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FACTORS INFLUENCING FINANCIAL INCLUSION AMONG FARMING HOUSEHOLDS IN NIGERIA. A REVIEW

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ABSTRACT: Nigeria's agricultural sector is dominated by smallholders who occupied a substantial economic position in the country. Literatures indicates that majority of rural farming households practice peasant agriculture and remained in vicious cycle of poverty. Inadequate finance and low financial inclusion have been considered as some of the reasons limiting their agricultural output. Thus, it is expedient to review the factors that influences financial inclusion and how financial interventions improve their agricultural production and overall household welfare. Therefore, this review is focused on socioeconomic factors and demographic variables that influences financial inclusion among Nigeria's farming households with the view to ascertaining its impact on agricultural production. It was concluded that financial inclusion is a concept with diverse influencing variables that holds immense potential for rural economic development. To promote sustainable financial inclusion in agriculture, targeted interventions are needed from governments, private actors, financial institutions, and development partners. These interventions should include financial literacy education, farmer-centric financial products, farmer's capacity-building programs, and investments in rural infrastructure.

Keywords: Financial inclusion, farming households, determinants, agriculture

INTRODUCTION

Agriculture is a primary source of income to most of rural people in low-income countries. Access to finance by farming households is seen as a crucial component of agricultural output, supporting poor farmers in preserving their standard of life, implementing cutting-edge technology, and boosting their household incomes (Mariam *et al*,. 2020). The global economy is warming up to provide an ultimate solution for achieving financial access of people across the globe. Besides, smallholder farmers in developing countries, especially in low-income African countries like Nigeria, are at the forefront of those who lacked access to institutional financing (Adegboyega *et al.*, 2023; Eze and Markjackson, 2020; David *et al.*, 2018; Ene *et al.*, 2019). Moreover, accessibility to high quality financial services is one of the components that contribute to economic development. Even though nations in Africa including Nigeria have formal financial institutions, nevertheless, available information shows that these institutions are underutilized by farming households.

Financial inclusion is a process that integrates all individuals into the formal financial system, enabling access to available formal financial services that can enhance their wellbeing (Barajas *et al*., 2020; Ozili, 2024). The 2021 Global Findex report by the World Bank indicates that 1.7 billion individuals remain unbanked or excluded from the formal financial system, with a significant majority residing in developing nations (Demirgüç-Kunt *et al*., 2022). This has prompted policymakers in developing nations to prioritize financial inclusion as a key policy objective. Although financial inclusion is a paramount objective in developing nations, there exists considerable discourse regarding its

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influencing factors, with numerous studies indicating that these are predominantly microeconomic and demand-side factors (Giday, 2023; Fahmy and Ghoneim, 2023; Barik and Lenka, 2023). Some contend that the influencing factors are mostly macroeconomic and financial supply-side issues (Gebrehiwot and Makina, 2019; Markose *et al*., 2022; Matsebula and Sheefeni, 2022).

Diverse opinions and discussions emerged from the multifaceted character of financial inclusion and the distinct problems encountered by each country in achieving it (Prabhakar, 2019; Ozili, 2021a Fernández-Olit *et al*., 2020). The majority of single-country research in the literature indicate that most drivers of financial inclusion are country-specific. This is also true for Nigeria as existing studies suggest that financial literacy, gender, income, age, internet usage, access to credit and the level of poverty are some factors that influenced financial inclusion (Adegboyega *et al*., 2023; Ozili, 2021b; Eze and Markjackson, 2020; Ene *et al*, 2019). Nigeria's level of banked-based financial inclusion is still very low despite the efforts of the government to accelerate financial inclusion since 2012 when the central bank announced the National Financial Inclusion Strategy and the revised version of the Strategy in 2018. In 2023, 52 percent of Nigeria's adults possess a formal bank account, this means that just 118.5 million individuals have a bank account in Nigeria and 109.4 million people are unbanked out of a population of 228 million people as at 2023 (Enhancing Financial Innovation and Access [EFInA] report, 2023). The substantial population of unbanked individuals poses significant concern for Nigeria's rural monetary authority. Financial inclusion has in many times served as a remedy for economic development and advancement. Nevertheless, the examination of contributing variables in Nigeria has received minimal attention. The limited empirical studies available, including those by Dzugwagi and Idris (2025), Adegboyega *et al*. (2023), Ayopo *et al*. (2020), Kolawole (2025), Kpaama and Benson (2024), Eze and Markjackson (2020), and Nuru and Adamu (2024), were conducted at the state, rural, sectoral, and/or disciplinary levels. Therefore, this study primarily identify, harness and present the numerous factors influencing financial inclusion among farming households, from either rural or urban settings, sector, or discipline within Nigeria context.

The concept of financial inclusion

Financial inclusion is a journey that spans centuries and reflects the efforts to ensure that all individuals and businesses have access to essential financial services, regardless of their socioeconomic status. Financial inclusion was traditionally borne out of the need to address various inequalities that exist across and within countries or population subgroups and hinder socio-economic inclusion (Beck *et al*., 2007; Nwanne, 2015). The concept of financial inclusion gained global attention in 2006 when Muhammad Yunus, founder of Grameen Bank, received the Nobel Peace Prize for pioneering microfinance (Matsvai, 2024). Since then, financial inclusion has become a central focus of global development, aligning with the United Nations' Sustainable Development Goals (SDGs) and the G20's High-Level Principles for Digital Financial Inclusion (World Bank, 2024). These initiatives emphasize financial access as a catalyst for economic growth and poverty alleviation. Despite progress, financial disparities persist. The World Bank's Global Findex Report (2021) indicates that 76% of adults worldwide now have access to financial services, up from 51% in 2011. Barriers, including a lack of collateral, high transaction costs, weak financial infrastructure, and limited literacy, hinder access to financial services for rural and agricultural communities (Matsvai, 2024).

Financial inclusion is widely acknowledged as a key driver of economic development, particularly in low-and middle-income countries. It encompasses three critical dimensions access, usage, and quality that collectively define the availability of affordable and appropriate financial products and services for individuals and enterprises of all sizes (World Bank, 2024). Access refers to both the presence and affordability of financial services, usage involves the consistent and meaningful engagement with these services, and quality ensures that financial offerings meet the diverse needs of users (Hasan, Dowla, and Tarannum, 2024). Together, these components contribute to financial stability and inclusive economic growth, particularly within the agricultural sector, where smallholder farmers represent a significant portion of the workforce in developing economies. In smallholder agriculture, financial exclusion is influenced by infrastructure gaps, limited access to agricultural credit, and systemic risks such as climate change and price volatility (Chimanga and Kawimbe, 2024). Gender disparities, low education, and financial illiteracy further restrict access (Matsvai, 2024). Overcoming these challenges requires targeted interventions, including enhanced financial education, expanded rural banking, and innovative financial solutions specifically designed for farmers.

Although financial inclusion has no universal definition, it is expedient to explore the different meanings of FI in the literature to arrive at a consensus in conceptualising the multidimensional framework for the FI of rural smallholder farmers (Ogunmefun and Achike, 2015; Rapsomanikis, 2015; and Ayegba, 2013). Financial inclusion can in a simple term referred to the accessibility and usage of financial products and services by individuals, households and businesses, especially those who are underserved or excluded from the financial systems (Fin Access, 2022). Over the years, research on financial inclusion has gained significant attention due to its potential to alleviate poverty, promote economic development, and enhance overall well-being and it has been defined in a diverse ways. The multidimensional definition will continue to make financial inclusion undergo constant transformation with the advent of new advancements in financial sector. For instance, financial inclusion has been defined by Ozili (2020), as the provision of affordable and accessible financial services, including borrowing facilities, savings accounts, and adequate credit, to underserved and economically disadvantaged groups. Barajas *et al.* (2020), has also defined financial inclusion as the provision of accessible and affordable financial services and products to all segments of the population in a consistent manner. Additionally, Arowolo (2022) defined financial inclusion as the easy access to a wide range of financial services including having a bank account, savings, availability of credit, remittance, insurance, payments and mobile money, that meet people's economic needs at low cost. Furthermore, financial inclusion may also be referred to the provision of accessible and cost-effective financial products and services, such as transactions, payments, savings, credit, and insurance that cater to the needs of individuals, households, and enterprises. These services are given in a responsible and sustainable manner. Having access to a transaction account is an initial step towards achieving greater financial inclusion, as it enables individuals to securely save money and engage in the transfer of funds. Overall, the history of financial inclusion showcases a trajectory from exclusive banking systems to more inclusive approaches driven by technological advancements, policy interventions, and the recognition of the economic and social benefits of providing access to financial services for all.

Nigeria's government policy strategy on financial inclusion for farming households is based on the National Financial Inclusion Strategy (NFIS), which aims to provide access to formal financial services for all adults, including farmers. According to (Ozilli, 2022), key initiatives and recommendations include improving rural infrastructure, promoting digital financial services, increasing financial literacy through agricultural extension services, and developing targeted financial products to address the specific needs of farming households. There is global shift towards cashless economies and the desire to expand digital finance prompted the Central Bank of Nigeria (CBN) to launch a financial policy for all categories of Nigeria’s population on October 25, 2021, to include digital finance through mobile phones for wider financial participation. This make it the second in the world to launch a digital currency after Bahamas (Ree, 2022). The motivations is to increase financial inclusion, facilitate remittance among households and to reduce financial informality and to ensure a system that is more inclusive of people who have been historically excluded from financial products and services (Akpan and Umaru, 2024).

Empirical Review

The factors that affect financial inclusion among rural households have been the subject of numerous empirical investigations. Adegboyega *et al*. (2023), looked at the determinants of financial inclusion among rural farming households in Akinyele Local Government, Oyo State, Nigeria. The study revealed factors that influence financial inclusion among farming households as having a bank account, access to credit facilities, cooperative association membership, sex, household income, access to agricultural training, and scale of farm production. Dzugwahi and Idris (2025) investigated the key determinants of financial inclusion in Nigeria focusing on macroeconomic policies, they found that bank branches and ATMs have a positive and significant relationship with financial inclusion. In contrast, inflation rate and interest do not show a significant impact. The results provide insight into the role of macroeconomic and infrastructural factors in enhancing financial accessibility, which can inform policy interventions to improve financial inclusion across the country.

Adegbite and Olayemi (2023) in a study on the determinants of financial inclusion in sub-Saharan Africa, evidence revealed that increasing the number of bank accounts and expanding digital financial services significantly enhance financial accessibility, particularly in rural and underserved areas. Their findings highlighted the transformative potential of leveraging financial technology (fintech) to overcome traditional barriers to financial inclusion. In another study by Safiyanu and Yusuf (2022) on socioeconomic determinants of financial inclusion in Niger State, Nigeria. The empirical findings revealed that income, phone availability, social security, literacy, education, and gender are the major positive drivers of financial inclusion, whereas age has a negative impact. In a similarly study by Eze and Markjackson (2020), they found rural deposits to loans, domestic credit, and the lending interest rate as the factors significantly influencing financial inclusion in Nigeria. Also, Seluhinga (2023) in a study on factors influencing smallholder farmer’s access to formal financial services, revealed that socioeconomic factors such as age, income, education, occupation and distance to formal financial institutions as the main factors affecting the access and use of formal financial services ($p<0.05$) among smallholder farmers. Additionally, Ozili (2025) used two stage least squares regression model to revealed the determinants of financial inclusion in Nigeria as the central bank monetary policy rate, the savings deposit rate, and the loan to deposit ratio of banks as the significant determinants of financial inclusion in Nigeria. He further showed that increase in the central bank interest rate decreases the level of financial inclusion, increase in the savings deposit rate increases the level of financial inclusion, and increase in the loan-to-deposit ratio decreases the level of financial inclusion. Furthermore, in six Nigerian geographical zones, Ayopo *et al* (2020) adopted logistic regression and obtained mobile phone transactions, employment, literacy education, financial and access to a loan as the major factors influencing financial inclusion.

Abdulmumin (2021) examined the determinants of financial inclusion in Nigeria using probit estimation technique on three models. The study established that financial inclusion is influenced by gender, age, literacy, income, employment status and documentation as well as that of country-level variables such as information technology, automated teller machine and business freedom in Nigeria. On the other end, documentation, rural and gross domestic product per capita are all negatively related to financial inclusion in Nigeria. Kpaama and Benson (2024) revealed that only farming experience and household income influences financial inclusion among smallholder farmers in Rivers state, Nigeria. In a comparative study by Obiora and Ozili (2024) on financial inclusion in Nigeria, sub-Saharan Africa and the world, using constructed index of financial inclusion and found that financial institution account ownership, formal borrowing, informal borrowing and debit or card ownership are the significant positive determinants of the financial inclusion index worldwide. In Adamawa state Nigeria, Nuru and Adamu (2024) studied determinants of financial inclusion among agricultural farmers and found that farmer’s income, literacy level and being a man significantly increase the chances of having access to the components of financial inclusion. Similarly, Aminu *et al*, (2025) studied the relationship between access to agricultural extension services and financial inclusion status of agricultural households in Nigeria. Findings revealed a significant and positive relationship between access to extension services, education level of household head, wealth status, location of residence and number of income generating activities in improving the financial inclusion status of Nigeria’s agricultural households.

Push and Pull Factors of Financial Inclusion

Push - pull factors are negative and positive determinants that affect financial inclusion among farming households in an emerging economy. For instance, push factors for financial inclusion among Nigerian farming households include vicious cycle of poverty, climate variability, low farm output, inadequate basic infrastructure, and limited access to credit and technology, all of which pushed rural farmers to seek alternative financial solutions for an enhance household wellbeing. Pull factors on the other hand are the attractive financial services and innovations, such as digital and mobile banking, low interest/borrowing rates, government initiatives, potential benefits from financial inclusion like enhanced welfare and socioeconomic variables, which draw farmers into the formal financial system.

Arowolo *et al*, (2022) in joint study of financial inclusion and livelihood revealed pull factors as having access to credit and owning a bank account, while those considered as push factors include; low level of education, female headed households, small farm sizes, marital status and household size. Also, Adegboyega *et al*, (2023) stated that religion, access to credit, cooperative membership, income, availability of credit facilities, training by extension agents, scale of production, and use of internet as the main factors that pulled-in rural farmers to becoming financially inclusive. While the push factors to financial inclusion are distance to financial institutions, low household income, high borrowing rates and non-membership into cooperative. The study measured financial inclusion using having bank account as the dependent variable. In another study from south-south region of Nigeria, Odum *et al*, (2023) described the pull factors of financial inclusion as education level, financial literacy, gender, age, marital status, household size and location. The push factors revealed are distance to banks, cost maintaining bank account, paper work (documentation), insufficient income and illiteracy. This corroborated with Fawowe (2020) who revealed the pull factors as having access to financial services, education, household size and gender. While the push factors are female headed households, high borrowing cost and unavailability of financial institutions.

Ugwu *et al*, (2024) in an access and usage study to financial services among farmers in Enugu state, Nigeria. Showed that pull factors in financial inclusion are farm size, farming experience, farm income, input cost and level of education of the farmers. While cost of financial services, low savings, dependency, trust and lack of access to financial services as the push factors. Furthermore, Kolawole (2025) in a gender perspective study on financial inclusion among farming households in southern Nigeria, revealed that the factors pulling households to becoming financially inclusive are participation into non-agricultural enterprises, male headed households and high income. The push factors are being female headed household and low income of household.

Financial Inclusion Gains, Lapses and the Way Forward for Nigerian Agriculture Sector

Despite Nigeria's rich natural resources and its historical reliance on agriculture for economic development through exports of agricultural cash crops like groundnuts, cocoa, and palm oil, as well as job creation, the sector's potential is still underutilized. Financial inclusion has continue to significantly stimulate these potentials by providing benefits to Nigerian farmers in a number of ways some of which include; boosting farm productivity through input purchase, income source diversification through financial capital provision, and market participation through access to credit, savings, and digital payment services. It also helps farming households to invest in better farm inputs and machinery, and integrate into the formal economy, which is crucial for sustainable development, poverty reduction, and economic growth (Amaka *et al*., 2024). Financial inclusion had on the other hand suffered lapses that limits its full utilization by rural farmers. For instance, rural farming households often find it difficult to access financial institutions and services, as most of these are located in the urban and semi urban areas. Similarly, the need for collaterals which many farmers lack is also an important challenge that limits financial inclusion among Nigerian farming households. Additionally, decline by some financial institutions to finance agriculture due to perceived high risk factors, citing issues like climate variability and market instability (Ayanda and Ogunsekan, 2022; Amaka *et al*., 2024 and Fawowe, 2020). The way forward for financial inclusion in Nigeria involves using digital financial channels, building a more supportive financial regulatory environment, and executing tailored interventions to address specific excluded groups such as women and rural populations. Key strategies to include increasing financial and digital literacy in agricultural extension sessions, fortifying agent banking networks, encouraging collaboration between the state and private financial actors, and boosting access through farmer friendly-centric financial product creation (Adegbite and Machethe, 2020).

CONCLUSION AND RECOMMENDATIONS

Based on the review, it was concluded that financial inclusion is a concept with diverse influencing variables that holds immense potential for rural economic development. Concerted efforts to focus on all the factors that influence financial inclusion should be intensified to harness potential for achieving sustainable rural financing. Furthermore, it is recommended that to promote sustainable financial inclusion in agriculture, targeted interventions are needed from governments, private actors, financial institutions, and development partners. These interventions should include financial literacy education, farmer-centric financial products, farmer's capacity-building programs, and investments in rural infrastructure.

REFERENCES

Abdulmumin. B., A. (2021). Determinants of Financial Inclusion in Nigeria: A Probit Estimation Technique Approach. *Al-Hikma Management Review Journal.* Vol (6), No (2). https://www.alhikmah.edu.ng/amr/index.php/amr/article/view/56.

Adegbite, O., O. and Machethe, C., L. (2020). Bridging the financial inclusion gender gap in smallholder agriculture in Nigeria: An untapped potential for sustainable development. *World Developmen*t 127: 104755. https://doi.org/10.1016/j.worlddev.2019.104755

Adegbite, A., and Olayemi, T. (2023). Determinants of Financial Inclusion in Sub-Saharan Africa. African economic Review, 15(2), 45-60.

Adegboyega, O., M., Idowu, J., F. and Omobowale, A., O. (2023). Determinants of Financial Inclusion among Rural Farming Households in Akinyele Local Government, Oyo State, Nigeria. Volume 8, Issue 9, September – 2023 International Journal of Innovative Science and Research Technology ISSN No: 2456-2165.

Akpan, U., and Umaru, A. (2024). Can the e-Naira Foster Financial Inclusion in Nigeria? Evidence from Structural Equation Model. Research Square, DOI: https://doi.org/10.21203/rs.3.rs-3861545/v1.

Amaka, C. S., Innocent, E, A., and Aloysius, O., C. (2024). Effect of financial inclusion on market participation of rice farmer's cooperative members in Anambra State, Nigeria. *International Journal of Life Science Research Archive*, 2024, 06(01). Pp 096–107.

Aminu, R., Oyawole, F., Arowolo, A., and Ibrahim, S. (2025). Relationship between Access to Agricultural Extension Services and Financial Inclusion Status of Agricultural Households in Nigeria. *Journal of Agricultural Extension*, *29*(3), 163–173. Retrieved from https://journal.aesonnigeria.org/index.php/jae/article/view/5483.

Arowolo, A. O., Ibrahim, S. B., Aminu, R. O., Olanrewaju A. E., Ashimiu, S. M. and Kadiri, O. J. (2022). Effect of Financial Inclusion on Livelihood Diversification among Smallholder Farming Households in Oyo State, Nigeria. Nigerian Agricultural Journal Vol. 53, No. 1 Pg. 67-75; *ISSN: 0300-368X.*

Ayanda, I., F. and Ogunsekan, O. (2022). Farmers' Perception of Repayment of Loans Obtained from Bank of Agriculture, Ogun State, Nigeria. *Journal of Agricultural Science.* 3(2) 21-27

Ayegba, O. (2013). An Impact Assessment of Agricultural Credit on Rural Farmers in Nigeria. *Research Journal of Finance and Accounting*, 4(18):80-89.Bahegot, W., (1873). Lombard Street: A Description of the Money Market, London, Henry S. King.

Ayopo, B. A., Isola, L. A., Okafo, T. C., Akhannolu, I. A., Achugamonu, B. Z., and Osuma, G. (2020). Financial Inclusion among Low-income Groups in Nigeria, Trigger and Barriers. Academy of Entrepreneurship Journal, 26(2s), 240-250.

Barajas, A., Beck, T., Belhaj, M., and Naceur, S. B. (2020). Financial Inclusion: what Have we Learned so far? What Do We Have to Learn? IMF Working Papers, 2020(157).

Barik, R., and Lenka, S. K. (2023). Demand-Side and Supply-Side Determinants of Financial Inclusion in Indian States: Evidence from Post-Liberalization Period. Emerging Economy Studies, 8(1), 7-25.

Beck, T., Demirguc- Kunt A. and Levine R. E. (2007). Finance, Inequality and the Poor. *Journal of Economic Growth,* 12(1): 27-49.

Chimanga, K., and Kawimbe, S. (2024). Analyzing the Impact of Mobile Banking on Commercial Banks' Financial Performance: A Case of FNB Bank-Zambia. Saudi Journal of Economics and Finance 8(1): DOI:10.36348/sjef.2024.v08i01.001, 1-8.

David, O. O., Oluseyi, A. S., and Emmanuel, A. (2018). Empirical Analysis of the Determinants of Financial Inclusion in Nigeria: 1990-2016. *Journal of Finance and Economics*, *6*(1), 19-25.

Demirgüç-Kunt, A., Klapper, L., Singer, D., and Ansar, S. (2022). The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19. World Bank Publications.

Dzugwagi, H and Idris, A. (2025). Determinants of Financial Inclusion in Nigeria: An Empirical Analysis. DOI https://doi.org/10.56201/jbae.v11.no1.2025.pg29.40. E-ISSN 2545- 5281, P-ISSN 2695-2238. *Journal of Business and African Economy.* Vol 11. No. 1 2025 www.iiardjournals.org Online Version.

EFInA (2023). Access to Financial Services in Nigeria (A2F). 2023 Financial Survey Report. Unlocking Insight to Accelerate Financial and Economic Inclusion. Retrieved from https://a2f.ng/access-to-financial-services-in-nigeria-a2f2023-survey-report/

Ene, E. E., Abba, G. O., and Fatokun, G. F. (2019). The Impact of Electronic Banking on Financial Inclusion in Nigeria. *American Journal of Industrial and Business Management*, *9*(6), 1409-1422.

Eze, G. P. and Markjackson, D. (2020). Determinants of Financial Inclusion in Nigeria. Journal of Economics and Finance, 11(1), 14-22. https://doi.org/10.9790/5933:11010414 22.

Fahmy, M., and Ghoneim, H. (2023). Financial Inclusion Demand-side Determinants: Analysis from Egypt. Management and Sustainability: An Arab Review, 2(3), 255-284.

Fernández-Olit, B., Martín Martín, J. M., and Porras González, E. (2020). Systematized Literature Review on Financial Inclusion and Exclusion in Developed Countries. *International Journal of Bank Marketing*, 38(3), 600-626.

FinAccess (2022). FinAccess Household Survey. Central Bank of Kenya Financial Inclusion Statistics Conference. 8th – 11th November, 2022. https://finaccess.knbs.or.ke

Fowowe, B. (2020). The Effects of Financial Inclusion on Agricultural Productivity in Nigeria. *Journal of Economics and Development*, 22(1): 61-79. doi:10.1108/JED-11-2019-0059.

Gebrehiwot, K. G., and Makina, D. (2019). Macroeconomic Determinants of Financial Inclusion: Evidence Using Dynamic Panel Data Analysis. In *Extending Financial Inclusion in Africa* (pp. 167-191). Academic Press.

Giday, H. G. (2023). Financial inclusion and its demand-side determinants: Evidence from Ethiopia. *Cogent Economics and Finance*, *11*(1), 2186031.

Hasan, A., Dowla, A. U., and Tarannum, R. (2024). Financial Inclusion and Economic Growth in Developing Nations: A Case study of Bangladesh. MPRA Paper No. 120213, https://mpra.ub.uni-muenchen.de/120213/.

Kolawole. R., J. (2025). Financial Inclusion, Non-agricultural Enterprises' Participation and Poverty among Rural Farming Households in Southern Nigeria: A Gender Perspective. *African Journal Online (AJOL)*. *Agricultural Economics and Extension Research Studies*. Vol. 12 No. 2 (2024).

Kpaama, R., B. and Benson, D., N. (2024). Assessment of Socio-economic Factors Influencing Financial Inclusion among Small Holder Cassava Farmers in Rivers State, Nigeria. *Journal of Agriculture and Food Sciences*. Vol 8(3) 9-16, 2024 © Faculty of Agriculture, Akwa Ibom State University, Nigeria. ISSN: 2651-5679 (Print).

Mariam, N, Syed F.I and Ambreen, F. (2020). Formal Financial Penetration and Households' Welfare in Pakistan. *International Journal of Financial Engineering* Vol. 7, No. 4 (2020) 2050041 (21 pages) © World Scientific Publishing Company DOI: 10.1142/S24247863205004132050041-1

Markose, S., Arun, T., and Ozili, P. (2022). Financial Inclusion, at What Cost? Quantification of Economic Viability of a Supply Side Roll Out. *The European Journal of Finance*, *28*(1), 3-29.

Matsebula, V., and Sheefeni, J. (2022). Financial Inclusion and Macroeconomic Stability in South Africa. *International Journal of Economics and Financial Issues*, 12(4), 56.

Matsvai, S. (2024). Determinants of Microfinance Demand (Evidence from Chiredzi Smallholder Resettled Sugarcane Farmers in Zimbabwe). *Sustainability*, 16(22), 9752; https://doi.org/10.3390/su16229752.

Nuru, M., A. and Adamu, B. (2024). Determinants of Financial Inclusion among Agricultural Farmers in Adamawa State, Nigeria. IIARD *International Journal of Economics and Business Management.* E-ISSN 2489-0065 P-ISSN 2695-186X Vol 10. No. 1 2024 www.iiardjournals.org DOI 10.56201/ijebm.v10.no1.2024. pg 212-226.

Nwanne, T.F.I. (2015). Relationship between Financial Inclusion and Economic Growth among Nigerian Rural Dwellers. *International Journal of Small Business and Entrepreneurship Research***,** 3(7):17-27.

Obiora, K. I., and Ozili, P. K. (2024). Comparative Analysis of Financial Inclusion in Nigeria, Sub-Saharan Africa, and the World. *Perspectives on Global Development and Technology*, 22(3- 4), 217-238. Available at: https://doi.org/ 10.1163/15691497-12341659.

Odum, F.N., Okoh, R.N. and Achoja, F.O. (2023). Financial Inclusion and its Determinants among Agro-Entrepreneurs in South-South States, Nigeria. *Journal of Agriculture and Food Environment.* Faculty of Agriculture Delta State University Abraka, Nigeria. Volume 10(3): 1-10, 2023.

Ogunmefun S.O. and Achike, A.I. (2015). Socioeconomic Characteristics of Rural Farmers and Problems Associated with the use of Informal Insurance Measures in Odogbolu Local Government Area, Ogun state, Nigeria. *Russian Journal of Agricultural and Socio-Economic Sciences*. ISSN 2226-1184 (Online) *RJOAS,* 2(38):3-14.

Ozili, P. K. (2021b). Financial Inclusion Research around the World: A review. *Forum for social economics.* 50(4), 457-479.

Ozili, P. K. (2022). Central Bank Digital Currency Research around the World; A Review of Literature, Journal of Money Laundering Control, 1368-5201.

Ozili, P. K. (2025). Determinants of Financial Inclusion in Nigeria: The Monetary Policy and Banking Sector Factors. In From Digital Disruption to Dominance, pp. 163-186. Emerald Publishing Limited.

Ozili, P., K, (2020). Financial Inclusion in Nigeria: Determinants, Challenges and Achievements, MPRA Paper 99173, *University Library of Munich, Germany*.

Ozili, P.K. (2021a). Financial Inclusion in Nigeria: Determinants, Challenges, and Achievements. Özen, E., Grima, S. and Gonzi, R.D. (Ed.) New Challenges for Future Sustainability and Wellbeing (Emerald Studies in Finance, Insurance, and Risk Management). *Emerald Publishing Limited, Leeds,* pp. 377-395.

Ozili, P.K. (2024). Vulnerable Group Theory of Financial Inclusion. Perspectives on Global Development and Technology, 22, 5-6, 396–414.

Prabhakar, R. (2019). Financial inclusion: A Tale of Two Literatures. *Social Policy and Society*, 18(1), 37-50.

Rapsomanikis, G. (2015). The Economic Lives of Smallholder Farmers: an Analysis Based on Household Data from Nine Countries, Food and Agriculture Organisation (FAO) of the United Nations, Rome.

Ree, J. (2023). Nigeria's e-Naira, One Year after. IMF Working Paper No. 2023/104, Available at SSRN: http://dx.doi.org/10.5089/9798400242113.001.

Safiyanu, U. Y., and Yusuf, S. G. (2022). Socio-economic Determinants of Financial Inclusion in Niger State, Nigeria. *Fuoye Journal of Finance and Contemporary Issues*, 3(1), 159-170.

Seluhinga, N., S. (2023). Factors Influencing Smallholder Farmers' Access to Formal Financial Services in Morogoro Region, Tanzania. *Tanzania Journal of Agricultural Sciences* (2023) Vol. 22 No. 2, 434-443.

Ugwu, A., Igweh, A., Odoh, J., Ezeaku, G. (2024). Access and Usage of Formal Financial Services among Small-scale Cassava Farmers for Productivity in Enugu state, Nigeria. Tarım Ekonomisi Dergisi, 30(2), 183-196. https://doi.org/10.24181/tarekoder.1559359

Welfare in Pakistan. *International Journal of Financial Engineering,* 7(4): Pp 1-20.

World Bank. (2024, March 15). Agriculture and Food. Retrieved from The World Bank: https://www.worldbank.org/en/topic/agriculture/overview.