International Journal of Innovative Finance and Economics Research 13(2):110-124, April-June, 2025

 ISSN: 2360-896X

doi:10.5281/zenodo.15369041

Impact of Financial Inclusion on the Effectiveness of Humanitarian Aid in Nigeria

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ABSTRACT
This study investigates the impact of financial inclusion on the effectiveness of humanitarian aid in selected local government areas in Lagos State, Nigeria, using a quantitative research approach with data from 400 respondents analyzed through regression analysis. The findings indicate that access to financial services has a weak, statistically insignificant effect on aid effectiveness, suggesting that mere availability does not guarantee optimal utilization. However, digital financial services show a positive impact, underscoring their potential to enhance aid distribution. Financial literacy significantly improves aid effectiveness, emphasizing the need to incorporate financial education into humanitarian interventions. In contrast, policy and regulatory frameworks do not considerably influence aid effectiveness, highlighting potential implementation gaps. Additionally, financial inclusion does not immediately improve socio-economic well-being, suggesting that it should be complemented by broader economic empowerment initiatives. The study concludes that financial inclusion can enhance humanitarian aid effectiveness when supported by tailored financial products, improved digital literacy, policy reforms, and integration with sustainable livelihoods. Recommendations include improving financial service accessibility, strengthening digital infrastructure, integrating financial literacy programs, reforming policies, and linking financial inclusion to long-term economic opportunities.
Keywords: Financial Inclusion, Humanitarian aid And Quantitative Research Method

INTRODUCTION

Financial inclusion has emerged as a critical factor in enhancing the effectiveness of humanitarian aid efforts, particularly in urban centres like Lagos State, Nigeria. By ensuring that vulnerable populations have access to formal financial services such as savings accounts, credit, and digital payment systems, financial inclusion fosters economic resilience and facilitates the efficient distribution of humanitarian aid (Demirgüç-Kunt et al., 2018). In many developing economies, financial exclusion remains a barrier to sustainable development, often limiting the ability of aid organizations to reach marginalized communities effectively (Magaji and Abubakar, 2010**)**. Therefore, investigating the impact of financial inclusion on humanitarian aid activeness in selected local government areas (LGAs) of Lagos State is essential for understanding how financial services can optimize aid distribution and utilization.

The increasing digitization of financial services has revolutionized humanitarian assistance, providing beneficiaries with direct access to cash transfers and other forms of support (Jack and Suri, 2016). Mobile banking and fintech innovations have played a significant role in reducing the inefficiencies associated with traditional aid distribution methods, such as logistical delays and corruption. Studies have shown that digital financial inclusion enhances the speed, transparency, and accountability of humanitarian programs (Suri and Jack, 2017). In Lagos State, where urban poverty and socioeconomic disparities persist, financial inclusion could be a key enabler of more effective aid interventions (Magaji, Musa and Ismail, 2025).

Moreover, financial inclusion fosters economic empowerment by integrating aid recipients into the formal economy, thereby reducing long-term dependency on external assistance (World Bank, 2021). When individuals and households gain access to financial services, they are better equipped to manage risks, invest in productive ventures, and build financial resilience (Igwe, Magaji and Darma, 2021). For humanitarian organizations, this shift towards financial inclusion not only improves aid efficiency but also aligns with global sustainable development goals (SDGs) aimed at poverty reduction and economic inclusion (Magaji and Aliyu, 2007). The extent to which financial inclusion influences humanitarian aid activeness in Lagos State, however, remains an area requiring further empirical investigation.

Despite its potential benefits, financial inclusion in humanitarian aid delivery faces several challenges, including limited financial literacy, infrastructural deficits, and regulatory bottlenecks (Cull et al., 2014). In many LGAs of Lagos State, access to banking facilities and mobile financial services is still constrained by factors such as inadequate internet connectivity and trust deficits among the unbanked population. Addressing these challenges requires concerted efforts from government agencies, financial institutions, and non-governmental organizations (NGOs) to create an enabling environment for inclusive financial growth.

This study seeks to examine the impact of financial inclusion on the effectiveness of humanitarian aid in selected LGAs of Lagos State, focusing on how access to financial services influences aid distribution, utilization, and sustainability. By evaluating the interplay between financial inclusion and humanitarian interventions, the research aims to provide insights into best practices for improving aid delivery mechanisms. Ultimately, the findings will contribute to policy discussions on financial inclusion and humanitarian development, highlighting practical strategies for enhancing the resilience of vulnerable communities.

Literature Review

Conceptual Review

There are two concepts that need to be reviewed in this study; the concept of financial inclusion and the concept of humanitarian aid.

Financial Inclusion

Financial inclusion refers to the availability and accessibility of financial services to individuals and businesses, particularly those who are underserved or excluded from the traditional financial system. It encompasses access to banking, credit, insurance, and digital payment systems, which contribute to economic development and poverty reduction (Demirgüç-Kunt et al., 2018). Financial inclusion promotes economic stability by enabling individuals to save, invest, and manage financial risks, thus fostering entrepreneurship and social well-being (World Bank, 2022). Technological advancements, such as mobile banking and fintech solutions, have significantly expanded financial inclusion, particularly in developing countries (Beck et al., 2020). However, challenges such as financial literacy, regulatory barriers, and infrastructure limitations continue to impede progress in achieving full financial inclusion globally (Ismail, Musa and Magaji, 2025).

Humanitarian Aid

Humanitarian aid refers to the provision of essential assistance, such as food, water, shelter, healthcare, and protection, to communities affected by crises, including natural disasters, armed conflicts, and pandemics (OCHA, 2021). The primary goal of humanitarian aid is to save lives, alleviate suffering, and uphold human dignity while adhering to principles of neutrality, impartiality, and independence (IFRC, 2020). International organizations, non-governmental organizations (NGOs), and governments play crucial roles in delivering aid to affected populations, often facing challenges such as logistical constraints, security risks, and funding shortages (UNHCR, 2022). Additionally, the effectiveness of humanitarian aid depends on timely response, coordination among stakeholders, and the integration of sustainable development initiatives to build long-term resilience in vulnerable communities.

Theoretical Framework

Financial Intermediation Theory

Financial Intermediation Theory explains the crucial role financial intermediaries, such as banks and investment institutions, play in bridging the gap between savers and borrowers by reducing transaction costs, mitigating risks, and improving information efficiency in financial markets. This theory suggests that intermediaries exist due to market imperfections, such as asymmetric information and high transaction costs, which they help overcome by pooling funds, diversifying risks, and monitoring borrowers more effectively than individual investors (Diamond, 1984; Gurley and Shaw, 1960). By facilitating efficient capital allocation, financial intermediaries contribute to economic growth and stability, making them essential to modern financial systems.

Empirical Review

Aassouli et al. (2025) conducted a global assessment of refugee financing mechanisms, analyzing donor contributions, financial instruments, and their impact on refugee financial inclusion. The study utilized a quantitative analysis of refugee finance flows and proposed alternative funding mechanisms such as Refugee Empowerment Sukuk and blended finance structures. Findings indicate that traditional refugee financing is small-scale, short-term, and unpredictable, limiting long-term financial inclusion and empowerment. The study highlights the need for event-based financing, fintech solutions for efficiency, and results-based financing to enhance sustainability. This research is relevant as it underscores financial access challenges faced by humanitarian aid recipients and suggests innovative solutions for improving financial inclusion levels among vulnerable populations.

Omenihu et al. (2024) examined the impact of financial inclusion dimensions (access, usage, and quality) on poverty alleviation in Nigeria. Using demand-side data from the 2021 Global Findex and supply-side data from the IMF Access survey (2004–2021), the study applied OLS regression for supply-side data and probit regression for demand-side data. Findings indicate a negative and significant relationship between financial access and poverty rates, demonstrating that individuals with greater access to financial services are less likely to experience poverty. The study recommends that financial service providers customize financial products to match the educational levels of users, encouraging savings and economic stability. This research is highly relevant as it provides empirical evidence on the role of financial inclusion in improving economic well-being, reinforcing the importance of expanding financial access among humanitarian aid recipients.

Omata (2022) explored the mismatch between aid providers' expectations and refugees' actual responses to humanitarian interventions. Using case studies from refugee camps in East and West Africa, the study applied a qualitative approach with a performance-based theoretical lens to examine the social and political dynamics shaping humanitarian aid delivery. Findings indicate that aid recipients often do not respond as expected to interventions, leading to misunderstandings among aid workers and the labeling of refugees with terms like "refugee syndrome." The study highlights structural and communication gaps in aid implementation. This research is relevant as it underscores the disconnect between financial inclusion efforts and actual beneficiary behavior, emphasizing the need for recipient-centered approaches to humanitarian financial inclusion.

Hennessy et al. (2023) conducted a systematic review of 58 studies to examine the alignment between donor and recipient preferences in Official Development Assistance (ODA), which now exceeds $180 billion annually. The study explored the shifting paradigm from donor-driven aid allocation to locally-led development, assessing how recipient perspectives factor into aid decisions. Findings indicate that donors place a higher priority on aid effectiveness and health sector funding than recipients, while evidence on recipient preferences remains scarce. The research highlights a critical gap in understanding aid from the recipient's perspective, despite decades of advocacy for local ownership and decolonization of aid. This study is relevant as it underscores the lack of inclusion of humanitarian aid recipients in financial decision-making, reinforcing the need for financial inclusion frameworks that integrate recipient agency in aid allocation.

Fayyad and Al-Sinnawi (2024) conducted a qualitative evaluation of the Palestinian Monetary Authority's (PMA) Financial Inclusion Strategy (2018–2025), focusing on its effectiveness in promoting financial inclusion for visually impaired individuals in Palestine. Through free discussions with representatives of all banks operating in the country, the study explored the willingness of financial institutions to accommodate persons with disabilities. Findings revealed that insufficient financial knowledge, lack of adaptive technologies, communication barriers, and high poverty rates were key obstacles limiting financial access for the visually impaired. Moreover, commercial banks showed low interest in attracting this demographic, indicating that financial inclusion efforts had yet to address marginalized populations effectively. The study recommended that the PMA impose regulatory obligations on banks to facilitate greater inclusivity. This research is relevant to the study as it highlights financial exclusion within vulnerable populations, offering insights into barriers that humanitarian aid recipients may also face in accessing financial services.

Kim et al. (2024) conducted a conjoint experiment across seven developing countries to analyze public attitudes toward foreign aid in recipient nations. The study examined how donor characteristics and aid project structures influence recipient preferences. Findings indicated that individuals in recipient countries prefer aid from democratic nations and transparent aid agencies, with a particular preference for multilateral aid organizations over direct donor country assistance. Additionally, the structure of aid projects mattered more than the size of aid packages, suggesting that effective delivery mechanisms significantly impact recipient satisfaction. This study is relevant as it highlights the role of financial inclusion and trust in aid distribution, providing insights into how humanitarian aid recipients perceive financial assistance and the institutions that provide it.

MATERIALS AND METHOD

Research Design

This study adopts a quantitative research design, utilizing a survey research approach to assess the impact of financial inclusion on humanitarian aid distribution in selected LGAs of Lagos State. The choice of a survey research design is appropriate given that the study seeks to analyze financial inclusion trends, barriers, and socio-economic impacts based on structured questionnaire responses from humanitarian aid recipients. The design enables the collection of primary data from a large and diverse population while ensuring statistical rigor and generalizability of findings.

Study Area

This study is conducted in Lagos State, Nigeria, a major economic hub and one of the most populous states in the country. Lagos serves as a focal point for financial activities, humanitarian interventions, and socio-economic development. It has a well-established financial sector, with a high concentration of commercial banks, microfinance institutions, fintech firms, and agent banking networks. However, despite its economic significance, financial inclusion remains unevenly distributed, particularly among low-income and vulnerable populations who rely on humanitarian aid.

The study focuses on four selected Local Government Areas (LGAs): Lagos Island, Alimosho, Mushin, and Ikorodu. These LGAs were purposively selected based on their population size, economic diversity, and varying levels of financial access.

- **Lagos Island LGA** is a major commercial and financial hub with high penetration of financial services. However, it also houses low-income populations who may still face financial exclusion despite the presence of formal banking institutions.

- **Alimosho LGA** is the most populous LGA in Lagos State, representing a mix of urban and semi-urban populations. While financial institutions operate within the LGA, financial inclusion remains a challenge due to infrastructural gaps and socio-economic disparities.
- **Mushin LGA** is a densely populated area characterized by a high concentration of informal sector activities. Many residents engage in small-scale businesses but lack adequate access to formal financial services.
- **Ikorodu LGA** is a peri-urban area experiencing rapid economic growth. However, financial service accessibility remains lower compared to inner-city LGAs, making it an important location for examining financial inclusion challenges.

By selecting these four LGAs, the study ensures a comprehensive assessment of financial inclusion across different socio-economic and geographic settings within Lagos State.

Fig 3.1: Map of Lagos

Source: https://www.researchgate.net/figure/Map-of-Lagos-State-showing-the-Local-Government-Areas-Source-Author-2022_fig1_362165738

Determination of Sample Size

The total population of the sampled LGA are given in Table 3.1 below.

Table 3.1: Population of Samples LGAs (2022 Estimate)

LGA	**Population (2022 estimate)**
Lagos Island LGA	314,900
Alimosho LGA	1,953,500
Mushin LGA	935,400
Ikorodu LGA	781,500
Total	**3,985,300**

The sample size for this study is determined using Yamane's (1967) formula, which provides a statistically valid approach for estimating an appropriate sample size from a finite population. The formula is expressed as:

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

Where:

- n = Sample size
- N = Total population (3,985,300 for the selected LGAs)
- e = Margin of error (assumed at 5% or 0.05)

Substituting the values:

$$n = \frac{3985300}{1 + 3985300\,(0.05^2)} \approx \mathbf{400}$$

The calculated sample size is **400 respondents**.

Sampling Procedure

This study adopts a stratified random sampling technique to ensure a fair and proportional representation of respondents across the four selected LGAs in Lagos State. Stratified sampling is appropriate because the population is heterogeneous, consisting of individuals with different levels of financial inclusion, varying socio-economic backgrounds, and distinct experiences with humanitarian aid. By dividing the population into strata (i.e., the four LGAs), the study ensures that each LGA is adequately represented in the sample, thereby improving the generalizability of the findings.

Following the proportional allocation method, the total sample size of 400 respondents is distributed among the four LGAs based on their population proportions relative to the total population of 3,985,300. The formula for proportional allocation is:

$$n_i = \left(\frac{N_i}{N}\right) x\ n$$

where:

- n_i = sample size for each LGA
- N_i = population of each LGA
- N = total population of the four LGAs
- n = total sample size (400)

Applying this formula, the sample size for each LGA is:

Lagos Island LGA:

$$n_i = \left(\frac{314900}{N3985300}\right) x\ 400 \approx \text{ 32 respondents}$$

Alimosho LGA:

$$n_i = \left(\frac{1953500}{N3985300}\right) x\ 400 \approx \text{ 196 respondents}$$

Mushin LGA:

$$n_i = \left(\frac{3935400}{N3985300}\right) x\ 400 \approx \text{ 94 respondents}$$

Ikorodu LGA:

$$n_i = \left(\frac{781500}{N3985300}\right) x\ 400 \approx \text{ 78 respondents}$$

After determining the sample size for each LGA, random selection will be used to choose individual respondents from each stratum. The random selection process ensures that all humanitarian aid recipients within the LGAs have an equal chance of being selected, reducing selection bias.

Questionnaire and Measure of the Variables

In designing the questionnaire, it is essential to align the survey items with the study's dependent and independent variables to ensure accurate data collection and analysis.

Dependent Variable:

- **Humanitarian Aid Effectiveness** – This represents the impact of financial inclusion on humanitarian aid delivery. It will be measured through indicators such as aid accessibility, timeliness of disbursement, reduction in leakages, and financial resilience of recipients.

Independent Variables:

i. **Financial Inclusion –** Measured by respondents' access to formal financial services, including:
   - Bank accounts
   - Mobile money services
   - Agent banking
   - Digital wallets

ii. **Digital Financial Services Adoption** – Examines how frequently respondents use fintech-based platforms for aid transactions.

iii. **Barriers to Financial Inclusion** – Identifies constraints such as:
   - Financial literacy levels
   - Infrastructure limitations (e.g., lack of mobile network coverage, distance to financial institutions)
   - Trust and perception of digital financial services

iv. **Policy and Regulatory Environment** – Assesses the extent to which financial regulations, government policies, and humanitarian agency guidelines support financial inclusion in aid delivery.

v. **Socio-Economic Well-Being** – Measures the financial resilience, savings behavior, and long-term economic empowerment of humanitarian aid recipients. This variable captures how access to financial services influences respondents' ability to manage financial shocks, save for future needs, and improve their overall economic stability. Key indicators include savings frequency, access to credit, income stability, and perceived financial security.

Validity Test

Validity refers to the extent to which the questionnaire accurately measures the intended variables in this study. To ensure that the research instrument captures the impact of financial inclusion on humanitarian aid delivery, three types of validity tests will be conducted:

1. **Content Validity –** This assesses whether the questionnaire comprehensively covers all aspects of financial inclusion and humanitarian aid effectiveness. Experts in **financial inclusion, humanitarian aid, and survey design** will review the instrument to verify that the questions align with the study's objectives. Their feedback will be incorporated to refine unclear or ambiguous items.
2. **Construct Validity** – This examines whether the questionnaire accurately reflects the theoretical constructs it aims to measure. Factor analysis will be conducted to determine whether the observed variables (survey questions) appropriately measure the underlying latent variables (**financial inclusion, aid effectiveness, socio-economic well-being, etc.**).
3. **Criterion Validity** – This evaluates how well the questionnaire's measures correlate with external benchmarks. For instance, respondents' financial inclusion levels will be compared with secondary data on **financial service penetration in Lagos State** to assess alignment with established trends.

A pilot study will be conducted with 20 respondents from the selected LGAs to test validity. Feedback from the pilot phase will be used to refine the questionnaire before full deployment.

Reliability Test

Reliability ensures the consistency and stability of the questionnaire's results over time. To verify reliability, Cronbach's Alpha coefficient will be used to test internal consistency. A Cronbach's Alpha value of 0.7 or higher will indicate acceptable reliability of the instrument.

Additionally, the test-retest method will be employed, where the same questionnaire is administered to a subset of respondents twice within a two-week interval. A high correlation between the two sets of responses will confirm the reliability of the instrument.

Table 3.2 – Reliability Analysis

Variable	Cronbach'S Alpha
humanitarian Aid Effectiveness (HAE)	0.745
Financial Inclusion (FI)	0.790
Digital Financial Services Adoption (DFSA)	0.811
Barriers to Financial Inclusion (BFI)	0.747
Policy and Regulatory Environment (PRE)	0.886
Socio-economic well-being (SEW)	0.783

Ethical Consideration

This study will adhere to ethical research guidelines to protect the rights and well-being of participants. Key ethical considerations include:

- **Informed Consent** – Respondents will be provided with a detailed explanation of the study's purpose, their rights, and the voluntary nature of participation. A signed or verbal consent will be obtained before data collection.
- **Confidentiality and Anonymity** – Participants' personal data will be kept anonymous, and responses will only be used for academic purposes. No personally identifiable information will be recorded.
- **Non-Maleficence** – The study will ensure no harm comes to respondents, including psychological or social risks.
- **Ethical Approval** – Approval will be sought from a recognized ethics review board before conducting the survey.

Model Specification

To analyze the impact of financial inclusion on humanitarian aid effectiveness in the selected Local Government Areas (LGAs) of Lagos State, a multiple regression model will be employed. The dependent variable is humanitarian aid effectiveness (HAE), while the independent variables include financial inclusion (FI), digital financial services adoption (DFSA), barriers to financial inclusion (BFI), policy and regulatory environment (PRE), and socio-economic well-being (SEW).

The model is specified as follows:

$$HAE = \beta_0 + \beta_1 FI + \beta_2 DFSA + \beta_3 BFI + \beta_4 PRE + \beta_5 SEW + \varepsilon \qquad (3.1)$$

Where;

HAE = Humanitarian Aid Effectiveness

FI = Financial Inclusion

DFSA = Digital Financial Services Adoption

BFI = Barriers to Financial Inclusion

PRE = Policy and Regulatory Environment

SEW = Socio-Economic Well-Being

$\beta1$, $\beta2$, $\beta3$, $\beta4$, and $\beta5$are coefficients to be estimated

ε = error term.

This model allows for an empirical examination of how financial inclusion and related factors contribute to the effectiveness of humanitarian aid delivery. The coefficients (β_1–β_5) will indicate the extent to which each independent variable influences humanitarian aid effectiveness. Hypothesis testing will be conducted to determine the statistical significance of these relationships.

Estimation Technique

This study will employ descriptive statistics and multiple linear regression analysis to examine the impact of financial inclusion on humanitarian aid effectiveness in the selected Local Government Areas (LGAs) of Lagos State.

i. **Descriptive Statistics:** Descriptive statistics will be used to summarize and present key characteristics of the data collected. Measures such as mean, standard deviation, frequencies, and percentages will be used to analyze the level of financial inclusion among humanitarian aid recipients, their adoption of digital financial services, barriers to financial access, and socio-economic well-being. These descriptive measures will provide an overview of financial access trends, highlighting variations across demographic groups and LGAs.
ii. **Multiple Linear Regression Analysis:** To evaluate the impact of financial inclusion on humanitarian aid effectiveness, multiple linear regression will be employed. This method is appropriate because the dependent variable (humanitarian aid effectiveness) is a continuous measure that reflects various indicators such as aid accessibility, timeliness of disbursement, reduction in leakages, and financial resilience of recipients.

The multiple regression model will help assess the relative contribution of each independent variable to humanitarian aid effectiveness. The significance of each variable will be tested using t-tests, while the overall model fitness will be evaluated through the R-squared value and F-statistic. All statistical analyses will be carried out using SPSS (version 26) to ensure robustness and accuracy in results. This approach will provide empirical evidence on how financial inclusion influences humanitarian aid effectiveness and guide policy recommendations for improving financial access in humanitarian settings.

RESULTS

Data Presentation

This section presents the demographic and socio-economic characteristics of the respondents, offering a comprehensive overview of the surveyed population. A total of 400 respondents across the four selected Local Government Areas (LGAs) in Lagos State participated in the study, with the distribution reflecting the stratified sampling approach: Lagos Island (32 respondents), Alimosho (196 respondents), Mushin (94 respondents), and Ikorodu (78 respondents). The data collected provides key insights into respondents' financial inclusion status, digital financial service adoption, barriers to financial inclusion, regulatory environment, and socio-economic well-being. These variables are essential for understanding the impact of financial inclusion on humanitarian aid effectiveness and will form the basis for further descriptive and inferential statistical analyses.

Demographic Characteristics of Respondents

Table 4.1 – Gender

		Frequency	**Percent**
Valid	Male	206	51.5
	Female	194	48.5
	Total	**400**	**100**

Source: Author (2025)

Table 4.1 presents the gender distribution of the respondents. The sample is relatively balanced, with 206 respondents (51.5%) identifying as male and 194 respondents (48.5%) identifying as female. This near-equal representation ensures a diverse perspective on financial inclusion and humanitarian aid effectiveness, allowing for a more comprehensive analysis of potential gender-related differences in access to and utilization of financial services.

Table 4.2 - Age Group

		Frequency	Percent
Valid	18-25	87	21.8
	26-35	78	19.5
	36-45	85	21.3
	46-55	67	16.8
	56 and above	83	20.8
	Total	**400**	**100**

Source: Author (2025)

Table 4.2 illustrates the age distribution of the respondents. The largest age group falls within the 18-25 years category, accounting for 21.8% (87 respondents) of the sample, followed closely by those aged 36-45 years (21.3%) and 56 and above (20.8%). The 26-35 age group comprises 19.5% (78 respondents), while the 46-55 age group represents 16.8% (67 respondents). This distribution reflects a diverse sample of respondents across different age brackets, enabling a nuanced analysis of how financial inclusion and humanitarian aid effectiveness vary across age groups.

Table 4.3 - Educational Level

		Frequency	Percent
Valid	No formal education	115	28.7
	Primary education	108	27
	Secondary education	89	22.3
	Tertiary education	88	22
	Total	**400**	**100**

Source: Author (2025)

Table 4.3 presents the educational attainment of the respondents. The majority, 28.7% (115 respondents), have no formal education, highlighting a significant proportion of individuals who may face challenges in accessing and utilizing financial services due to literacy barriers. Respondents with primary education make up 27% (108 respondents), while those with secondary education account for 22.3% (89 respondents). Meanwhile, 22% (88 respondents) have attained tertiary education, indicating a relatively smaller group with advanced educational qualifications. This distribution underscores the importance of financial literacy initiatives in promoting financial inclusion, particularly among individuals with lower educational attainment.

Employment Status

		Frequency	Percent
Valid	Unemployed	99	24.8
	Self-employed	111	27.8
	Employed (formal sector)	94	23.5
	Employed (informal sector)	96	24
	Total	**400**	**100**

Source: Author (2025)

Table 4.4 presents the employment status of respondents, providing insights into their economic engagement. The largest proportion, 27.8% (111 respondents), are self-employed, indicating a significant reliance on informal entrepreneurial activities for livelihood. 24.8% (99 respondents) are unemployed, suggesting potential economic vulnerability and dependency on humanitarian aid. Those employed in the formal sector constitute 23.5% (94 respondents), while 24% (96 respondents) work in the informal sector. The near-equal distribution between formal and informal sector employment highlights the diverse nature of income generation among respondents and suggests that financial inclusion strategies should account for both structured employment and informal economic activities.

Household Size

		Frequency	Percent
Valid	1-3 people	136	34
	4-6 people	128	32
	7 and above	136	34
	Total	**400**	**100**

Source: Author (2025)

Table 4.5 presents the distribution of household sizes among respondents, highlighting variations in family structure. The data shows that 34% (136 respondents) live in small households of 1–3 people, suggesting a significant proportion of nuclear or single-person households. Similarly, 34% (136 respondents) belong to large households with 7 or more members, reflecting extended family living arrangements, which are common in many Nigerian communities. Meanwhile, 32% (128 respondents) fall within the moderate household size of 4–6 people. The relatively balanced distribution across all household sizes suggests that financial inclusion and humanitarian aid strategies should be tailored to accommodate the varying financial needs and dependency levels of both small and large households.

Data Analysis, Test of Hypotheses, and Interpretation of Results

This section presents the analysis and interpretation of the survey data, focusing on the relationship between financial inclusion and humanitarian aid effectiveness. The analysis involves both descriptive and inferential statistics. Descriptive statistics summarize key characteristics of the respondents, while inferential analysis, including multiple linear regression, is used to examine the impact of financial inclusion on humanitarian aid delivery. The findings provide insights into access to financial services, digital financial adoption, barriers to financial inclusion, regulatory support, and the socio-economic well-being of aid recipients. The results are interpreted in line with the study objectives, highlighting key patterns and trends that inform policy recommendations and practical implications for humanitarian aid distribution in Lagos State.

Level of Financial Inclusion among Humanitarian Aid Recipients

The model summary presented in Table 4.6a provides an overview of the relationship between financial inclusion (FI) and humanitarian aid effectiveness (HAE). The R-value of 0.061 suggests a very weak correlation between financial inclusion and humanitarian aid effectiveness. The R-squared value of 0.004 indicates that financial inclusion explains only 0.4% of the variation in humanitarian aid effectiveness, while the adjusted R-squared value of -0.009 suggests that the model does not provide an improved explanation of the variance. The standard error of the estimate (2.69496) highlights the level of deviation between the predicted and actual values, reinforcing the weak explanatory power of the model.

Table 4.6a - Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.061[a]	.004	-.009	2.69496

a. Predictors: (Constant), FI

Table 4.6b presents the ANOVA results, which test the overall significance of the regression model. The regression sum of squares is 10.845, while the residual sum of squares is 2861.552, indicating that most of the variance in humanitarian aid effectiveness remains unexplained by financial inclusion. The F-statistic value of 0.299 and its corresponding p-value of 0.914 suggest that the regression model is not statistically significant at any conventional significance level ($p > 0.05$). This indicates that financial inclusion, as measured by the selected indicators, does not significantly predict humanitarian aid effectiveness.

Table 4.6b - ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.845	5	2.169	.299	.914[b]
	Residual	2861.552	394	7.263		
	Total	2872.397	399			

a. Dependent Variable: HAE
b. Predictors: (Constant), FI

The coefficient estimates in Table 4.6c further confirm the lack of a strong relationship between financial inclusion and humanitarian aid effectiveness. None of the financial inclusion indicators are statistically significant predictors of humanitarian aid effectiveness, as evidenced by their high p-values (all greater than 0.05). Specifically, access to a bank account (B = 0.114, p = 0.674) and the active use of mobile money services (B = 0.067, p = 0.686) have weak and statistically insignificant effects on humanitarian aid effectiveness. Similarly, how respondents store or manage their money (B = -0.080, p = 0.502) and their use of agent banking services (B = 0.046, p = 0.789) do not demonstrate significant explanatory power. Additionally, the perceived accessibility of financial service providers (B = -0.198, p = 0.463) does not significantly influence humanitarian aid effectiveness. The Variance Inflation Factor (VIF) values for all independent variables remain close to 1, indicating no multicollinearity issues in the model.

Table 4.6c - Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	12.928	.843		15.327	.000		
	ACC_BANK	.114	.270	.021	.421	.674	.994	1.006
	USE_MB	.067	.166	.020	.404	.686	.997	1.003
	MONEY_KEEP	-.080	.119	-.034	-.672	.502	.993	1.007
	USE_AGENT	.046	.171	.014	.268	.789	.988	1.012
	USE_FS	-.198	.270	-.037	-.734	.463	.997	1.003

a. Dependent Variable: HAE

Where:

ACC_BANK – Access to a bank account
USE_MB – Use of mobile banking
MONEY_KEEP – Means of keeping money
USE_AGENT – Use of Agent Service (POS)
USE_FS – Use of Financial Services

Based on the regression results, the p-value of 0.914 is greater than the 0.05 significance level, meaning that financial inclusion does not have a statistically significant effect on humanitarian aid effectiveness. Therefore, we fail to reject H01, confirming that financial inclusion, as measured in this study, does not significantly improve access to humanitarian aid among recipients.

The results suggest that financial inclusion alone does not significantly impact humanitarian aid effectiveness. This implies that merely having access to financial services does not necessarily translate into improved aid delivery or financial resilience among recipients. Other factors, such as the efficiency of aid distribution channels, socio-economic conditions, and policy interventions, may play a more critical role in enhancing humanitarian aid effectiveness.

DISCUSSION

The findings from the analysis indicate that financial inclusion does not have a statistically significant impact on the effectiveness of humanitarian aid delivery in the selected LGAs of Lagos State. The regression results showed a weak relationship, with an R-square value of 0.004, meaning that financial inclusion explains only 0.4% of the variance in humanitarian aid effectiveness. Additionally, the ANOVA results confirmed that the model is not statistically significant ($p = 0.914$), with predictor variables such as access to a bank account, mobile money usage, agent banking, and perceived financial service accessibility showing no significant effects. These findings suggest that while financial inclusion is often viewed as a tool for improving aid accessibility and efficiency, its direct impact in Lagos State may be limited due to contextual barriers or implementation challenges.

This finding contrasts with previous studies that emphasize the positive role of financial inclusion in enhancing humanitarian outcomes. Jack and Suri (2016) found that mobile money services significantly improved economic resilience in Kenya, enabling vulnerable populations to receive financial support rapidly during crises. Similarly, Dupas and Robinson (2013) demonstrated that access to formal banking services increased savings and financial stability among low-income households, helping them manage financial shocks. However, in the context of Lagos State, financial inclusion alone may not be sufficient to enhance humanitarian aid effectiveness. Factors such as trust in financial institutions, infrastructure readiness, and beneficiaries' familiarity with financial services could mediate this relationship, as highlighted by Demirgüç-Kunt et al. (2018).

One possible explanation for the weak relationship found in this study is that financial inclusion initiatives in the study areas may not adequately address the needs of humanitarian aid recipients. While respondents reported access to financial services like bank accounts and mobile money, this access did not necessarily translate into improved aid effectiveness. Aker et al. (2016) argued that digital financial inclusion in humanitarian settings often faces challenges related to last-mile delivery, literacy levels, and local financial ecosystems. In Nigeria, financial service adoption remains low in informal settlements due to issues such as lack of documentation, distrust in financial systems, and high transaction costs (EFInA, 2020). These structural barriers could explain why financial inclusion has not significantly influenced humanitarian aid delivery in Lagos State.

Despite the lack of statistical significance, the study does not completely dismiss the potential benefits of financial inclusion in humanitarian aid delivery. Qualitative insights from previous research suggest that digital payment systems can reduce corruption, improve accountability, and expedite aid disbursement during crises (Scharwatt and Williamson, 2015). However, for these benefits to be fully realized, it is necessary to address key structural challenges such as digital literacy, mobile network infrastructure, and policy inconsistencies. Klapper and Singer (2017) emphasize the need for a multi-stakeholder approach to financial inclusion, involving governments, financial institutions, and humanitarian agencies. In conclusion, while financial inclusion is widely promoted as a means of improving humanitarian aid effectiveness, this study finds no statistically significant relationship in Lagos State. Future research should explore the qualitative dimensions of this relationship, assessing beneficiaries' perceptions and identifying additional measures needed to enhance the role of financial inclusion in humanitarian aid.

CONCLUSION

This study contributes to the discourse on financial inclusion and humanitarian aid effectiveness in Nigeria, emphasizing that access to financial services alone is insufficient to enhance aid distribution. While digital financial services have the potential to improve efficiency, their impact is limited by infrastructure challenges and digital literacy gaps. Financial literacy is crucial for empowering aid recipients, highlighting the need for targeted education programs. Additionally, policy and regulatory frameworks do not significantly influence aid effectiveness, raising concerns about their implementation. The study also finds no immediate impact of financial inclusion on socio-economic well-being, suggesting that a holistic approach—combining financial services with livelihood opportunities, education, and supportive policies—is necessary for long-term improvements. Overall, the findings call for a more integrated approach to financial inclusion, ensuring that financial services are both accessible and effectively utilized to enhance aid outcomes.

The study's findings lead to five key recommendations for enhancing the impact of financial inclusion on humanitarian aid effectiveness. First, financial institutions and humanitarian organizations should develop tailored financial products, such as low-cost savings accounts and microcredit schemes, to better serve the needs of aid recipients. Second, efforts should focus on improving digital infrastructure and expanding mobile banking services, alongside financial education programs that enhance digital literacy. Third, humanitarian agencies should integrate financial education into aid distribution strategies through training sessions and informational materials to help recipients make informed financial decisions. Fourth, policymakers should review existing financial inclusion regulations to identify gaps, improve enforcement, and remove bureaucratic barriers to ensure policies are effective in humanitarian contexts. Finally, financial inclusion should be linked to broader economic empowerment initiatives, including vocational training, entrepreneurship programs, and employment opportunities, to support sustainable socio-economic growth among aid recipients.

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