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Financial Literacy, Financial Self-Efficacy, and Saving Behaviour among Women Traders in Traditional Markets in Anambra State, Nigeria

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Abstract. Financial resilience and economic empowerment for women in informal trading are crucial to women's savings. But a lack of financial literacy, the need to pay bills or the burden of family responsibilities may restrict sustainable saving. This study addresses this lack of empirical evidence on the relative importance of financial knowledge, socioeconomic traits and psychological skills and attributes in saving participation. It specifically examined financial literacy, saving attitudes and obstacles, socioeconomic association, financial self-efficacy and saving participation. A structured questionnaire was used to obtain Primary data from 156 female traders in the four selected traditional markets in Onitsha North Local Government Area, Anambra State, Nigeria. The data were analyzed using descriptive statistics, Cronbach α reliability analysis, Pearson correlation and binary logistic regression. The results showed that 78.8% of them were financially illiterate, while 86.5% engaged in saving activities. Daily saving was reported by 54.8% of the savers, and 77.8% used bank accounts and 70.4% used Akawo thrift collectors. Irregular income was the main saving constraint (75.6%). Financial self-efficacy was a strong predictor of saving participation (odds ratio = 4.54; 95% confidence interval: 1.64–12.59; $p < 0.05$), whereas financial literacy, income, financial stress and education were not statistically significant. Based on the study findings, the only statistically significant predictor of saving participation in the fitted model was financial self-efficacy. It calls for market-based financial education, psychological empowerment, and flexible saving arrangements. Its contribution to knowledge lies in demonstrating the importance of financial self-efficacy within an integrated framework explaining saving participation among women operating in traditional markets, while recognizing the study's observational limitations.

Keywords: Financial literacy; Financial self-efficacy; Saving behaviour; Women traders; Financial inclusion; Informal markets.

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A. INTRODUCTION

Saving behaviour is a significant aspect of financial management, economic resilience and sustainable livelihood development of households, especially among women engaged in informal economic activities. Women's livelihoods in small businesses tend to be irregular, with household financial needs and low access to appropriate financial services in low- and middle-income countries. Socio-economic factors, financial illiteracy, institutional access and psychological factors therefore have an impact on their ability to save. These linkages are critical for designing financial measures that are inclusive and promote women's economic involvement and household welfare (Collins et al., 2009; Demirgüç-Kunt et al., 2022).

Traditional markets are significant informal economic activities in Nigeria where women are involved in the retail market, distribution of foodstuffs, sale of clothing and other commercial activities for their livelihoods and employment. But income from such activities can often be irregular due to the volatility of demand, inventory needs, household spending and, of course, unforeseen expenses. This situation puts competing demands on immediate consumption and future financial security. Women traders can thus rely on formal banking institutions, informal thrift collectors, cooperative societies and rotating savings and credit associations (ROSCAs) to build up financial resources (Collins et al., 2009; Karlan et al., 2014).

Financial literacy is a relevant factor that can be included in the discussion about saving. It involves the knowledge and skills that enable a person to comprehend budgeting, interest rates, the impact of inflation, financial diversification and suitable financial products. Financial literacy has been described as a key ability for making informed financial decisions by the Organization for Economic Co-operation and Development (OECD, 2019). However, income knowledge does not necessarily reflect saving behaviour, especially in the presence of income instability and other financial demands that restrict individuals' choices. Financial self-efficacy is a psychological explanation for participation in saving and is not only financial literacy. Financial self-efficacy is one's belief that he or she can execute financial tasks and attain financial goals under current conditions. Bandura (1986) has indicated that self-efficacy is a factor that influences behavioural decisions and perseverance, and is included under the Social Cognitive Theory. Lown (2011) took this further to financial management, and Farrell et al. (2016) to positive financial behaviour and financial self-efficacy. Women who are more confident in managing financial problems, therefore, may continue to save during times of fluctuating income.

Another explanation of the relationship between income and saving is the Keynesian theory of consumption and saving (Keynes, 1936), which states that disposable income is a key factor in determining saving capacity. But behavioural economics acknowledges that the choice to save is also affected by psychological biases, commitment devices and social structures (Thaler and Sunstein, 2008). The above views indicate that it is not sufficient to understand the saving behaviour of informal traders only by income or financial knowledge. Empirical studies have focused on measures of financial literacy, socioeconomic factors, institutional features, and psychological factors affecting saving behaviour. Karlan et al. (2014) pointed out that behavioural interventions and commitment mechanisms were important for encouraging savings in financially constrained groups. Their findings offer a foundation to understand the ongoing significance of non-institutionalized saving mechanisms and systematic resource commitment. First, Lown (2011) examined financial self-efficacy as a measurable psychological construct, and then Farrell et al. (2016) showed the importance of financial self-efficacy in financial management and saving behaviour. The evidence from these studies indicates that confidence in financial decision-making, as well as the usual socioeconomic factors, might account for variance in saving behaviour.

Ayenew (2014) and Syed et al. (2017) studied the socioeconomic factors influencing saving and highlighted the importance of income and household variables. Likewise, Negatu

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et al. (2024) and Midamba et al. (2024) studied the financial constraints on saving among the economically vulnerable groups. These studies confirm that the consideration of family responsibilities and income insecurity is an important issue to take into account when analyzing saving decisions. Islam et al. (2024) analyzed financial education interventions, and Katnic et al. (2024) explored financial literacy and financial behaviour. Their contributions imply that financial knowledge continues to play a role, but it is likely to have different effects depending on economic and institutional conditions. Moreover, Oladipo and Olujimi (2024) took into account the significance of financial arrangements and contextual considerations, and van Dongen et al. (2022) noted financial control and autonomy. These studies all show that saving behaviour is a multifaceted process which is tightly coupled with economic resources, financial capacity, institutional experiences and psychological traits. The literature reviewed, however, fails to reveal whether or not such factors operate in a similar fashion in the case of women traders in the traditional markets of Onitsha North, where informal saving arrangements exist in parallel to traditional banking.

Although women traders play an important role in the informal trading sector, their saving behaviour has not been well studied in the context of the informal urban market in southeastern Nigeria. Previously, research has tended to focus on financial knowledge or income, household composition or relationships with financial institutions, but not on how these aspects are related to financial self-efficacy and saving behaviour. In addition, not all people with bank accounts save regularly, and not all people who are not very financially literate are unable to save. This situation has significant implications for the role of financial knowledge, socio-economic resources and psychological confidence. The research question is thus the limited context-specific empirical evidence that has been used to identify some financial and psychological characteristics that are independently associated with the saving participation of women traders in Onitsha North. If there is no evidence, financial inclusion interventions could fail to provide as much of a solution as needed for the factors that shape women's saving choices.

This study was triggered by a need for empirical evidence in order to understand the participation of women in saving in traditional markets. In particular, the co-existence of formal and informal channels of saving, the financial constraints that accompany irregular income, and the role of financial self-efficacy were explored. The study employed descriptive statistics, financial literacy assessment, reliability analysis, Pearson correlation and binary logistic regression for the analysis of these relationships. It is significant because it integrates financial literacy, economic conditions and psychological traits in a single empirical study. The results will guide financial education programmes, market-based saving programs and gender-inclusive financial inclusion policies. They also provide a basis for further research in the field of longitudinal studies and a wider geographic coverage. Hence, the study specifically sought to:

i. Determine the financial literacy of female traders in traditional markets in Onitsha North.

ii. Review the results of saving participation, saving frequency, saving approaches, motivations, and constraints for the respondents.

iii. Explore linkages of socioeconomic factors with saving practices of women traders.

iv. Examine the association between financial self-efficacy and saving participation, controlling for financial literacy, income, financial stress, and education.

B. LITERATURE REVIEW

The conceptual framework incorporates the socio-economic, financial, institutional and psychological aspects in the saving behaviour of women traders. The binary logistic regression specifically focuses on five explanatory variables: financial literacy, daily income, financial self-efficacy, financial stress and education level, in relation to saving participation. Exploratory

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correlations describe and/or examine additional saving practices and financial well-being measures. The overall pattern of relationships shown within the framework does not imply causal or mediating relationships between variables, as they are statistically supported in the literature.

The framework is based on the Social Cognitive Theory (Bandura, 1986), the Keynesian consumption and saving theory (Keynes, 1936) and behavioural economics (Karlan et al., 2014). These viewpoints provide an understanding of how saving participation can be linked to financial confidence, available income, financial knowledge and competing financial obligations. The principal outcome is saving participation, classified as saving or not saving. It has five explanatory variables: financial literacy, daily income, financial self-efficacy, financial stress, and education level. Financial literacy is assessed by knowledge of budgeting, interest, inflation and diversification. Daily income reflects the financial resources available for consumption or saving, whereas education reflects the education that respondents have received. Financial self-efficacy involves confidence in one's ability to handle one's finances, while financial stress is the perception of financial pressure (Lown, 2011; Farrell et al., 2016).

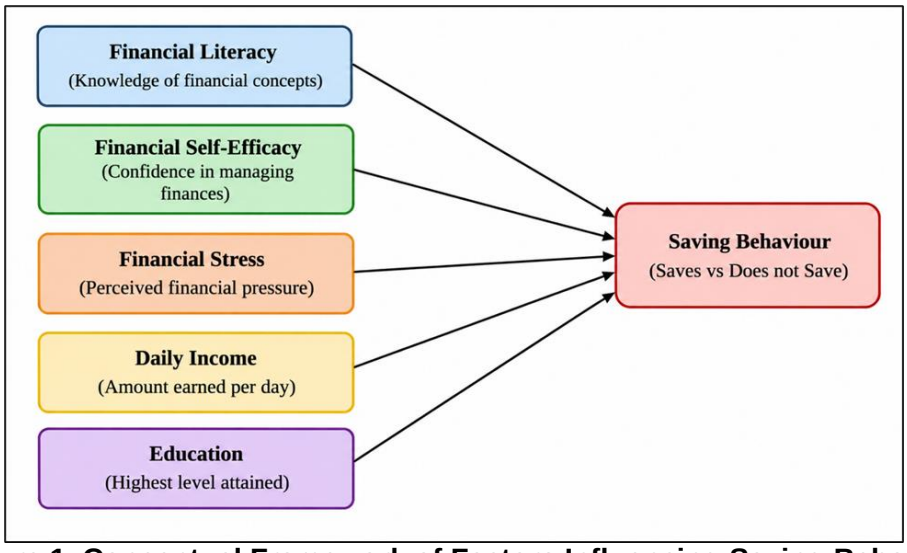


Figure 1. Conceptual Framework of Factors Influencing Saving Behaviour and Financial Well-being among Women Traders.

The framework also acknowledges other aspects of saving, including how often people save, how much they save, how they save, why they save, and what factors would inhibit their saving. Formal and informal saving devices, including bank accounts, Akawo thrift collectors, and rotating saving and credit associations, are described. Selected characteristics are further analyzed using Pearson correlation analysis in relation to saving frequency.

C. RESEARCH METHODOLOGY

This section outlines the research design, study population, sampling procedures, data collection instruments, statistical techniques and model specifications used to examine saving behaviour of the women traders in Onitsha North, Anambra State, Nigeria.

A cross-sectional survey design was used for the study with a quantitative research approach to examine financial literacy, saving behaviour, socioeconomic status and psychological factors influencing saving behaviour of the women traders in Onitsha North Local Government Area, Anambra State, Nigeria. The design enabled individual-level information to be gathered at a single point in time, enabling the statistical analysis of the relationships between financial characteristics and saving participation.

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The study population consisted of women business operators in four traditional markets, namely: Ogbeoye, Slaughter, Afia Isiokwe and Afia Obeleagu. The markets were assumed to have 300 traders with 100 eligible women traders in each market, i.e. 100, 100, 50 and 50, respectively. The respondents were a proportionately stratified systematic sample of 156 subjects, which is 52% of the estimated population. For the first two markets, 52 respondents were selected, and for the remaining markets, 26 respondents were selected.

To achieve a balance across markets, stratification was used for the four markets, and systematic selection was used to recruit the respondents within each market. The traders were replaced when they were absent or did not consent. The design was similar to that of quantitative investigations of saving behaviour of economically vulnerable population (Negatu et al., 2024; Midamba et al., 2024). It, however, was cross-sectional, limiting the ability to make causal inferences and to assess temporal changes.

Primary data were obtained through structured questionnaires administered to 156 women traders selected from the four traditional markets in Onitsha North Local Government Area. The questionnaire gathered data on the demographic characteristics, education, and household composition, and daily income, financial literacy, saving participation, saving frequency, saving methods, financial constraints, financial self-efficacy, financial stress, and perceived financial well-being of the respondents. Questions on financial literacy were taken from the OECD – INFE assessment framework. Items in the financial self-efficacy section were adapted from Lown (2011), and other items were used to measure household financial autonomy and saving motivations.

Two academic supervisors and a financial inclusion professional evaluated the content validity. Questionnaire revisions were based on a preliminary survey of 15 women traders in a neighbouring market. Participants were informed about the study and gave their consent to participate, and data collection was done while maintaining their confidentiality. Personally, identifying information was not kept in the analytical data set.

The questionnaires were collected and analyzed for completeness, coded, cleaned, and analyzed with R statistical software, version 4.4.2. The study objectives were answered using descriptive and inferential statistical techniques. The respondents' socioeconomic, financial literacy, saving participation, saving frequency, saving amounts, saving methods, financial constraints and financial well-being were summarized by frequencies, percentages, means and standard deviations.

Financial literacy was measured based on five questions taken from the OECD (2019) framework developed by the Organization for Economic Co-operation and Development and the International Network on Financial Education. One mark was awarded for each correct answer, with a maximum of 5 possible marks. The scores of 0–2 correct responses were considered to have low financial literacy, 3 moderate, and 4–5 high financial literacy for descriptive reporting purposes. These groupings recode the reported frequencies of categories of the coded data set.

Financial self-efficacy, financial self-confidence, and financial stress were used to assess psychological characteristics. The 12 items of financial self-efficacy resulted from adding six reverse-worded items (fse1–fse6) to six positively worded items (fsc1–fsc6) in the dataset. The higher the composite scores are, the more strongly the respondents have a sense of financial self-efficacy. Internal consistency was evaluated using Cronbach's alpha, which was set at 0.70 as the minimum acceptable reliability coefficient (DeVellis, 2017). Pearson's product–moment correlation coefficient was used to analyze relationships between saving frequency and certain social, economic and psychological variables. Saving frequency was recorded on a scale from daily to rarely (coded as 1 to 4), with negative correlations representing more frequent saving.

Binary logistic regression was used to determine factors associated with saving participation. Saving status was assigned as one if the person was a saver, and zero if the person was not a saver. The explanatory variables included were: financial literacy, financial

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self-efficacy, financial stress, daily income, and education level, which were all standardized. It was appropriate for logistic regression due to the dichotomous dependent variable (Hosmer et al., 2013).

Based on the study objectives and theoretical framework, there were five explanatory variables specified. The resulting regression estimates should be viewed with caution due to the lack of savers and the uncertainty of coefficients (Peduzzi et al., 1996). The obtained regression coefficients, odds ratios, 95% confidence intervals, Nagelkerke's coefficient of determination, and the percentage of classification accuracy were used in the evaluation of the models. Multicollinearity was checked with the variance inflation factor (VIF), and values of > 10 were regarded as problematic (Field, 2018). A 5% level of statistical significance was considered. Findings were interpreted as associations rather than causal relationships.

The study employed binary logistic regression to examine the determinants of saving participation and Pearson correlation analysis to assess relationships between saving frequency and selected explanatory variables

The probability that respondent *i* participated in saving activities was specified as:

$$P(Y_i = 1|X_i) = \frac{exp(\eta_i)}{1 + exp(\eta_i)} \qquad (1)$$

where Y_i represents saving status, taking the value 1 for savers and 0 for non-savers.

The linear predictor was defined as:

$$\eta_i = \beta_0 + \beta_1 FL_i + \beta_2 INC_i + \beta_3 FSE_i + \beta_4 FS_i + \beta_5 EDU_i \qquad (2)$$

The equivalent logit specification was:

$$\log\left(\frac{P_i}{1 - P_i}\right) = \beta_0 + \beta_1 FL_i + \beta_2 INC_i + \beta_3 FSE_i + \beta_4 FS_i + \beta_5 EDU_i \qquad (3)$$

where:

P_i = probability of saving participation for respondent i;
FL_i = standardised financial literacy score;
INC_i = standardised daily income measure;
FSE_i = standardised financial self-efficacy composite score;
FS_i= standardised financial stress score;
EDU_i = standardised education-level measure;
β_0 = intercept;
$\beta_1, \cdots, \beta_5$ = regression coefficients.

The odds ratio associated with each explanatory variable was obtained as:

$$OR_j = exp(\beta_j) \qquad (4)$$

An odds ratio greater than one indicates increased odds of saving participation, whereas a value below one indicates reduced odds, holding the remaining explanatory variables constant. Because the predictors were standardized, each odds ratio represents the change in odds associated with a one-standard-deviation increase in the corresponding predictor.

Pearson's product–moment correlation coefficient was specified as:

$$r_{XS} = \frac{\sum_{i=1}^{n_s}(X_i - \bar{X})(S_i - \bar{S})}{\sqrt{\sum_{i=1}^{n_s}(X_i - \bar{X})^2 \sum_{i=1}^{n_s}(S_i - \bar{S})^2}} \qquad (5)$$

where r_{XS} represents the correlation between an explanatory variable X and saving frequency S, while n_s denotes the number of savers included in the correlation analysis.

The saving frequency was recoded from everyday saving to infrequent saving. Thus, negative correlation coefficients represented an association with more frequent saving, while positive coefficients represented an association with less frequent saving. Correlation coefficients were considered based on direction and intensity, but not as cause-and-effect relationships. Since the saving frequency was measured as an ordered categorical variable, the Pearson

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coefficients are reported as exploratory summaries of the selected numerical coding of the ordered categorical.

D. RESULTS AND DISCUSSION

Table 1. Selected socioeconomic characteristics of women traders (N = 156)

Characteristic	Category	Frequency	Percentage (%)
Market	Ogbeoye	52	33.3
	Slaughter	52	33.3
	Afia Isiokwe	26	16.7
	Afia Obeleagu	26	16.7
Age (years)	Below 25	14	9.0
	25–34	42	26.9
	35–44	47	30.1
	45–54	32	20.5
	55 and above	21	13.5
Marital status	Single	37	23.7
	Married	92	59.0
	Widowed	22	14.1
	Divorced/separated	5	3.2
Education	No formal education	7	4.5
	Primary	24	15.4
	Secondary	99	63.5
	Tertiary	26	16.7
Daily income	Below ₦2,000	3	1.9
	₦2,000–₦5,000	31	19.9
	₦5,001–₦10,000	44	28.2
	₦10,001–₦20,000	36	23.1
	₦20,001–₦50,000	30	19.2
	Above ₦50,000	12	7.7
Income regularity	Irregular/very irregular	71	45.5
	Moderately regular	84	53.8
	Fairly/very regular	1	0.6

As shown in Table 1, the majority of the respondents were economically active women, with the highest age group being 35-44 years (30.1%). The majority of the respondents were married (59.0%) and held secondary education (63.5%). The majority of people (51.3%) had an income range of between ₦5,001 and ₦20,000 per day. Additionally, 45.5% said they earned irregular or very irregular incomes, and 0.6% said they earned fairly regular or very regular income. These findings provide the socioeconomic context of the saving decisions made and argue that income instability was a factor to consider when looking at financial behaviour.

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Financial Literacy among Women Traders

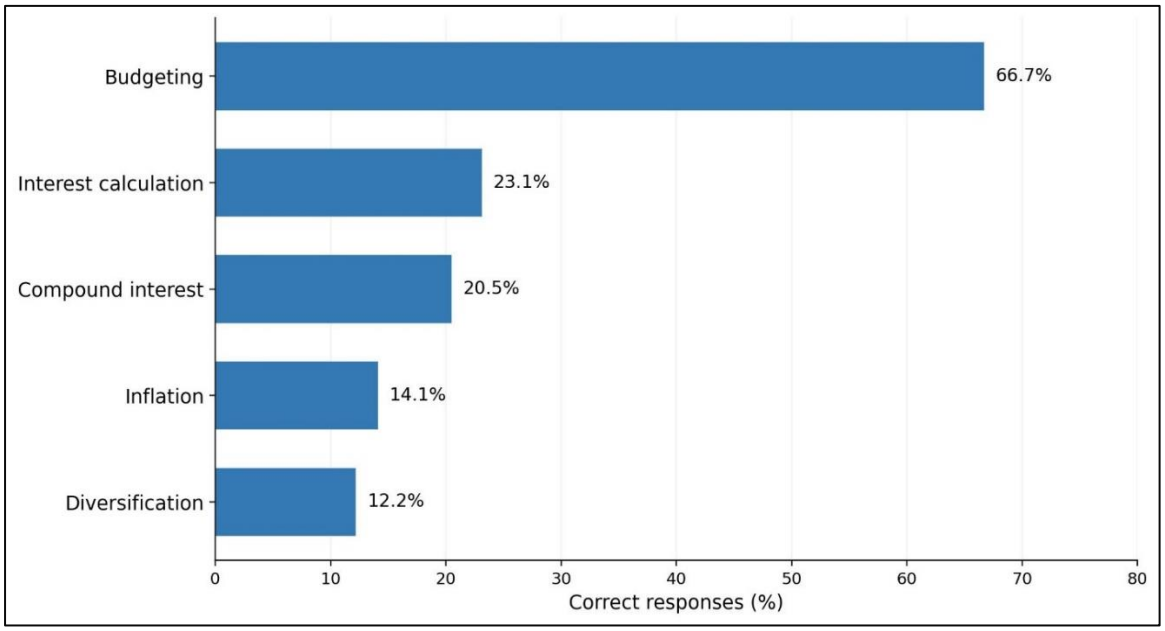


Figure 2. Financial literacy item performance among women traders

The respondents were assessed on five financial literacy questions, as summarized in Figure 2. Budgeting knowledge was moderate, with 66.7% correct in stating the main purpose of a budget. But knowledge of other financial terms was significantly lower. Only 23.1% correctly answered the interest calculation question, 20.5% understood compound interest, 14.1% correctly identified the effect of inflation on purchasing power, and 12.2% demonstrated knowledge of financial diversification.

The overall mean financial literacy score was 1.37 (SD = 1.40) out of 5. The study indicated that 78.8% of respondents were low in financial literacy, 10.9% were moderate, and 10.3% were high in financial literacy. The results show significant gaps in financial knowledge, especially regarding the evaluation of savings products and protection of the real value of savings.

Saving Practices and Financial Constraints

Table 2. Saving participation, saving frequency, weekly amounts, and principal motivations

Indicator	Category	Frequency	Percentage (%)
Saving participation (N = 156)	Savers	135	86.5
	Non-savers	21	13.5
Saving frequency (n = 135)	Daily	74	54.8
	Weekly	36	26.7
	Occasionally	22	16.3
	Monthly/rarely	3	2.2
Weekly amount saved (n = 135)	Below ₦1,000	21	15.6
	₦1,000–₦2,499	29	21.5
	₦2,500–₦4,999	32	23.7

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	₦5,000–₦9,999	39	28.9
	₦10,000 and above	14	10.4
Reasons for saving (n = 135)	Emergency expenses	105	77.8
	Business expansion	92	68.1
	Children's education	58	43.0
	House rent	29	21.5
	Healthcare	28	20.7
	Financial security	25	18.5
	Retirement	6	4.4

As shown in Table 2, 135 respondents (86.5%) took part in saving activities, which means that saving participation is widespread, despite the low financial literacy level. Of the savers, 54.8% saved every day and 26.7% every week, indicating that short-interval deposits were prevalent. The most frequently reported weekly saving amount was ₦5,000–₦9,999 (28.9%), whereas only 10.4% saved ₦10,000 or more.

Saving for emergency preparedness (77.8%) and business expansion (68.1%) were the main reasons for saving. The results suggest that savings were precautionary and productive, both in response to unforeseen expenses and to support business operations.

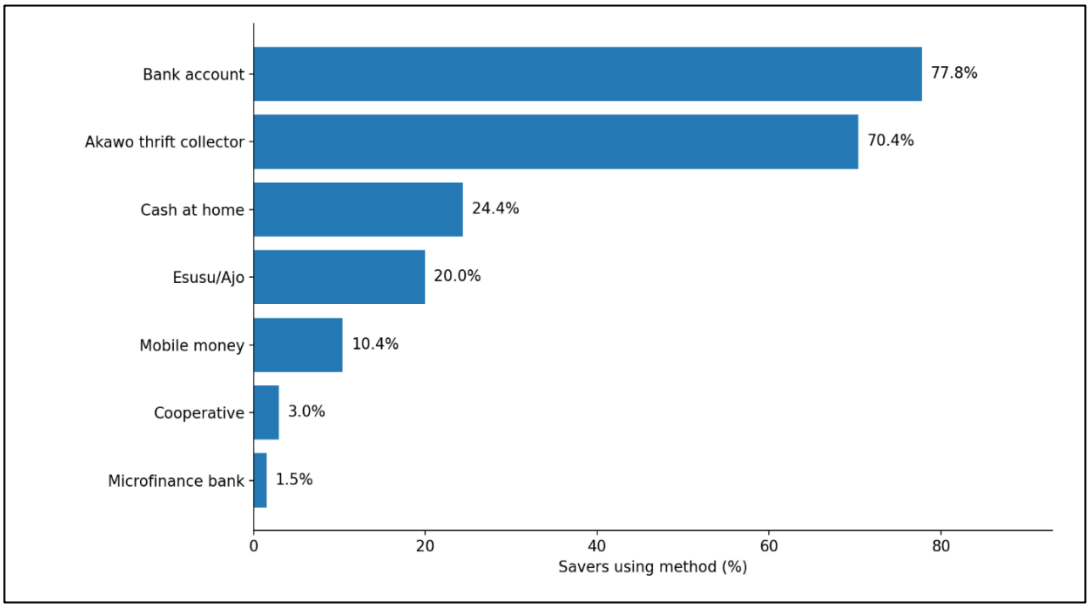


Figure 3. Formal and informal saving methods among women traders

Figure 3 shows that there are both formal and informal saving channels. 77.8% of the savers used bank savings accounts, and 70.4% used *Akawo* thrift collectors. Other approaches involved cash savings at home (24.4%), *Esusu/Ajo* rotating saving structures (20.0%) and mobile money wallets (10.4%). Cooperative societies (3.0%) and microfinance banks (1.5%) were the next largest sources of credit.

The high levels of use of *Akawo* and its combination with formal banking means that there is also a significant role for informal saving mechanisms in the market environment. Results are not intended to provide definitive insight into the exact proportion of respondents who use both channels; however, there was a possibility of selecting more than one saving method.

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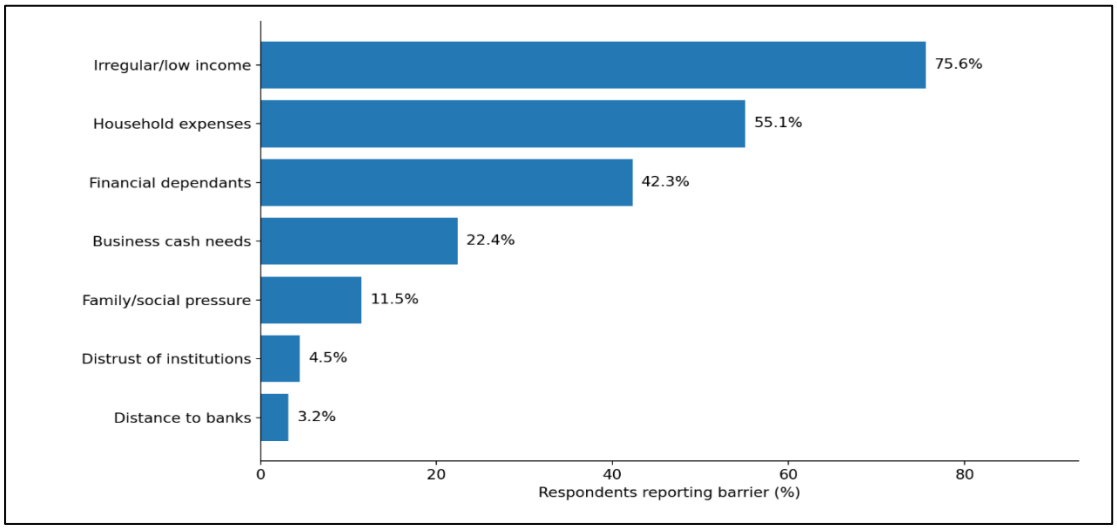


Figure 4. Major barriers to saving among women traders

As illustrated in Figure 4, high household expenditure and financial dependents were the next most often reported saving constraints, with 55.1% and 42.3%, respectively, followed by irregular or low income, which was reported by 75.6%. 22.4% of respondents identified business cash needs. Distrust of financial institutions (4.5%) and distance to banks (3.2%) were relatively uncommon barriers, however.

The results indicated that more often than not, economic barriers were reported as compared to institutional access barriers. While access to formal banking was relatively broad, this did not mean to say that financial pressures were not caused by income irregularity and household responsibilities.

Psychological Factors and Determinants of Saving Participation

Table 3. Financial capability, reliability, and binary logistic regression results

Panel A: Psychometric characteristics and reliability

Scale	Mean	SD	Cronbach's α
Financial self-efficacy barriers subscale	3.07	0.98	0.767
Financial self-confidence	3.31	0.81	0.839
Financial stress	14.22	4.70	0.864

Panel B: Selected characteristics by saving status

Variable	Savers (n = 135)	Non-savers (n = 21)
Self-efficacy composite mean	3.21	2.54
Financial stress mean	13.53	18.62
Financial literacy mean	1.33	1.57

Panel C: Binary logistic regression predicting saving participation

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Predictor	β	SE	OR	95% CI for OR	p-value
Financial literacy	−0.317	0.288	0.73	0.41–1.28	NS
Daily income	0.284	0.343	1.33	0.68–2.60	NS
Financial self-efficacy	1.513	0.520	4.54	1.64–12.59	<0.05
Financial stress	−0.323	0.500	0.72	0.27–1.93	NS
Education level	0.119	0.300	1.13	0.63–2.03	NS

Note: SD = standard deviation; SE = standard error; OR = odds ratio; CI = confidence interval; NS = not statistically significant at the 5% level.

Table 3 shows psychological traits and multiple determinants of saving participation. The internal consistency measures (reliability coefficients) for the three scales ranged from 0.767 to 0.864, which represents acceptable to good internal consistency within each scale. Financial self-efficacy scores were higher for savers than for non-savers (3.21 versus 2.54), and financial stress scores were lower for savers (13.53 versus 18.62). The average financial literacy score, however, was lower: 1.33 compared to 1.57, which meant that one did not necessarily go with the other in this sample of people.

The binary logistic regression showed that only financial self-efficacy was statistically significant for saving participation (β = 1.513, OR = 4.54, 95% CI: 1.64–12.59, $p < 0.05$). Other factors included: increased financial self-efficacy by one standard deviation; the odds of engaging in saving activities increased by about 4.54 times.

Financial literacy, daily income, financial stress and education were not found to be statistically significant at the 5% level. Thus, confidence in one's ability to deal with financial difficulties was significantly related to saving participation more than any other measured socioeconomic and financial attributes.

Saving Frequency and Financial Well-being

The correlation analysis also confirmed the above findings concerning saving frequency. There were the highest reported correlations of *Akawo* participation with saving frequency (r = −0.385), education (r = 0.192), bank account ownership (r = 0.183), household size (r = −0.178), financial literacy (r = −0.172), and financial self-efficacy (r = −0.161), and the lowest with daily income (r = −0.153). Saving frequency coding was applied to the study, with negative coefficients representing more frequent saving. Therefore, the correlations between participation in *Akawo* and more frequent saving did not prove a causal relationship.

Concerning financial health, the mean score was 3.31 (SD = 0.66) on a five-point scale. 60.9% indicated that their finances had improved over the past year, and 88.5% expected them to improve over the next year. Additionally, 61.5% reported that they made all the financial decisions, and 24.4% that they shared in all the financial decisions.

However, less than a third (33.3%) were very confident of their ability to raise the ₦50,000 in one month. This implies that the positive financial expectations and decision-making autonomy did not necessarily lead to the appropriate short-term financial resilience.

Discussion of Findings

The findings provide evidence that saving behaviour among women traders in Onitsha North is influenced by financial knowledge, economic circumstances, institutional arrangements, and psychological capabilities. Of 156 respondents, 78.8% scored low on financial literacy, with an average score of 1.37 out of 5. While 66.7% knew about budgeting, very little knowledge was found when it came to compound interest (20.5%), inflation (14.1%) and diversification (12.2%). This finding corroborates the study by Lewis & Messy (2012) that highlighted financial education as key to making informed financial decisions. Likewise, Islam et al. (2024) showed that financial knowledge could be improved by using suitable education

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interventions. The present results, however, indicate that financial information might not be enough to explain the saving participation of informal traders.

Despite low financial literacy, 86.5% of respondents said they saved, with 54.8% of those who saved contributing daily. The major reasons were emergency preparedness (77.8%) and business expansion (68.1%). These results support Karlan et al. (2014), who found precautionary saving and productive investment to be important financial strategies of low-income households. They also concur with Kwenda and Sithole (2024), who reported positive saving behaviour among low-income earners, which contradicts the notion that low-income earners do not save.

The saving methods also indicated that formal and informal financial arrangements exist side by side. Savers had 77.8% of their bank accounts and 70.4% of their *Akawo* thrift accounts. This finding aligns with Karlan et al. (2014), who highlighted the importance of commitment mechanisms in promoting financial discipline. *Akawo* participation was correlated with more frequent saving ($r = -0.385$), indicating that a range of accessible, socially integrated practices can incentivize regular saving. In contrast, mobile money savers were relatively small (10.4%) as compared to Nandhi (2012), who found that savers experienced positive savings results after adopting mobile banking.

However, economic constraints were still significant, including unusual income (75.6%), household spending (55.1%) and financial dependents (42.3%). The results confirmed the studies by Syed et al. (2017), Negatu et al. (2024) and Midamba et al. (2024), which highlighted the socioeconomic pressures causing fluctuations in saving capacity. However, the link between income and saving, and between education and saving, was not significant, which indicates that they could be related to other behavioural factors. The finding aligns with the findings of Oladipo and Olujimi (2024), who posed rhetorical questions about the explanatory power of demographic factors.

Based on the fitted logistic regression model, financial self-efficacy was the only statistically significant predictor (odds ratio = 4.54; 95% CI: 1.64–12.59; $p < 0.05$). Savers had higher self-efficacy 3.21 compared with 2.54 for non-savers) and less financial stress (13.53 compared with 18.62 for non-savers). These observations align with Bandura's (1986) Social Cognitive Theory and concur with Lown (2011), Farrell et al. (2016), and Chenji et al. (2023), who linked financial confidence with the enhancement of financial management. In contrast, the results of this study do not support the importance of financial literacy, as opposed to the results of Katnic et al. (2024), which are based on financial knowledge.

Lastly, while 60.9% of respondents felt that their financial situation had improved, 61.5% felt that they were able to make financial decisions on their own, and 33.3% said that they were very confident of raising ₦50,000 within one month. This distinction aligns with van Dongen et al. (2022), who stressed financial control, but shows that there is a distinction between perceived improvement and emergency liquidity. In general, the study results indicate that sustainable saving interventions need to be multifaceted, including money literacy, psychological empowerment, income stabilization, and user-friendly saving mechanisms. However, the cross-sectional study does not allow for causal interpretation and broader generalization.

E. CONCLUSIONS AND SUGGESTIONS

This study examined financial literacy, financial self-efficacy and saving behaviour of the women traders in four traditional markets in Onitsha North Local Government Area, Anambra State, Nigeria. Special focus was paid to the financial knowledge, socio-economic characteristics, psychological capabilities, and institutional saving arrangements-saving participation relationship. The study used primary data gathered from 156 respondents, and descriptive statistics, reliability analysis, Pearson correlation, and binary logistic regression were used to analyze saving behaviour and its determinants. The study brings to light an

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understanding of the financial behaviour of women in informal sector markets, where women often have unstable financial incomes, multiple financial needs, and household responsibilities. Its main innovation is the coupling of financial education and financial self-efficacy in a shared analytical framework, which allows evidence to be generated on the respective significance of financial literacy, financial resources, and financial self-efficacy when explaining women traders' saving participation.

The results showed that overall financial literacy is low, with 78.8% of them considered to have low financial knowledge, and the average financial literacy score was 1.37 on a scale of 5. However, 86.5% of them were actively involved in saving activities and 54.8% of the savers saved on a daily basis. The proportion of savers using bank accounts (77.8%) and Akawo thrift collectors (70.4%) was again significant, indicating that both formal and informal saving arrangements are relevant. The main reasons for saving were for emergency needs (77.8%) and for business expansion (68.1%). But irregular or low income (75.6%), household expenditure (55.1%) and financial dependents (42.3%) continued to be significant constraints. Financial self-efficacy was the only predictor that had a statistically significant odds ratio, 4.54 (95% CI: 1.64–12.59), in the regression analysis. There were no differences found in financial literacy, daily income, or financial stress at the 5% level, nor in level of education. In addition, the increased frequency of saving was correlated with the participation of Akawo, but this did not imply causality.

The outcomes are applicable to financial inclusion policies, women's economic empowerment and the development of accessible saving avenues in informal markets. Financial self-efficacy is positively associated with saving participation, which suggests that financial knowledge-based interventions are not sufficient to boost saving behaviour. It is thus important that financial education programmes have components that cover financial management, confidence-building exercises and coping with irregular income and multiple household needs. The high levels of dependency on Akawo collectors also show the need to acknowledge existing informal financial arrangements for inclusive financial services design. Furthermore, increased availability of flexible savings products could be beneficial to women with a highly variable income. Although most of those respondents reported that their financial situation has improved, financial hardship in moving into/into their emergency fund does not reflect financial resilience. Hence, financial inclusion programs should be directed towards sustainable savings capacity, not just account holding. The conclusions of this investigation, however, are not causal conclusions because of the cross-sectional design employed.

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