurement model analysis

Source: Author 2025

Table 2: Cronbach's Alpha, Composite Reliability, and AVE Values

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Consumption Pattern	0.850	0.907	0.882	0.527
Expenditure Pattern	0.904	0.935	0.927	0.684
Income Generation	0.812	0.925	0.869	0.560
Job Creation	0.880	0.909	0.900	0.518
SMEs	0.868	0.876	0.898	0.558

The validity and reliability of the constructs need to be assessed. The Cronbach's Alpha needs to be assessed in connection with internal reliability which is similar to Composite reliability (CR). The CR of all constructs were above 0.7 (Table 2 above), satisfying the Hair, Hult, Ringle, and Sarstedt (2014) rule of thumb. Hair, Black, Babin, and Anderson (2010) suggested accepting items with Cronbach's alpha of at least 0.6 (0.812 to 0.904). Likewise, the coefficients of the CR in this study range from a value of 0.882 to 0.927 indicating the reliability of the measurement model.

The convergent validity was evaluated using the average variance extracted (AVE). The AVE of all constructs was above 0.5, signifying the satisfactory degree of convergent validity (Fornell & Larcker, 1981b). Two approaches were used to test the discriminant validity of the constructs. First, the criterion of Fornell and Larcker (1981) tested whether each construct's AVE is greater than its squared correlation with the remaining constructs (Table 3 below). Second, the cross-loading of the indicators, which revealed that no indicator loads higher on an opposing construct (Hair, Sarstedt, Ringle, & Mena, 2012). Both analyses confirm the discriminant validity of all constructs.

Table 3: *Discriminant Validity (Fornell-Larcker Criterion) (n=335)*

	1	2	3	4	5
Consumption Pattern	0.726				
Expenditure Pattern	0.145	0.827			
Income Generation	0.220	0.213	0.748		
Job Creation	0.186	0.165	0.189	0.719	
SMEs	0.233	0.259	0.293	0.315	0.747

Note: Entries are shown in boldface and highlighted represent the square root of the average variance extracted (AVE).

Assessment of the Structural Model

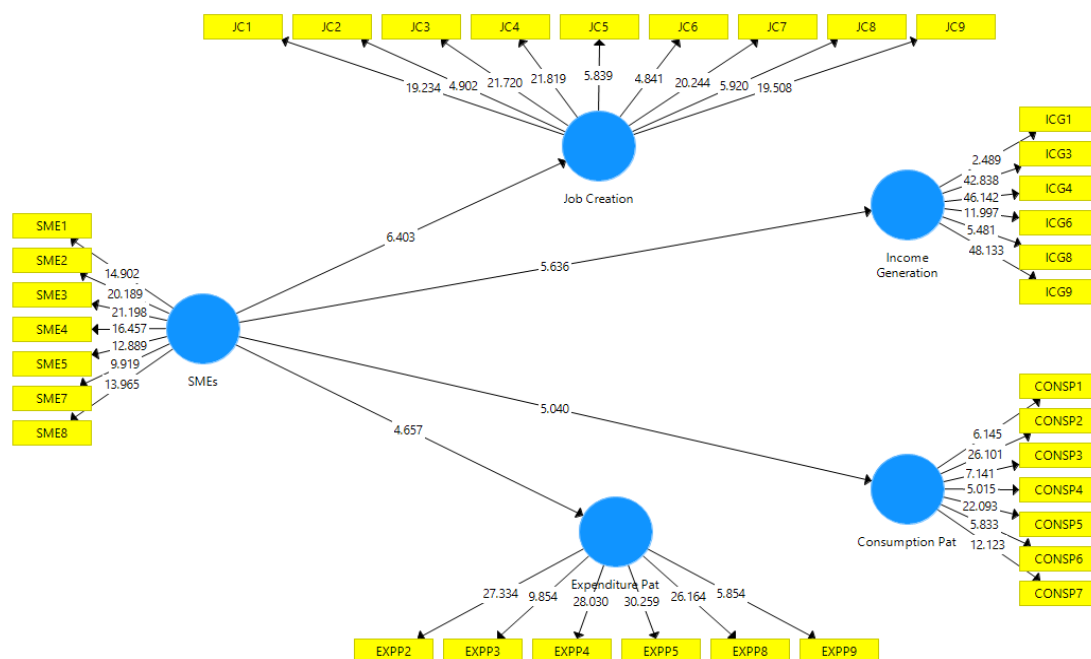


Figure 3: *Structural model analysis*

Source: Author 2025

Table 4: *Structural model analysis*

Mean, STDEV, T-Values, P-Values					
	Beta (β)	Mean (M)	Stand Dev.	T-Statistics	P-Values
SMEs -> Consumption Pat	0.233	0.246	0.046	5.040	0.000
SMEs -> Expenditure Pat	0.259	0.266	0.056	4.657	0.000
SMEs -> Income Generation	0.293	0.302	0.052	5.636	0.000
SMEs -> Job Creation	0.315	0.327	0.049	6.403	0.000

Note: In two tail test significant $p < 0.01^{***}$, $p < 0.05^{**}$, $p < 0.1^*$, for 99%, 95%, 90% confidence level the t-statistics level is 2.57, 1.96, and 1.65 respectively.

With the satisfactory results in the measurement model, the structural model was evaluated subsequently to verify the relationships between the constructs through the method. To test whether path coefficients differed significantly from 0, t-values were calculated using nonparametric bootstrapping (Efron & Tibshirani, 1998; Wetzels et al., 2009) with 5000 resamples (Table 4). As shown in Figure 3 above, Consumption pattern ($\beta=0.233$, $p < 0.000$), this revealed a significant positive effect of (poverty reduction) Consumption pattern and SMEs.

The significance is at 1%. The implication of this is that an increase in 1% SMEs performance will lead to an increase in consumption pattern of the poor with 0.233. The study is in line with the previous findings of (Hussaini & Chibuzo, 2018). Expenditure pattern ($\beta = 0.259$, $p < 0.000$), also revealed SMEs significant positive effects on poverty reduction (expenditure pattern). This indicates that a 1% change in SMES will bring about an improvement in expenditure pattern of the poor by 0.259. This is consistent with previous studies of (Anho, 2018; Gunu et al., 2013). Income generation ($\beta = 0.293$, $p < 0.000$), also revealed SMEs significant positive effects on poverty reduction (income generation).

This indicates that a 1% change in SMEs performance will bring about an improvement in income generation of the poor by 0.233. This is consistent with previous studies of (Anho, 2018; Gunu et al., 2013). Job Creation ($\beta = 0.315$, $p < 0.000$), also revealed SMEs performance has a significant positive effect on poverty reduction (job creation). This indicates that a 1% change in SMES performance will lead to job creation by to the poor by 0.315. This is consistent with previous studies of (Anho, 2018; Gunu et al., 2013). This study supported the view of theory by having a positive relationship between SMES and poverty reduction. In summary, the results of the structural model indicate that small and medium enterprises have a significant positive effect on all the poverty reduction dimensions examined, as evidenced by the beta coefficients (β), t-statistics, and p-values. Specifically, small and medium enterprises demonstrated the strongest effect on job creation ($\beta = 0.315$, $t = 6.403$, $p < 0.001$), suggesting that SMEs play a crucial role in providing employment opportunities, which aligns with prior studies that identified SMEs as engines of job creation in developing economies (Orji et al., 2019). Similarly, SMEs showed a substantial influence on income

generation ($\beta = 0.293$, $t = 5.636$, $p < 0.001$), confirming that entrepreneurial activities significantly enhance household incomes and economic empowerment (Ayyagari, M., Demircuc-Kunt & Maksimovic, 2014, 2016; Hussaini & Chibuzo, 2018).

The results also reveal that SMEs positively impact expenditure patterns ($\beta = 0.259$, $t = 4.657$, $p < 0.001$) and consumption patterns ($\beta = 0.233$, $t = 5.040$, $p < 0.001$), implying that increased SME activities lead to higher spending capacity and improved consumption, which directly improve living standards (Orji et al., 2019). The consistently low p-values (0.000) across all paths confirm the statistical significance of the results, while the relatively high mean scores further validate the robustness of the findings. Collectively, these results underscore the pivotal role of SMEs in reducing poverty by creating jobs, generating income, and improving consumption and expenditure.

Assessment of Variance Explained in the Endogenous Latent Variables

PLS-SEM structural model recommends using R-squared (R^2) which is also called coefficient of determination as a value assessment criterion (Hair et al., 2012; Henseler et al., 2009). The R^2 value represents the ratio of variation in the dependent variable(s) that could be explained by one or more independent variable (s) (Hair et al., 2012; Hair et al., 2010). Falk and Miller (1992) suggested that an R^2 value of 0.10 is acceptable. In addition, Chin (1998) recommended that in PLS-SEM, an R^2 value of 0.19 is considered as weak, 0.33 as moderate and 0.60 as substantial.

The R^2 value from the endogenous latent constructs in this study is presented in table 5 below.

This study's model explains 5.4%, 6.7%, 8.6% and 9.96% of the total variance in small and medium enterprises suggesting that the exogenous latent construct SMEs including its dimensions jointly explained 30.6% of the variance of the endogenous latent constructs. Thus, following Falk and Miller (1992), and Chin (1998), this study's endogenous latent construct (dependent variable) showed an acceptable level of R^2 . Chin (1998) noted that even a model with a low R^2 can still yield excellent goodness of fit.

Table 5: Variance Explained in the Endogenous Latent Variables

	R Square (R^2)	Effect Size
Consumption Pattern	0.054	Weak
Expenditure Pattern	0.067	Weak
Income Generation	0.086	Weak
Job Creation	0.099	Weak

Evaluation of Effect Size (F^2)

After assessing R^2 and according to Hair. et. al. (2013), the next criterion to be assessed is effect size (F^2). Effect size is the difference in R^2 between the main effects when the particular exogenous construct is omitted from the model and when it is in the model. This

is done purposely to evaluate whether the omitted exogenous construct has a substantial impact on the endogenous variables (Hair et al., 2013).

Equation 1 below is used to calculate the effect size for the exogenous construct. Cohen (1988) proposed that effect size of 0.35, 0.15, and 0.02 as large effects, moderate, and small, respectively. However, Chin et al. (2003) noted that even the smallest strength of F^2 should be considered as it can influence the dependent variables (endogenous variables). Table 6 below Shows effect size of the latent variable in the structural model.

$$F^2 = \frac{R^2 \text{ included} - R^2 \text{ Excluded}}{1 - R^2 \text{ included}} \quad \text{Equation 1}$$

Table 6: *Effect Size on the Endogenous Latent Construct Cohen (1988)*

	(F^2)	Effect Size
Consumption Pattern	0.057	small
Expenditure Pattern	0.072	small
Income Generation	0.094	small
Job Creation	0.110	small

It shows that effect size for financial inclusion and digital financial inclusion is small for all the three indigenous variables. Thus, following Cohen's (1988) recommendation, the effect size of these independent variables on dependent variables can be regarded as small.

Conclusion

The analysis above revealed that SMEs plays a positive and significant role in the reduction of poverty in Northern Nigeria. This is as results of creating job, increase in income generation, increase in consumption by the family of the poor, and increase in expenditure which all translate to improved welfare. The results of this study have implications to policy makers in policy formulation for government intervention on SMEs development in Northern Nigeria which is characterized by low development due to insecurity and acute poverty. It is also an addition to the pooled of knowledge in the field of Entrepreneurship and poverty.

Practical & Policy Implications

This study contributes to knowledge by providing empirical insights into the role of small and medium enterprises in poverty reduction in Nigeria, a country where poverty persists despite numerous government interventions. By examining how small and medium enterprises influence job creation, income generation, and wealth distribution, the study highlights their potential as sustainable drivers of economic empowerment and social inclusion. The findings will not only deepen academic understanding of small and medium enterprises' developmental impact but also offer practical guidance for policymakers and

development practitioners in designing strategies that strengthen small and medium enterprises performance as a tool for addressing poverty and improving living standards. his study will contribute to policy making by offering evidence-based insights on how small and medium enterprises can serve as a strategic instrument for poverty reduction in North western Nigeria. The findings will help policymakers identify the key constraints hindering small and medium enterprises growth and design targeted interventions such as improved access to finance, capacity-building programs, and supportive regulatory frameworks. By aligning policies with the realities of small and medium enterprises operations, government and development agencies can create an enabling environment that maximizes the sector's potential to generate employment, increase incomes, and ultimately reduce poverty across the country.

Limitations and Recommendation of the Study

Similar to other research studies, this study has the following prominent limitations: Firstly, the study is limited to the influence of one independent variable namely small and medium enterprises. Based on this limitation, it is recommended that future research could include additional variables such as Entrepreneurship orientation, etc. that correspondingly donates to poverty reduction which the existing research cannot conceal. The second limitation of this study was the fact that the data was collected from single source small and medium enterprises. Thus, replication of this or parts of this study in different organizational settings and industries Such as MSMEs, will help determine the validity of its results and proposed model. The third is the study covered only north-west small and medium enterprises, so if findings of this study to be generalized, then SMEs in other regions should be researched to get more updated valuable contributions regarding the effect of small and medium enterprises and poverty reduction.

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