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ECONOMIC EFFECTS OF FINANCIAL TECHNOLOGY ADOPTION ON FINANCIAL INCLUSION AMONG RURAL HOUSEHOLDS IN AKWA IBOM STATE

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ABSTRACT

This study examined the economic effects of financial technology adoption on financial inclusion among rural households in Akwa Ibom State, Nigeria. Despite the rapid growth of financial technology (FinTech) services and the increasing penetration of mobile devices across Nigeria, a substantial proportion of rural households remain financially excluded due to inadequate access to formal financial services, low digital literacy, and infrastructural deficiencies. The study specifically investigated the effect of mobile banking adoption and digital payment platform adoption on financial inclusion among rural households in Akwa Ibom State. A descriptive survey research design was adopted for the study. The population comprised 5,420 rural household heads selected from rural communities across the thirty-one Local Government Areas of Akwa Ibom State. A sample size of 373 respondents was determined using the Taro Yamane formula. Data were collected using a structured questionnaire titled “Economic Effects of Financial Technology Adoption and Financial Inclusion Questionnaire (EEFTAFIQ)”. The instrument was validated by experts in Business Education and Measurement and Evaluation. Data obtained were analysed using mean and standard deviation to answer the research questions, while independent t-test statistics were used to test the hypotheses at the 0.05 level of significance. The findings revealed that mobile banking adoption had a high effect on financial inclusion among rural households. The findings further revealed that digital payment platform adoption significantly enhanced

financial inclusion among rural households. The study concluded that financial technology adoption remains a critical mechanism for expanding financial inclusion and reducing financial exclusion among rural populations. The study recommended among others that financial institutions should intensify awareness campaigns and financial literacy programmes to educate rural households on the benefits and usage of mobile banking services.

KEYWORDS: Financial technology adoption, financial inclusion, mobile banking, digital payment platforms, rural households.

INTRODUCTION

Over the years, the global financial landscape has undergone substantial transformation due to the emergence and rapid diffusion of financial technology. Financial technology, commonly referred to as FinTech, represents the application of digital technologies to improve the delivery, accessibility, and efficiency of financial services. FinTech has significantly altered the manner in which individuals and businesses access and utilise financial services through innovations in mobile banking, digital wallets, electronic transfers, online lending, and agent banking systems. Financial technology contributes significantly to addressing financial exclusion problems, particularly among vulnerable and underserved populations. The increased integration of digital technologies into financial systems has created unprecedented opportunities for expanding access to formal financial services and promoting inclusive economic growth.

Financial inclusion refers to the provision and accessibility of affordable, appropriate, and timely financial products and services to all segments of society, especially those traditionally excluded from the formal financial sector. The financial inclusion is enhanced through the adoption of FinTech which has significantly affected the utilization of financial services in the rural households (Ozili, 2021). The World Bank (2022) defines financial inclusion as the ability of individuals and businesses to access useful and affordable financial products and services that meet their needs, including transactions, payments, savings, credit, and insurance, delivered responsibly and sustainably. Financial inclusion has gained considerable attention among policymakers, researchers, and development practitioners because of its potential to alleviate poverty, reduce inequality, and stimulate economic development. Demirgüç-Kunt et al. (2022) argue that access to financial services enables households to

manage risks, accumulate assets, invest in education and healthcare, and improve their overall welfare.

In developing countries such as Nigeria, financial exclusion remains particularly prevalent among rural populations. Rural households frequently encounter challenges associated with geographical isolation, inadequate banking infrastructure, limited financial literacy, and low income levels. These challenges often restrict their participation in formal financial systems and compel them to rely on informal financial arrangements. Consequently, governments and financial institutions have increasingly embraced digital financial innovations as viable alternatives for extending financial services to underserved communities. Mobile banking services, digital payment systems, and agency banking models have become important channels for reaching previously excluded populations and integrating them into the formal financial ecosystem (Nurvita, 2026).

Mobile banking adoption represents one of the most significant dimensions of financial technology utilisation. Mobile banking enables individuals to perform various financial transactions using mobile devices without the need for physical visits to banking institutions (Appiah-Otoo & Song, 2021). Through mobile banking platforms, users can transfer funds, pay bills, monitor account balances, receive remittances, and access savings products. Suri and Jack (2016) observed that mobile-based financial services substantially enhance financial accessibility by overcoming geographical and infrastructural barriers. More recently, Abokyi (2025) maintained that mobile banking adoption contributes significantly to financial inclusion by reducing transaction costs and facilitating financial participation among low-income households.

Closely related to mobile banking is the adoption of digital payment platforms. Digital payment platforms comprise technologies that facilitate electronic transactions through mobile wallets, Point-of-Sale terminals, electronic transfers, QR code payments, and internet-based payment systems (Grzybowski et al., 2024). These technologies provide secure, efficient, and convenient alternatives to cash-based transactions. According to Khera et al. (2022), digital payment technologies enhance financial inclusion by simplifying transactions and increasing participation in formal financial markets. The adoption of digital payment systems has become increasingly important in rural communities where traditional banking facilities are either inadequate or entirely absent.

Akwa Ibom State has experienced substantial growth in telecommunications infrastructure and mobile phone penetration over recent years. This development has created favourable conditions for the expansion of financial technology services within both urban and rural

communities. Financial institutions, telecommunications providers, and FinTech companies have introduced various digital financial products designed to improve financial accessibility and promote financial inclusion among rural populations. Despite these efforts, evidence suggests that significant disparities persist in the adoption and utilisation of digital financial services among rural households. Understanding the extent to which financial technology adoption influences financial inclusion among rural households is therefore necessary for informing policy interventions and promoting inclusive economic development.

Statement of the Problem

Financial inclusion has emerged as a critical component of sustainable economic development due to its capacity to improve access to financial resources, enhance household welfare, and reduce poverty. In recognition of its importance, governments, financial institutions, and development agencies have implemented numerous initiatives aimed at increasing access to formal financial services among underserved populations. One of the most prominent strategies adopted in recent years involves the deployment of financial technology solutions to bridge existing gaps in financial service delivery.

Despite the widespread availability of mobile banking services, digital payment platforms, and other financial technology innovations in Nigeria, many rural households remain financially excluded. A significant proportion of rural residents continue to experience difficulties accessing formal banking services, securing credit facilities, maintaining savings accounts, and participating effectively in digital financial transactions. This situation persists despite substantial investments in digital infrastructure and financial inclusion initiatives.

Observations indicate that many rural households in Akwa Ibom State either underutilise available financial technology services or encounter challenges associated with digital literacy, technological competence, poor network connectivity, and limited trust in digital financial systems. Consequently, the anticipated benefits of financial technology adoption in promoting financial inclusion may not have been fully realised. While previous studies have examined financial inclusion and digital finance in various contexts, limited empirical evidence exists regarding the specific effects of mobile banking adoption and digital payment platform adoption on financial inclusion among rural households in Akwa Ibom State. It is against this background that this study seeks to examine the effects of financial technology adoption on financial inclusion among rural households in Akwa Ibom State.

Purpose of the Study

The main purpose of this study was to examine the economic effects of financial technology adoption on financial inclusion among rural households in Akwa Ibom State. Specifically, the study sought to determine:

1. The economic effect of mobile banking adoption on financial inclusion among rural households in Akwa Ibom State.
2. The economic effect of digital payment platform adoption on financial inclusion among rural households in Akwa Ibom State.

Research Questions

The following research questions guided the study:

1. To what extent does mobile banking adoption affect financial inclusion among rural households in Akwa Ibom State?
2. To what extent does digital payment platform adoption affect financial inclusion among rural households in Akwa Ibom State?

Research Hypotheses

The following null hypotheses were formulated and tested at the 0.05 level of significance:

H01: Mobile banking adoption has no significant effect on financial inclusion among rural households in Akwa Ibom State.

H02: Digital payment platform adoption has no significant effect on financial inclusion among rural households in Akwa Ibom State.

THEORETICAL FRAMEWORK

Technology Acceptance Model (TAM) by Fred Davis (1989)

The Technology Acceptance Model (TAM) was originally propounded by Fred Davis in 1989 as an information systems theory modeled to predict and explain user acceptance of new digital systems. The core tenets of the theory posit that an individual's behavioral intention to adopt and utilize a given technology is primarily driven by two cognitive factors: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Perceived usefulness describes the degree to which a person believes that using a particular system would enhance their job performance or daily operational efficiency, while perceived ease of use captures the extent to which a user expects the target technology to be relatively free of physical or mental effort. Within TAM, external variables such as system design characteristics, training, user

support, and demographic traits do not directly influence usage behavior but are mediated through these two foundational perceptions.

The Technology Acceptance Model provides a highly relevant lens for this study by explaining the specific behavioral mechanisms that drive or inhibit rural households in Akwa Ibom State from transacting via fintech platforms. In rural settings, traditional brick-and-mortar banks are often physically inaccessible, making digital channels like USSD codes, mobile wallets, and Point of Sale (POS) agent banking vital alternatives. This study relies on TAM to evaluate how rural consumers perceive the usefulness of fintech in streamlining their daily agricultural or retail financial transactions, alongside how the perceived ease of use, influenced by local network connectivity, language accessibility, and simplified interfaces, directly impacts their willingness to move away from cash-only practices. Ultimately, understanding these dual perceptions helps decode why certain rural households successfully achieve financial inclusion while others remain financially isolated.

Diffusion of Innovations (DOI) Theory by Everett Rogers (1962)

The Diffusion of Innovations (DOI) Theory was developed by Everett Rogers in 1962 to clarify how, why, and at what rate new ideas, cultural practices, and technologies spread through a specific social system. The core tenets of the theory establish that innovation diffusion is an inherently social communication process structured around four main components: the innovation itself, communication channels, time, and the social system. Rogers categorizes adopters into five sequential groups based on their willingness to accept new ideas: innovators, early adopters, early majority, late majority, and laggards. Furthermore, DOI states that the rate of adoption is strongly dictated by five perceived attributes of the innovation: relative advantage (superiority over old methods), compatibility (alignment with existing values and needs), complexity (difficulty to understand), trialability (ability to experiment with on a limited basis), and observability (visibility of results to others).

The relevance of the Diffusion of Innovations Theory to this study lies in its capacity to trace the community-level trajectory of fintech adoption across the socially interconnected rural landscapes of Akwa Ibom State. Rural households rarely make technology adoption decisions in complete isolation; instead, they heavily depend on local social networks, peer references, and community leaders to validate new tools. By deploying DOI, this study can analyze how the relative advantage of digital financing over traditional physical cash storage diffuses through communal networks, and how early adopters of mobile money or local POS agents

showcase observable economic benefits to their skeptical neighbors. This framework allows the researcher to understand how fintech transitions from an alien concepts into an acceptable, compatible socio-economic standard within rural Akwa Ibom communities.

CONCEPTUAL CLARIFICATIONS

Financial Technology (Fintech) Adoption

Financial Technology (Fintech) refers to the innovative application of digital software, infrastructure, and platforms to improve, automate, and disrupt the delivery of conventional financial services. Appiah-Otoo and Song (2021) conceptualize fintech as an essential tool for altering traditional financial mechanisms, noting that its spread is a structural driver for narrowing access gaps in marginalized ecosystems. In Sub-Saharan Africa, fintech adoption is heavily characterized by mobile-centric architectures rather than desktop or traditional internet banking. As noted by Grzybowski et al. (2024), mobile money systems have emerged as the primary vehicle for financial outreach across the continent, allowing users to execute transactions without physical proximity to standard bank buildings. In the local context of Akwa Ibom State, Henry et al. (2025) emphasize that while digital adoption fundamentally reshapes entrepreneurial business operations and operational efficiency, it remains tethered to distinct infrastructural roles and structural challenges, including network quality, digital literacy, and regulatory compliance.

Financial Inclusion

Financial inclusion entails providing individuals and businesses with universal access to affordable, useful, and formal financial products, such as transactions, payments, savings, credit, and insurance, delivered in a responsible and sustainable manner. According to Demirgüç-Kunt et al. (2022) in the Global Findex report, financial inclusion acts as a critical pillar for building resilience against economic shocks, with digital payments transforming how marginalized groups manage risks and secure their livelihoods. The conceptualization of financial inclusion extends beyond simple account ownership; as Ozili (2021) underscores, it is a multi-dimensional construct widely researched around the world for its capacity to integrate the unbanked sector into the formal macroeconomy. To quantify this effectively, Khera et al. (2022) formulate comprehensive digital financial inclusion indices that measure the dimensions of access, usage, and service quality. Similarly, the World Bank (2022) reinforces that deepening financial inclusion across Sub-Saharan Africa is a foundational

requirement to unlock shared prosperity, lower transactional friction, and economically empower vulnerable segments of society.

Economic Effects

The economic effects of financial inclusion and technology adoption capture the tangible impacts on the material well-being, consumption patterns, asset accumulation, and broader growth trajectories of households. Abokyi (2025) provides critical insights from developing countries demonstrating that expanding financial inclusion systematically enhances household welfare by smoothing consumption and reducing overall vulnerability to income volatility. This household welfare enhancement scales up into broader regional development, as Nurvita (2026) provides empirical evidence linking digital financial inclusion to sustained macroeconomic growth across emerging economies through efficient capital mobilization. On a microeconomic scale, the long-run transformative impact of these digital transitions cannot be understated; Suri and Jack (2016) famously document that the sustained adoption of mobile money platforms drives profound structural changes, explicitly lifting vulnerable households out of extreme poverty and creating long-term positive welfare shifts for rural communities.

METHODOLOGY

The study empirically examined the economic effects of financial technology adoption on financial inclusion among rural households in Akwa Ibom State. Two specific objectives, research questions and hypotheses were formulated to guide the study. The study adopted a descriptive survey research design because it enabled the researcher to collect data from a representative sample of rural households and describe the existing relationship between financial technology adoption and financial inclusion. The study was conducted in rural communities across the thirty-one Local Government Areas of Akwa Ibom State, Nigeria. The population of the study comprised 5,420 rural household heads identified through community records and local administrative registers. A sample size of 373 respondents was obtained using the Taro Yamane formula at a 0.05 level of precision. The instrument used for data collection was a structured questionnaire titled “Economic Effects of Financial Technology Adoption and Financial Inclusion Questionnaire (EEFTAFIQ)”. The instrument was divided into three sections. Section A elicited information on respondents' demographic characteristics, while Sections B and C collected data on mobile banking adoption, digital payment platform adoption and financial inclusion. The questionnaire was structured on a

four-point rating scale of Very High Extent (4 points), High Extent (3 points), Low Extent (2 points), and Very Low Extent (1 point).

The instrument was validated by three experts, two from the Department of Business Education and one from the Department of Measurement and Evaluation. Their observations and recommendations were incorporated before the final administration of the instrument. The reliability of the instrument was established through a pilot study involving 30 rural household heads outside the study area. Cronbach Alpha reliability coefficients of 0.82, 0.86 and 0.88 were obtained for the various sections, resulting in an overall reliability coefficient of 0.85, indicating that the instrument was suitable for the study. A total of 373 copies of the questionnaire were administered. Out of these, 351 copies were properly completed and returned, representing a response rate of 94.1%. Data collected were analysed using mean and standard deviation to answer the research questions. The criterion mean of 2.50 was used for decision making. Independent t-test statistics were used to test the hypotheses at the 0.05 level of significance.

RESULTS

The results based on the data gathered for the study are presented below.

Research Question One

To what extent does mobile banking adoption affect financial inclusion among rural households in Akwa Ibom State?

Table 1: Economic Effect of Mobile Banking Adoption on Financial Inclusion among Rural Households in Akwa Ibom State. (n = 351)

S/N	Items	Mean	SD	Remark
1	Mobile banking enables access to savings services.	3.24	.73	HE
2	Mobile banking facilitates money transfers.	3.31	.68	HE
3	Mobile banking reduces transportation costs associated with banking services.	3.18	.75	HE
4	Mobile banking improves access to formal financial institutions.	3.12	.77	HE
5	Mobile banking supports bill payments and other transactions.	3.26	.69	HE
6	Mobile banking promotes regular financial participation.	3.17	.74	HE
7	Mobile banking increases confidence in formal financial services.	3.09	.78	HE
Aggregate Mean		3.20	.73	HE

Source: Field Survey, 2026

The data presented in Table 1 shows the mean scores of respondents on the effect of mobile banking adoption on financial inclusion among rural households. Using the criterion mean of 2.50, the analysis indicates that all items recorded mean scores ranging from 3.09 to 3.31. The aggregate mean of 3.20 exceeded the criterion mean of 2.50. This indicates that mobile banking adoption affect financial inclusion among rural households in Akwa Ibom State to a high extent.

Research Question Two

To what extent does digital payment platform adoption affect financial inclusion among rural households in Akwa Ibom State?

Table 2: Effect of Digital Payment Platform Adoption on Financial Inclusion among Rural Households in Akwa Ibom State. (n = 351)

S/N	Items	Mean	SD	Remark
1	Digital payment platforms facilitate cashless transactions.	3.28	.71	HE
2	Digital payment platforms improve access to financial services.	3.22	.76	HE
3	Digital payment platforms reduce transaction costs.	3.15	.73	HE
4	Mobile wallets improve financial accessibility.	3.26	.69	HE
5	Electronic transfers promote financial participation.	3.19	.74	HE
6	POS services facilitate financial transactions.	3.11	.78	HE
7	Digital payments improve convenience and efficiency.	3.30	.67	HE
Aggregate Mean		3.22	.73	HE

Source: Field Survey, 2026

The data presented in Table 2 shows the mean scores of respondents on the effect of digital payment platform adoption on financial inclusion. The item mean scores ranged from 3.11 to 3.30. The aggregate mean score of 3.22 exceeded the criterion mean of 2.50, indicating that digital payment platform adoption affect financial inclusion among rural households in Akwa Ibom State to a high extent.

Research Hypothesis One

H₀₁: Mobile banking adoption has no significant effect on financial inclusion among rural households in Akwa Ibom State.

Table 3: Independent t-test Analysis of the Effect of Mobile Banking Adoption on Financial Inclusion among Rural Households in Akwa Ibom State. (n = 351)

Variables	Mean	SD	Df	t-cal	t-tab	P-value
Mobile Banking Adoption	3.20	.73				
Financial Inclusion	3.27	.71	350	4.62	1.96	.000

Df = Degree of Freedom; $P < 0.05$

The result presented in Table 3 shows that at 350 degrees of freedom, the calculated t-value of 4.62 was greater than the critical t-value of 1.96. The p-value of .000 was less than the significance level of 0.05. Therefore, the null hypothesis was rejected. This implies that mobile banking adoption has a significant effect on financial inclusion among rural households in Akwa Ibom State.

Research Hypothesis Two

H0₂: Digital payment platform adoption has no significant effect on financial inclusion among rural households in Akwa Ibom State.

Table 4: Independent t-test Analysis of the Effect of Digital Payment Platform Adoption on Financial Inclusion among Rural Households in Akwa Ibom State. (n = 351)

Variables	Mean	SD	Df	t-cal	t-tab	P-value
Digital Payment Platform Adoption	3.22	.73				
Financial Inclusion	3.27	.71	350	5.18	1.96	.000

Df = Degree of Freedom; $P < 0.05$

The result presented in Table 4 shows that at 350 degrees of freedom, the calculated t-value of 5.18 was greater than the critical t-value of 1.96. The p-value of .000 was less than the significance level of 0.05. Therefore, the null hypothesis was rejected. This implies that digital payment platform adoption has a significant effect on financial inclusion among rural households in Akwa Ibom State.

Findings of the Study

The following findings emerged from the study:

1. Mobile banking adoption affect financial inclusion among rural households in Akwa Ibom State to a high extent.
2. Digital payment platform adoption affect financial inclusion among rural households in Akwa Ibom State to a high extent.
3. Mobile banking adoption has significant effect on financial inclusion among rural households in Akwa Ibom State.

4. Digital payment platform adoption has significant effect on financial inclusion among rural households in Akwa Ibom State.

DISCUSSION OF FINDINGS

Economic Effect of Mobile Banking Adoption on Financial Inclusion among Rural Households

The findings for research question one shown in Table 1 revealed that mobile banking adoption has a high and significant effect on financial inclusion among rural households in Akwa Ibom State. The high aggregate mean obtained from respondents indicates that mobile banking services have enhanced access to savings, transfers, bill payments and other financial services among rural residents. The result presented in Table 3 for hypothesis one further confirmed the existence of a statistically significant influence of mobile banking adoption on financial inclusion. The finding is consistent with the study of Abokyi (2025), who reported that mobile banking technologies significantly improve financial accessibility and participation among low-income households. Similarly, Demirgüç-Kunt et al. (2022) observed that digital financial services contribute substantially to expanding financial inclusion among previously underserved populations. The observed effect may be attributed to the convenience, affordability and accessibility associated with mobile banking services. Mobile banking eliminates geographical barriers and reduces the transaction costs associated with traditional banking services. Consequently, rural households are able to access financial services without travelling long distances to physical bank branches. Furthermore, the findings support the position of Ozili (2021), who argued that mobile financial technologies play a strategic role in reducing financial exclusion in developing economies. The adoption of mobile banking services enables rural households to participate more actively in formal financial systems, thereby enhancing savings behaviour, financial security and economic welfare.

Economic Effect of Digital Payment Platform Adoption on Financial Inclusion among Rural Households

The findings for research question two and hypothesis four in Tables 2 and 4 revealed that digital payment platform adoption has a high and significant effect on financial inclusion among rural households in Akwa Ibom State. Respondents acknowledged that digital payment platforms facilitate cashless transactions, improve access to financial services and enhance convenience in financial transactions. The significant result obtained from the

hypothesis tested in Table 4 indicated that digital payment technologies contribute meaningfully to financial inclusion among rural populations. This finding corroborates the study of Khera et al. (2022), who found that digital payment technologies significantly promote financial inclusion by simplifying financial transactions and improving access to formal financial systems. The finding is equally in agreement with the Global Findex Report by Demirgüç-Kunt et al. (2022), which reported that digital payments have become one of the most effective channels for increasing financial participation across developing countries. The significant effect of digital payment platform adoption may be explained by the growing availability of mobile wallets, electronic transfer systems and Point-of-Sale terminals in rural communities. These technologies provide secure and efficient alternatives to cash transactions and encourage greater participation in formal financial activities. Consequently, digital payment platforms contribute substantially to reducing financial exclusion and enhancing economic inclusion among rural households.

CONCLUSION

Based on the findings of the study, the study concluded that financial technology adoption has become an important driver of financial inclusion, particularly among populations that have traditionally experienced limited access to formal financial services and that financial technology adoption has high effect on financial inclusion among rural households in Akwa Ibom State, with particular emphasis on mobile banking adoption and digital payment platform adoption. The findings further demonstrated that mobile banking adoption and digital payment platform adoption significantly influence financial inclusion of rural households in Akwa Ibom State. The study therefore concludes that financial technology adoption remains a viable mechanism for reducing financial exclusion and expanding access to formal financial services among rural populations. Increased utilisation of mobile banking services and digital payment platforms has the potential to strengthen financial participation, promote economic empowerment, and support sustainable rural development in Akwa Ibom State.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made:

1. Financial institutions should intensify awareness campaigns and financial literacy programmes to educate rural households on the benefits and usage of mobile banking services.

2. Community-based digital literacy programmes should be established to improve the technological competence of rural households and increase confidence in the use of digital payment platforms.

REFERENCES

1. Abokyi, E. (2025). Financial inclusion and household welfare: Insight from a developing country. *Development and Sustainability in Economics and Finance*, 6, Article 100068. <https://doi.org/10.1016/j.dsef.2025.100068>
2. Appiah-Otoo, I., & Song, N. (2021). The impact of fintech on poverty reduction: Evidence from China. *Sustainability*, 13(9), Article 5225. <https://doi.org/10.3390/su13095225>
3. Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2022). *The Global Findex Database 2021: Financial inclusion, digital payments, and resilience in the age of COVID-19*. World Bank.
4. Grzybowski, L., Lindlacher, V., & Mothobi, O. (2024). *Mobile money and financial inclusion in Sub-Saharan Africa* (Working Paper No. 2024-20). Faculty of Economic Sciences, University of Warsaw.
5. Henry, L. P., Inyang, A. B., & Akpan, E. E. (2025). AI adoption in entrepreneurial business operations in Akwa Ibom State: Evaluating the roles and challenges. In *Modern anthology in education, administration, science and technology* (pp. 24–39). Global Academic Star. <https://globalacademicstar.com>
6. Khera, P., Ng, S., Ogawa, S., & Sahay, R. (2022). Measuring digital financial inclusion in emerging market and developing economies: A new index. *Asian Economic Policy Review*, 17(2), 213–230. <https://doi.org/10.1111/aepr.12377>
7. Nurvita, S. M. S. (2026). Digital financial inclusion and economic growth: Evidence from emerging economies using panel data analysis. *Economit Journal: Scientific Journal of Accountancy, Management and Finance*, 5(4), 240–250. <https://www.biarjournal.com/index.php/economit/article/view/1457>
8. Ozili, P. K. (2021). Financial inclusion research around the world: A review. *Forum for Social Economics*, 52(4), 457–479. <https://doi.org/10.1080/07360932.2020.1715238>
9. Suri, T., & Jack, W. (2016). The long-run poverty and gender impacts of mobile money. *Science*, 354(6317), 1288–1292. <https://doi.org/10.1126/science.aah5309>
10. World Bank. (2022, March 29). *Financial inclusion in Sub-Saharan Africa*. <https://www.worldbank.org/en/topic/financialinclusion/brief/financial-inclusion>.