

PETTY TRADING AND RURAL POVERTY ALLEVIATION: AN EMPIRICAL ANALYSIS USING THE FOSTER-GREER-THORBEC (FGT) MODEL IN SHAGARI LOCAL GOVERNMENT AREA

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Abstract

This study examines the role of petty trading as a non-farm activity in alleviating poverty among rural households in Shagari Local Government Area of Sokoto State, Nigeria. Using a cross-sectional survey design, primary data were collected from 250 respondents through structured questionnaires. The study employed descriptive statistics and the Foster–Greer–Thorbecke (FGT) poverty index to analyze poverty incidence, depth, and severity. Findings reveal that petty trading contributes more than 50% of household income for a majority of respondents, indicating its central role in rural livelihoods. The poverty analysis shows a headcount ratio of 0.48, poverty gap of 0.21, and severity index of 0.11, suggesting that while petty trading reduces poverty intensity, it does not eliminate it. The study concludes that petty trading serves as a critical coping mechanism but is constrained by structural limitations. Policy interventions such as improved access to microcredit, rural infrastructure development, and capacity building are recommended to enhance its poverty-reduction potential.

Keywords: Petty Trading, Poverty Alleviation, FGT Model, Rural Livelihoods, Nigeria

Introduction:

Poverty remains one of the most persistent socio-economic challenges confronting rural populations across the world, particularly in developing countries (Umeghalu, et al., 2025). Globally, despite significant progress in economic growth, a substantial proportion of the population especially those in rural areas continue to live below the poverty line, with limited access to basic necessities such as food, healthcare, education, and shelter (Nji, 2025). Rural livelihoods are traditionally dominated by agriculture; however, the sector is increasingly characterized by low productivity, vulnerability to climate change, and seasonal income fluctuations (Usman, et al., 2025). As a result, rural households have adopted livelihood diversification strategies, particularly engagement in non-farm activities such as petty trading, to enhance income security and reduce poverty.

Rural poverty remains a persistent development challenge in many parts of Sub-Saharan Africa, particularly in northern Nigeria (Ajagbe & Adefabi, 2025). In recent decades, attention has shifted

toward rural non-farm activities as viable pathways for poverty reduction (Onwuchekwa & Nnaji, 2025). Among these, petty trading has emerged as one of the most accessible livelihood strategies for rural households due to its low capital requirements and ease of entry (Famadewa, 2026). In Sokoto State, where agriculture is largely rain-fed and seasonal, petty trading provides an alternative source of income that helps households cope with economic shocks. Despite its widespread adoption, the extent to which petty trading contributes to measurable poverty reduction remains underexplored (Ogwang, 2022).

However, despite the increasing reliance on petty trading as a livelihood strategy, its effectiveness in alleviating poverty among rural households remains inadequately understood, particularly at the local level. While existing studies have established the general importance of non-farm activities in rural development (Mortson et. al., 2026; Lawi, et al., 2022; Liviga, & Mekacha, 1998) there is limited empirical evidence on the specific contribution of petty trading to poverty reduction in rural communities of Northwestern Nigeria, including Sokoto State. Furthermore, many of these studies tend to adopt a broad national or regional perspective, often overlooking the spatial and contextual differences that shape livelihood strategies and outcomes at the grassroots level (Ndunguru, 2025). In Shagari Local Government Area of Sokoto State, rural households face a combination of socio-economic and environmental challenges that exacerbate poverty. These include low agricultural yields, limited access to formal employment opportunities, poor infrastructure, and inadequate access to financial services. As a result, many households have turned to petty trading as an alternative or complementary source of income (Sheriff & Saidu, 2022)

Despite its prevalence, petty trading in the area is characterized by several constraints, including lack of access to credit, poor market linkages, price instability, limited business skills, and inadequate institutional support (Jack & Jackson, 2025). These challenges may limit the capacity of petty trading to generate sufficient income to lift households out of poverty. Without a clear understanding of the role, potentials, and limitations of petty trading (Magidi, 2025) interventions aimed at promoting rural non-farm activities may fail to achieve their intended outcomes. It is against this backdrop that this study seeks to investigate the role of petty trading as a non-farm activity in alleviating poverty among rural households in Shagari Local Government Area of Sokoto State, Nigeria. Specifically, the study aims to assess the contribution of petty trading to household income and welfare, identify the opportunities within the sector, and examine the challenges that hinder its effectiveness as a poverty alleviation strategy using the FGT model. By addressing these issues, the study intends to fill existing knowledge gaps and provide evidence-based recommendations for enhancing the role of petty trading in rural development and poverty reduction.

Methodology

The study is conducted in Shagari Local Government Area, located in Sokoto State, North-Western Nigeria. The area is predominantly rural, with agriculture as the main occupation, complemented by non-farm activities such as petty trading. Shagari Local Government Area is located in the Northwestern part of Nigeria, within Sokoto State. Shagari Local Government area, with a land mass of about 1,332 km², is located between Latitude: 12° 37' 31" N and Longitude: 4° 59' 27" E. Shagari Local Government Area is located in the southern part of Sokoto State To the North, Shagari LGA shares boundaries with Tureta LGA to the East, Tambuwal to the West, Yabo and Bodinga to the North (Figure 1) The LGA lies close to the boundary between Sokoto State and Kebbi State. Its Southern boundary is influenced by proximity to the River Niger basin, particularly toward Yauri axis and lies within the Sudan savannah ecological zone (Anyebe, 2015). Its location

places it within a predominantly rural and agrarian region characterized by dispersed settlements and subsistence farming. The climate of the study area is typically tropical continental, characterized by two distinct seasons; the wet season and the dry season (Yunusa, Umar, & Hamisu, 2025). The wet season usually spans from May to October, while the dry season extends from November to April. Rainfall in the area is generally low and erratic, ranging between 500 mm and 800 mm annually (Dogon Daji and Magawata, 2024). This makes agricultural activities highly dependent on rainfall and vulnerable to climatic variability. Temperatures are generally high throughout the year, often exceeding 40°C during the hot season (March to May). The dry season is marked by the influence of the Harmattan, a dry and dusty wind that blows from the Sahara Desert, leading to reduced humidity and cooler temperatures, especially in the early mornings and evenings (DogonDaji and Magawata, 2024). Shagari Local Government Area has a predominantly rural population, with settlements largely dispersed across the area. The population is composed mainly of Hausa and Fulani ethnic groups, who are predominantly Muslim. Household sizes tend to be relatively large, reflecting cultural and socio-economic factors. Population growth, coupled with limited economic opportunities, has increased pressure on land and other resources (Usman et al., 2025). This has contributed to the diversification of livelihoods, including the growing involvement in petty trading and other non-farm activities.

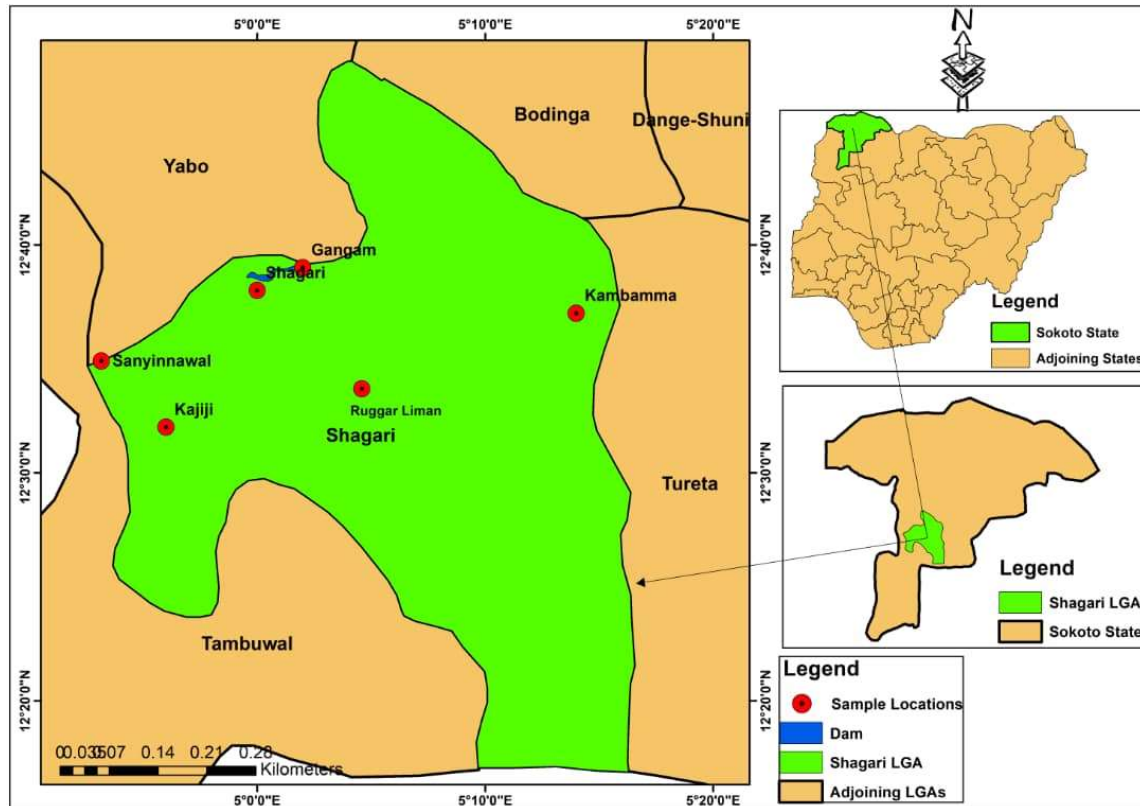


Figure 1: Study Area

The economy of the study area is largely agrarian, with the majority of the population engaged in subsistence farming. Major crops grown include millet, sorghum, maize, and cowpeas. Livestock rearing, particularly of cattle, goats, and sheep, is also an important economic activity, especially among the Fulani. In addition to agriculture, non-farm activities play a significant role in the local economy (Idris and Ilallu, 2025). Petty trading is one of the most common non-farm activities, involving the buying and selling of goods such as food items, clothing, and household materials.

Other non-farm activities include artisan work, transportation services, and small-scale processing. Petty trading is particularly important as it provides a source of income during the agricultural off-season and helps households cope with economic shocks (Adeosun, Oladapo & Ojo, 2025) However, the sector is often informal and characterized by low capital investment, limited access to credit, and inadequate infrastructure.

The study adopts a cross-sectional survey research design, which involves the collection of data from respondents at a single point in time. This design is appropriate because it allows for the assessment of income, poverty status, and livelihood activities. The target population consists of rural households engaged in petty trading and Household heads or primary income earners. The unit of analysis is the household, as poverty and livelihood decisions are typically made at this level. A multi-stage sampling technique is adopted where a purposive selection of wards with high rural population and visible petty trading activities was made. Four Wards were purposively selected based on the intensity of petty trading activities and population concentration. The Questionnaires were also distributed across the wards based on their population concentration. These wards are as indicated in the Table 1, below:

Table 1: Sampled Wards

S/NO	WARD	POPULATION	% of Sampled Population	Total Questionnaire allocated
1	Shagari	35,000	28.5	71
2	Kajiji	30,000	24.4	61
3	Sanyinnawal	25,000	20.3	51
4	Dandin Mahe	33,000	26.8	67
TOTAL		123,000	100	250

Source: NPC Population Estimates 2026

A purposive sampling technique was employed to select two communities from each ward as indicated in the following Table 2.

Table 2: Selected Communities

S/No	Ward	Community
1	Shagari	Shagari Gangam
2	Kajiji	Kajiji Kanbama
3	Sanyinnawal	Sanyinnawal Ruggar Liman
4	Dandin Mahe	Dandin Mahe Ruggar Kogo

Systematic random sampling of households engaged in petty trading within the selected communities was also made. From the Sample frame of 123,000, a sample size of 250 respondents was determined using the Yamane (1967) formula.

$$n = \frac{N}{1+N(e)^2}$$

Where:

n = sample size

N = population size

p = level of precision (0.05)

The study utilized data that were obtained directly from respondents (rural households engaged in petty trading) in Shagari Local Government Area. The primary data covered the Socio-economic characteristics, Nature of petty trading, Income and expenditure, Opportunities and challenges and Coping strategies. Descriptive Statistics and FGT Poverty Index (Core Method) were used to analyze the data. Descriptive Statistics was used to Analyze the Mean income and Income distribution while Foster-Greer-Thorbecke (FGT) Model was used to Measures how many are poor (incidence), Measures depth of poverty (gap) and also Measures inequality among the poor (severity) (Ogwang, 2022). This method is used because it is a globally accepted and it is considered as a robust poverty measurement tool. The general FGT formula is expressed as:

$$P\alpha = 1/N \sum_{i=1}^e (z - y_i/z)\alpha$$

Where:

Pα = poverty index

N = total number of households

q = number of poor households

z = poverty line

y_i = income of household *i*

α = poverty aversion parameter (0, 1, 2)

Results and Discussion

Poverty Status of Rural Households Engaged in Petty Trading

To assess the poverty status of rural households involved in petty trading, household income data were analyzed using the Foster-Greer-Thorbecke (FGT) poverty model. The poverty line was determined using two-thirds of the mean per capita household income. Households earning below the poverty line were classified as poor, while those above the poverty line were considered non-poor as indicated in Table 3, below.

Table 3: Distribution of Households by Poverty Status

Poverty Status	Frequency	Percentage (%)
Poor	120	48.0
Non-poor	130	52.0
Total	250	100.0

The results presented in the Table 3 above indicate that 120 respondents, representing 48.0% of the sampled households, were classified as poor, while 130 respondents (52.0%) were non-poor. Although a slightly higher proportion of households were above the poverty line, the findings reveal that poverty remains a major socioeconomic challenge in the study area. The relatively high proportion of poor households suggests that rural livelihoods in Shagari Local Government Area continue to be characterized by low incomes, limited economic opportunities, and vulnerability to economic shocks. This finding is consistent with studies conducted across northern Nigeria

(Kehinde & Alabi, 2025) which have reported higher poverty rates in rural communities due to dependence on low-productivity agriculture and informal economic activities.

However, the fact that more than half of the respondents were categorized as non-poor may indicate that participation in petty trading contributes positively to household welfare by providing supplementary income beyond farming activities. This supports the argument of Albore et al., (2026) that diversification into non-farm activities enhances household resilience and reduces vulnerability to poverty.

Foster-Greer-Thorbecke (FGT) Poverty Indices

The FGT poverty indices were computed to determine not only the incidence of poverty but also its depth and severity among rural households.

Table 4: FGT Poverty Indices of Respondents

Poverty Measure	Index Value
Headcount Ratio (P_0)	0.48
Poverty Gap Index (P_1)	0.21
Poverty Severity Index (P_2)	0.11

Poverty Incidence (P_0)

From the Table 4 above, the headcount ratio (P_0) was estimated at 0.48, indicating that approximately 48 percent of the sampled households were living below the poverty line. This finding implies that nearly one out of every two households in the study area experiences poverty. The magnitude of the poverty incidence reflects the continuing challenges facing rural households in northern Nigeria, including low agricultural productivity, climate variability, inadequate infrastructure, and limited access to productive resources. Although the poverty incidence remains substantial, it is lower than figures reported in several rural poverty studies in northwestern Nigeria where poverty rates exceeding 60 percent have been documented (Sadiq et al., 2025). This suggests that petty trading may be playing an important role in cushioning households against extreme deprivation.

The finding supports the livelihood diversification theory, which posits that rural households engage in multiple economic activities to spread risks and stabilize income sources (Mahedi et al., 2026) Through petty trading, households are able to supplement farm income and improve their ability to meet daily consumption needs.

Poverty Depth (P_1)

The poverty gap index (P_1) was estimated at 0.21. This indicates that poor households fall, on average, 21 percent below the poverty line. The poverty gap provides insight into how far poor households are from escaping poverty. The result suggests that although poverty is widespread, many poor households are not extremely poor. In practical terms, an average poor household would require an income increase equivalent to about 21 percent of the poverty line to move above the poverty threshold. This finding is significant because it suggests that targeted interventions such as access to microcredit, small business grants, and market support could substantially reduce poverty among petty traders.

The relatively moderate poverty gap may also reflect the contribution of petty trading income to household livelihoods. Unlike agriculture, which is seasonal and highly dependent on rainfall, petty trading provides a more regular flow of income throughout the year. Consequently, households engaged in petty trading may be better able to smooth consumption and avoid falling into extreme poverty.

Poverty Severity (P_2)

The poverty severity index (P_2) was estimated at 0.11. This measure captures inequality among poor households by assigning greater weight to those who are far below the poverty line. The result indicates that severe poverty exists among some households but is not widespread across the study area. The relatively low severity index suggests that most poor households are clustered around the poverty line rather than being trapped in extreme poverty. This finding has important policy implications. It suggests that poverty reduction strategies aimed at increasing the productivity and profitability of petty trading could yield substantial improvements in household welfare. Since many households are already close to the poverty threshold, relatively modest increases in income could significantly reduce poverty levels.

The result is consistent with findings from rural livelihood studies across Sub-Saharan Africa, which have shown that non-farm enterprises often reduce the severity of poverty by providing alternative sources of income during periods of agricultural stress (John et al., 2025)

Contribution of Petty Trading to Poverty Reduction

To further understand the role of petty trading in household welfare, respondents were asked to indicate the proportion of their household income derived from petty trading activities.

Table 5: Contribution of Petty Trading to Household Income

Contribution Level	Frequency	Percentage (%)
Less than 25%	36	14.4
25–50%	78	31.2
51–75%	82	32.8
Above 75%	54	21.6
Total	250	100.0

The results in Table 5 above, show that more than half of the respondents (54.4%) derived over 50 percent of their household income from petty trading activities. Specifically, 32.8 percent obtained between 51 and 75 percent of their income from petty trading, while 21.6 percent depended on petty trading for more than 75 percent of their household income. These findings demonstrate the central role of petty trading in sustaining rural livelihoods. Rather than serving merely as a supplementary activity, petty trading has become a major source of household income for many rural families. The importance of petty trading can be attributed to its accessibility, low capital requirements, and ability to generate regular cash income. In rural areas where formal employment opportunities are scarce and agricultural income is seasonal, petty trading provides an alternative pathway for income generation.

The findings support previous studies (John et al., 2025) that identified rural non-farm activities as important instruments for poverty reduction and livelihood diversification. The results further

suggest that households with greater involvement in petty trading are likely to experience lower poverty intensity compared to households relying solely on farming. Overall, the findings indicate that petty trading contributes significantly to household welfare and plays an important role in reducing the incidence, depth, and severity of poverty among rural households in Shagari Local Government Area.

Conclusion

This study examined the role of petty trading in alleviating poverty among rural households in Shagari Local Government Area of Sokoto State using the Foster-Greer-Thorbecke (FGT) poverty model. The findings revealed that although poverty remains prevalent among rural households, petty trading has emerged as a critical livelihood strategy that contributes substantially to household income and welfare. The FGT analysis showed that nearly half of the sampled households were poor, while the poverty gap and severity indices indicated that many poor households were relatively close to the poverty line rather than experiencing extreme deprivation. The study further established that petty trading constitutes a major source of household income for a significant proportion of respondents, providing regular cash earnings that supplement agricultural income and enhance household resilience. Through income diversification, petty trading enables households to smooth consumption, meet basic needs, and reduce their vulnerability to economic and environmental shocks associated with rain-fed agriculture.

The study concludes that petty trading plays a significant role in reducing the incidence, depth, and severity of poverty among rural households in the study area. However, its poverty-reduction potential is constrained by limited access to finance, inadequate infrastructure, market imperfections, and other structural barriers. Consequently, while petty trading serves as an important pathway out of poverty for many rural households, its effectiveness can only be fully realized when supported by policies and interventions that improve the business environment and strengthen rural livelihoods.

Recommendations

Based on the findings of this research, the following recommendations were offered.

1. **Improving Access to Credit and Financial Services:** The Sokoto State Government, through the Sokoto State Ministry of Commerce and Industry, in collaboration with the Central Bank of Nigeria (CBN), the Bank of Agriculture (BOA), the Bank of Industry (BOI), and licensed Microfinance Banks, should establish special microcredit schemes targeted at rural petty traders, particularly women and low-income households. Such schemes should provide accessible and affordable loans with flexible repayment conditions to enable traders to expand their businesses, increase working capital, and improve household income.
2. **Provision of Rural Market Infrastructure:** The Sokoto State Ministry of Works and Transport, the Sokoto State Ministry of Commerce and Industry, and the Shagari Local Government Council should prioritize the construction and rehabilitation of rural feeder roads, market stalls, storage facilities, electricity infrastructure, and water supply systems within major trading centres. Improving these facilities will reduce transportation costs, facilitate market access, minimize losses, and enhance the profitability of petty trading activities.

3. **Entrepreneurship Development and Business Training:** The Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), in partnership with the Sokoto State Ministry of Commerce and Industry, the National Directorate of Employment (NDE), and tertiary institutions within the state, should organize regular entrepreneurship and business management training programmes for petty traders. These programmes should focus on financial literacy, record keeping, marketing strategies, inventory management, customer relations, and enterprise development to strengthen the capacity and competitiveness of rural traders.
4. **Strengthening Security in Rural Markets:** The Nigeria Police Force, in collaboration with the Sokoto State Community Guard Corps, traditional institutions, and the Shagari Local Government Council, should strengthen community-based security arrangements in rural markets and trading centres. This can be achieved through increased security patrols, community policing initiatives, and the establishment of local security committees to protect traders, their goods, and business assets from theft, harassment, and other criminal activities.
5. **Promoting Women's Participation in Petty Trading:** The Sokoto State Ministry of Women Affairs and Social Development, working with community leaders, religious leaders, and relevant non-governmental organizations, should implement programmes aimed at empowering women engaged in petty trading. Such programmes should improve women's access to credit facilities, business training, and productive resources while addressing socio-cultural barriers that limit their economic participation and decision-making capacity.
6. **Mainstreaming Petty Trading into Rural Development Policies:** The Sokoto State Ministry of Budget and Economic Planning, in collaboration with the Sokoto State Ministry of Commerce and Industry and the Shagari Local Government Council, should integrate petty trading and other rural non-farm activities into state and local government development plans. This integration should ensure that poverty reduction programmes, rural development initiatives, educational interventions, and social welfare policies recognize petty trading as a viable livelihood strategy capable of improving household welfare and reducing rural poverty.
7. **Strengthening Cooperative Societies among Petty Traders:** The Sokoto State Ministry of Commerce and Industry and the Department of Cooperatives should encourage the formation and strengthening of traders' cooperative societies within rural communities. Strong cooperatives can improve access to credit, facilitate bulk purchasing, enhance bargaining power, and provide a platform for capacity building and collective action among petty traders.
8. **Expanding Social Protection and Poverty Reduction Programmes:** The Federal Ministry of Humanitarian Affairs and Poverty Reduction, in partnership with the Sokoto State Government and development partners, should design social protection programmes that specifically target vulnerable petty-trading households. Such interventions should include conditional grants, business support packages, and livelihood enhancement programmes aimed at reducing poverty incidence and improving household resilience.

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