

Determinants of AKILIMO Adoption: A Comparative Study of Cassava Farmers in Nigeria and Ghana.

Olufunke Comfort Olatunji¹, Oluwatosin Oluwasegun Fasina², Omowunmi Veronica Ayodele², Abimbola Theresa Fanu.

Federal University Oye, Nigeria¹, Federal University of Technology Akure, Nigeria², International Institute of Tropical Agriculture³; **Corresponding email:** comfort.olatunji@fuoye.edu.ng

Abstract

This study was conducted to analyse the adoption of IITA AKILIMO tools by cassava farmers in Nigeria and Ghana. 3 states were selected in Nigeria, while 3 regions were selected in Ghana. A total of 500 respondents were finally chosen from the sample frame. Chi-square, ANOVA were used for analysis. The objective of the study is to ascertain the socioeconomic characteristics of respondents in the study area and examine the adoption of IITA AKILIMO tools in the study area. Respondents were between the ages of 31-40 years in Nigeria, while 41-50 years in Ghana. In Nigeria, 78.5% of respondents were married, while 82.4% were married in Ghana. With an average educational status of 31.5% in Nigeria, who are University graduates, while 25.2% in Ghana who finished from a polytechnic. Male cassava farmers had high adoption, while female farmers had high adoption in Ghana. Hypothesis testing revealed that there's a significant relationship between the Sex ($X^2=0.30$, $p<0.00$), marital status ($X^2=9.89$, $p<0.00$), educational level ($X^2=16.56$, $p<0.00$), and adoption of AKILIMO software in the study area. It was concluded that women adopt IITA AKILIMO tools in Ghana more than in Nigeria. It was recommended that to increase the adoption of AKILIMO tools among genders, especially women, it is important to address the constraints identified in the study by providing training and support for farmers, especially women. This will help overcome these barriers and enhance the adoption of the tools.

Keywords: Technology, Innovation, Gender, AKILIMO, Adoption.

Introduction: Technology in agriculture, also known as AgTech, has rapidly changed the industry in recent years. Technologies are helping farmers improve efficiency and maximize yield (Matthew et al, 2020). Some major technologies that are commonly utilized by farms include: harvest automation, autonomous tractors, seeding and weeding, and drones. Recent trends have proven that technology is revolutionizing the world of livestock management, which runs the business of poultry farms, dairy farms, cattle ranches, or other livestock-related agribusinesses (Taylor & Linly., 2023) Livestock provides much needed renewable, natural resources that we need daily. The emerging technologies can literally transform the agricultural landscape in the years to come. Emerging technologies ranging from robotics to machine language have completely transformed modern agriculture, both on a small scale and large scale (Mohd, et al.2022); Nyong, &Nweze, (2012) Agricultural innovation is the process whereby individuals or organizations bring existing or new products, processes, and forms of organization into social and economic use to increase effectiveness, competitiveness, resilience to shocks, or environmental

sustainability, thereby contributing to food and nutritional security, economic development, and sustainable natural resource management (FAO, 2016). Innovation is not only driven by technological advances, but also through novel ways of organizing farmers and connecting them to the information they need. By introducing these game-changing technologies, new ways to grow and deliver food to the masses can be explored. Digital technologies have significantly altered the nature and way of communication and interaction with our environment (Zhang, J. (2023). Unique technological innovations and personal devices, like personal computers, mobile phones, self-driving cars, advanced television units, drones, wearable devices, smartphones as well as smart watches have changed the way societies obtain, use and transfer information. These technological novelties affect every industry, therefore many operations for agricultural production and services are being executed independently in recent times (Büyüközkan and Göçer, 2018); Nyong, &Nweze, (2012) . However, the ultimate goal of generating technology is not only just adoption but somewhat much wider and broader. Technology acts as a key vector for change in a variety of

Determinants of AKILIMO Adoption: A Comparative Study of Cassava Farmers in Nigeria and Ghana.

disciplines (Ugochukwu and Phillips, 2018). For example, introduction of a new high-yielding paddy variety will have an ultimate goal of increased paddy production or productivity in the country. This can only be achieved by promoting the adoption of the specific technology, which will lead to achieving the ultimate goal. Rather than mere adoption, it will require continuation of usage and spread of information among a larger community to make a visible impact on the community. Thus, the rate of adoption as well as the rate of diffusion will determine the ultimate impact of the technology generated. Vast amount of research has been conducted over time to study the adoption process as well as the diffusion process linked with the type of factors affecting the adoption as well as the rejection of a technology by the end users. Though technological development in agriculture is believed to be a very important path to eliminate poverty by many, and considered as a priority, most developing countries still struggle with low rates of adoption of the introduced novel or improved technologies. Nevertheless, adoption of novel technologies lies as a pivotal necessity in developing the agriculture sector, (Nyong & Bassey 2019).

Much emphasis is given to facilitate and ensure adoption of technologies. The technological inventions in agricultural sector coupled with adoption have driven agriculture towards its development. Each day, the population is growing which increases the demand for food. This further aggravates the requirement of new improved technologies in the agricultural sector. Thus, technology adoption is emphasized at high levels (Ruzzante et al., 2021). Many smallholder farmers around the world still farm the same way their ancestors did thousand years ago (Dixon et al., 2023). Traditional farming approaches may continue to work for some, but new practices can help many to substantially improve yields, soil quality and natural capital increase as well as food and nutrition security. Sometimes innovations to address these issues are taken to farms via extension activities. Farmers themselves can be organized in innovative ways so they are reached more easily and effectively with information (Tamako, 2022); Nyong, & Nweze, (2012). Advances in technology and farming practices have helped farmer become much more productive, growing crop efficiently in areas most suitable for agricultural production. Farmers today are faced with a changing climate, which demands seeds that can cope with increased incidents of drought, heat waves, floods and elevated salinity levels. Innovation is not restricted to the methods employed in running the sector but cut across the practices and goes down to the distribution of produce. This covers but not limited to; adaptation to changing tech trends, using tech products to ease farm work, such as farm management information systems, big data, high-roofed greenhouses, use of drones, GPS, sensors and several others Nyong, & Nweze, (2012); (Tamako, 2022). Some effects of technology on farming are evidence of adopting the use of artificial intelligence to analyze farm growth, nutrients, and deficiency in crops. GPS for tracking purposes and other Agro-digital applications for various uses, all of which enhance farmer's productivity and enables to deliver maximum value to farmers members. Cassava is among the six commodities defined by the African Head of States as a

strategic crop for the continents, given its significant contribution to the livelihoods of African farmers and its potential for transforming African economy. Despite the efforts of IITA to improve cassava production in Nigeria and Ghana, there exists a significant gap in understanding and addressing gender dynamics in the adoption of these technologies. The International Institute of Tropical Agriculture (IITA) has developed digital agronomy tools aimed at improving cassava production, yet there is a gap in understanding rate of adoption and impact of these technologies in the two countries (African Cassava Agronomy Initiative, 2020). The objective of this study is to determine the adoption of the AKILIMO tool among cassava farmers in Nigeria and Ghana. ascertain the socioeconomic characteristics of respondents in the study area; and determine the adoption rate of AKILIMO tools in the study area. **Hypothesis of the Study:** Hypothesis 1: There's no significant relationship between the socioeconomic characteristics of the respondents in the adoption of AKILIMO Tools in the study area

Study Area: The study was carried out in Nigeria and Ghana. The population of the study consists of cassava farmers who have been trained in the usage of AKILIMO IITA tools in Nigeria and Ghana respectively. A total of 500 cassava farmers were selected from Nigeria (300) and Ghana (200) using a stratified random sampling technique. Data was collected using a structured questionnaire and interview schedule. The questionnaire was administered to the selected farmers in face-to-face interviews. Secondary data was gotten from journals, proceedings of conferences, textbooks and information from IITA. The collected data was analyzed using SPSS software. Descriptive statistics such as frequency and percentages were used to describe the sample characteristics. Chi-square were used to determine the relationship between the socioeconomic characteristics of the respondents and the adoption of AKILIMO tools. Logistic regression was used to determine the significant predictors of adoption. Independent Variables are the socioeconomic characteristics of the respondents, including age, sex, marital status and educational status. Dependent Variables are the Adoption of AKILIMO tools was measured by assessing whether farmers had adopted AKILIMO tools and how long they had been using them. The study was limited to the experiences of cassava farmers in Nigeria and Ghana, and may not be generalized to other regions or countries. Additionally, self-reported data is susceptible to social desirability bias.

Results and Discussion: Socioeconomic Characteristics of the Respondents The study shows that In Nigeria, the gender distribution of respondents was skewed towards male participation, with 60.30% of the participants being male and 39.70% being female. In Ghana, on the other hand, female respondents constituted 54.50% of the sample, with male participants accounting for 45.50%. Studies have found that gender is an important factor in the adoption of agricultural technologies, with women often facing greater barriers to access and use of these technologies (Nyong & Bassey 2019); (Baffour et al., 2021). Firstly, the age distribution of farmers shows that the majority of farmers in both countries are in the 31-50 age group, with a mean of 41 years in

Determinants of AKILIMO Adoption: A Comparative Study of Cassava Farmers in Nigeria and Ghana.

Nigeria and 42 years in Ghana. Osei et al. (2023), found that the average age of cassava farmers in Ghana and Nigeria is in the 40s. Which could be due to a range of factors, such as the physical demands of farming or the need for experience and knowledge of the industry. The result shows that a large majority of farmers in both countries (78.2% in Nigeria and 66.8% in Ghana) are married. This suggests that farming is often carried out as a household activity, with spouses potentially collaborating on farming tasks or sharing responsibilities. However, the proportion of single farmers is higher in Ghana (20.5%) than in Nigeria (13.9%), which may indicate cultural or societal differences between the two countries. The relatively high proportion of unmarried and divorced farmers in Ghana may indicate that these farmers have fewer family obligations and are therefore more able to focus on their farms and adopt new technologies. A study by Mensah et al. (2021) found that married farmers in Ghana were less likely to adopt new technologies than unmarried farmers. The lower proportion of unmarried and divorced farmers in Nigeria suggests that family obligations may play a greater role in the adoption of new technologies.

Education is a key predictor of technology adoption among farmers, with higher levels of education associated with greater willingness to adopt new technologies (Abugre et al., 2020). In Ghana, a significant proportion (41.6%) of farmers have completed the West African Senior School Certificate Examination (WAEC), which is equivalent to a secondary school education in Nigeria. This suggests that many farmers in Ghana have completed secondary education, which may provide them with basic numeracy and literacy skills that could be useful in farming.

Country Comparative of Adoption Category (Nigeria & Ghana) The chart presents the adoption of AKILIMO tools among cassava farmers in Ghana and Nigeria, comparing the overall adoption rates for each country. The findings indicate that Ghana had a higher adoption rate at 95.2% compared to Nigeria at 78.9%. This suggests that the factors influencing adoption are more favorable in Ghana, and that Nigeria may need to adopt targeted interventions to increase the uptake of AKILIMO tools among its farmers.

Factors Influencing Decision to Adopt Akilimo Tools (Nigeria) Trust and reliability of the tools are the most important factor both in Nigeria (92.6%) and Ghana (90.7%), with over 90% of respondents agreeing that they would adopt tools if they believed they were trustworthy and reliable. This underscores the importance of building trust and credibility with farmers. However, the table shows that more farmers in Ghana agreed with the various factors influencing their decision to adopt AKILIMO tools, compared to farmers in Nigeria. Due to reasons like Ghanaian farmers having more access to effective training and support systems, which could have made them more confident in adopting the tools. This has led to a high level of trust and support (Nyong & Bassey 2019).

Increasing rate of adoption of AKILIMO Tools among farmers : The increasing rate of adoption among Cassava farmers refers to the trend of more and more farmers adopting AKILIMO in a given period of time. The result

shows that there is an increasing rate of adoption of AKILIMO tools among farmers in Ghana (92.1%) to Nigeria (80.3%). This implies that Ghana had a stronger farming culture or more open attitudes towards new technologies, which could lead to higher adoption rates. With the help of IITA and the Ministry of Agriculture, Ghana has more effective training programs and support systems for farmers, which could increase their confidence and willingness to adopt AKILIMO, (Nyong & Bassey 2019).

Speed of Adoption of Akilimo Tools (Ghana): The tables below show that the majority of farmers (71.1%) adopted AKILIMO within a month of becoming aware of it, while only a small percentage adopted it within the first week (11.6%). This indicates that most farmers take some time to consider and evaluate a new technology before deciding to adopt it. The fact that over 75% of farmers adopted AKILIMO within a month suggests that it is a highly desirable tool that meets the needs and requirements of most farmers.

Speed of Adoption of Akilimo Tools (Nigeria): This table shows that the majority of farmers in Nigeria adopted AKILIMO within the first week (52.5%). This high rate of adoption within a short time frame indicates that farmers in Nigeria were eager to try out AKILIMO and may have found the initial information and training to be compelling and persuasive. However, it is notable that a small percentage of farmers (3.4%) adopted the tool more than a year after being introduced to it, suggesting that some farmers may have required more time or additional exposure to the technology before deciding to adopt.,(Nyong & Bassey 2019).

Hypothesis: there's no significant relationship between the socioeconomic characteristics of the respondents in adoption of AKILIMO Tools in the study area.

Relationship between Socioeconomic Characteristics of the respondents in the Adoption of AKILIMO tools: The p-value of 0.00 for each variable means that they are statistically significant at the significance level of 0.05. The country is a significant factor, suggesting that there is a difference in the adoption category between Nigeria and Ghana. Sex is also a significant factor, meaning that there is a difference in adoption category between male and female respondents. Also, marital status is also a significant factor, indicating that different categories of marital status (i.e., single, married, divorced, widowed, or separated) are related to the adoption category of AKILIMO tools. Finally, educational level is also a significant factor, implying that the level of education of respondents influences their likelihood of adopting AKILIMO tools. Overall, these results show that these factors have an impact on whether or not farmers adopt and use the AKILIMO tools, which could have important implications for the development and implementation of agricultural technologies.

Conclusion: Results revealed significant differences in the adoption of AKILIMO tools in both countries. The findings of this study provide valuable insights into the factors influencing the adoption of AKILIMO tools among cassava farmers in Nigeria and Ghana. The high adoption rate of

AKILIMO tools in Ghana, with a 95.2% overall adoption rate compared to Nigeria's 78.9%, suggests that specific strategies and programs should be developed to address the unique challenges faced by Nigerian farmers in adopting the tool.

The observed difference in increasing adoption rates between the two countries is also noteworthy, with Ghana exhibiting a much higher increasing rate of adoption at 86.2% compared to Nigeria's 11.4%. These results highlight the importance of targeted interventions in Nigeria, particularly in promoting trust, reliability, and social networks, to ensure that farmers have the support and knowledge they need to adopt AKILIMO tools. Moreover, the majority of farmers (75.3%) adopted AKILIMO tools within a month of becoming aware of the technology, while 52.5% reported adopting AKILIMO within the first week of training. These findings suggest that the initial introduction and communication of the tool were well-received by farmers, leading to quick adoption within a relatively short period. This highlights the importance of effective dissemination and training programs in increasing the uptake of agricultural technologies. The high rates of adoption within the first month suggest that farmers are eager to try out new technologies, provided that they perceive them to be beneficial and are given adequate support.

Recommendations: Based on the conclusions drawn from the study, the following recommendations can be proposed: **Targeted interventions:** Governments, NGOs, and private organizations should develop targeted interventions and support systems that address the unique needs and challenges of farmers in different regions and countries. These interventions could include training programs, extension services, and access to financing. **Trust and reliability:** Efforts should be made to build trust and reliability in the tools and services offered to farmers. This could include the use of demonstration trials, success stories, and feedback mechanisms to communicate the benefits of the tools. **Social networks:** Farmers should be encouraged to share information and experiences with one another, as social networks have been shown to be important factors in the adoption of agricultural technologies. This could be done through farmer field schools, community meetings, and other community-based activities. **Long-term impact:** Further research should focus on understanding the long-term impact of AKILIMO on farmer practices, agricultural productivity, and sustainability. This information can help refine and improve the tool to better meet the needs of farmers in different contexts.

References

African Cassava Agronomy Initiative. (2020). New agronomic advice tool Akilimo is showing high returns for cassava farmers. African Plant Nutrition Institute. Retrieved June 8, 2024, from <https://www.apni.net/>.

Baffour-Ata, F., Antwi-Agyei, P., Nkiaka, E., Dougill, A.J., Anning, A.K. & Kwakye, S.O. (2022) Climate information services available to farming households in Northern Region, Ghana. *Weather, Climate, and Society*, 14(2), 467–480.

Büyüközkan, G., & Göçer, F. (2018). Digital supply chain: Literature review and a proposed framework for future research. *Computers in Industry*, 97, 157–177. doi:<https://doi.org/10.1016/j.compind.2018.02.010>

FAO, (2016). Drone for agriculture; Available at <http://www.fao.org/policy-support/tools-and-publications/resources-details/en/c/1234537>.

Joachim Betz, Wolfgang Hein (2023) Globalization and Technological Development: Production, Transport and Communication. June 2023 DOI:10.1007/978-3-658-41717-8_2(pp.21-42).

John Dixon, Lingling Li, Tilahun Amede (2023) A century of farming systems. Part 1: Concepts and evolution. Alliance for a Green Revolution in Africa (AGRA), Nairobi, 00800, Kenya. Received 3 October 2023, Revised 12 October 2023, Accepted 13 October 2023, Available online 6 November 2023, Version of Record 6 November 2023.

Matthew N. O. Sadiku, Tolulope Joshua Ashaolu, Sarhan M. Musa (July 2020) Emerging technologies in agriculture. *International Journal Of Scientific Advances* 1(1) DOI:10.51542/ijscia.v1i1.6.

Mohd Javaid, Abid Haleem, Ravi Pratap Singh, Rajiv Suman (2022). Enhancing smart farming through the applications of Agriculture 4.0 technologies. *International Journal of Intelligent Network* Volume 3, 2022, Pages 150-164.

Nthabeleng Tamako, Joyce M, Thamaga-Chitja, Maxwell Mudhara (2022). agricultural knowledge networks and their implications on food accessibility for smallholder farmers.

ISSN 0378-5254 *Journal of Consumer Sciences*, Vol 50, 2022.

Nyong, E. E. & Nweze, N.J (2012) "Allocative Efficiency in Fish Production in Oil and Non-oil Producing areas of Akwa Ibom State, Nigeria". *International Journal of Agriculture and Food Science (IJAFS)* Vol. 2, No.1, pp.924-941.

Nyong, E. E. and Bassey, D.E. (2019). "Analysis of Adaptation of Climate Smart Agricultural (CSA) Practices of Yam Farmers Akwa State, Nigeria", (2018) *Journal Agriculture, Environmental Resources and Management*, Vol.1, No.2, pp.24-35.

Osei-Asibey, R., et al. (2023) Determination of Phytochemicals in *Thaumatococcus daniellii* (Sweet Prayer Leaves) and *Musa paradisiaca* (Plantain Leaves) as a Food Packaging Material. *International Journal of Technology and Management Research*, 8, 1-13. <https://doi.org/10.47127/ijtmr.v8i1.155>.

Sacha Ruzzante, Ricardo Labarta, Amy Bilton (2021) Adoption of agricultural technology in the developing world: A meta-analysis of the empirical literature. Accepted 30 May 2021, Available online 17 June 2021, Version of Record 17 June 2021.

Seth Opoku Mensah, Brent Jacobs, Rebecca Cunningham (2025) The role of intersectionality in shaping adaptive capacity of smallholder farmers in the Talensi district of Ghana. Received 27 Nov 2023, Accepted 07 Jan 2025, Published

online: 21 Jan 2025
<https://doi.org/10.1080/17565529.2025.2453569>.

Taylor Fay and Linly Ku (2023) The impact of livestock farming technology in Animal Agriculture. Published on july, 03, 2023.

Thomas, L. (2022, December 5). Simple Random Sampling | Definition, Steps & Examples. Scribbr. <https://www.scribbr.com/methodology/simple-random-sampling>

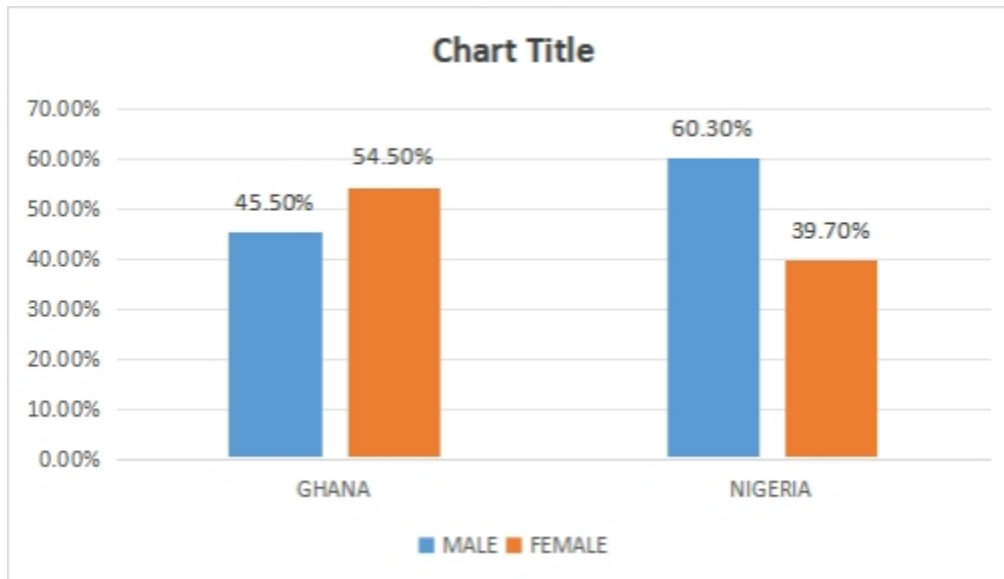
Xiufan Zhang and Decheng Fan (2023) Can agricultural digital transformation help farmers increase income? An

empirical study based on thousands of farmers in Hubei Province.

Zhang, J. (2023). The impact of new media on communication and engagement in the digital age. *Communications in Humanities Research*, 21, 184-190. <https://doi.org/10.54254/2753-7064/21/20231470>.

Zainab Asif, Zivanemoyo Chinzara, Radhika Lahiri (2023). The role of risk and institutions in the adoption and diffusion of technologies: Evidence from Sub-Saharan Africa. *Economic Analysis and Policy*. Volume 77, March 2023, Pages 16-33.

Figure 1: Sex distribution of respondents



Field survey, 2025

TABLE 1: SOCIOECONOMIC CHARACTERISTICS OF RESPONDENTS IN NIGERIA AND GHANA

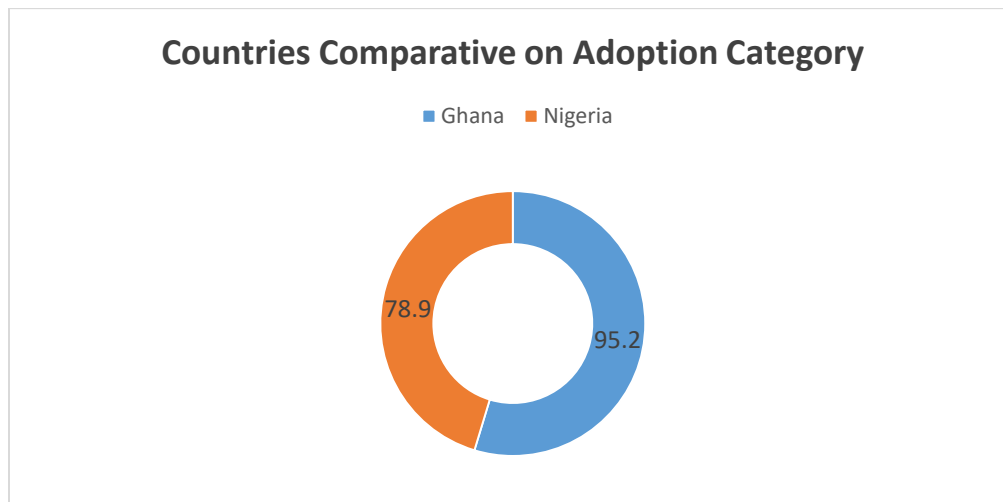
Nigeria (N=300)					Ghana (N=200)					
	Frequency		Percentage		Mean	Frequency		Percentage		Mean
Age (years)	Male n=181		Female n=119			Male n= 91		Female n=109		
	F	%	F	%		F	%	F	%	
≤ 30	25	13.8	20	16.8	45 years	12	13.2	10	9.2	45 years
31-40	70	38.6	43	36.1		26	28.6	35	32.1	
41-50	46	25.4	28	23.5		38	41.8	42	38.5	
51-60	28	15.5	19	16.0		12	13.2	21	19.3	
≥61	12	6.6	9	7.6		3	3.3	1	9	
Marital Status										
Single	29	16.0	8	6.7		19	20.9	21	19.3	
Married	142	78.5	98	82.4		69	75.8	66	60.6	
Widow	1	6.0	10	8.4		1	1.1	5	4.6	

Determinants of AKILIMO Adoption: A Comparative Study of Cassava Farmers in Nigeria and Ghana.

Divorced	4	2.2	1	0.8	1	1.1	11	10.1
Separated	5	2.8	2	1.7	1	1.1	6	55.5
Level of Education								
No formal education	0	0	5	4.2	6	6.6	19	17.4
Polytechnic/College of Education	49	27.1	30	25.2	13	14.3	16	14.7
Postgraduate study	11	6.1	4	4.2	5	5.5	2	1.8
Primary Leaving Certificate	8	4.4	18	15.1	7	7.7	31	28.4
University degree	57	31.5	24	20.2	19	20.9	0	0
WAEC	56	30.9	38	31.9	41	45.1	41	37.6

Source: Field Survey, 2025

Figure 2: Countries Comparison on the Adoption Category



Source: Field Survey, 2025

Table 2: FACTORS INFLUENCING DECISION TO ADOPT AKILIMO TOOLS (GHANA)

factors influencing the decision to adopt AKILIMO Tools	Agreed	Disagreed	Undecided	Mean
Trust and reliability of the tools	174 (92.6)	3 (1.6)	11 (5.9)	2.91
Cost of usage	166 (88.3)	14 (7.4)	8 (4.3)	2.84
Training and support for using	173 (92.0)	4 (2.1)	11 (5.9)	2.90
Social network	159 (85.9)	11 (5.9)	15 (8.1)	2.80
Educational status	162 (85.3)	12 (6.3)	13 (6.8)	2.80
Internet network	162 (85.7)	14 (7.4)	13 (6.9)	2.78
Cultural norms	148 (81.3)	17(9.3)	17(9.3)	2.72
Attitude and belief	155 (83.8)	14 (7.6)	16 (8.6)	2.76

Source: Field Survey, 2025

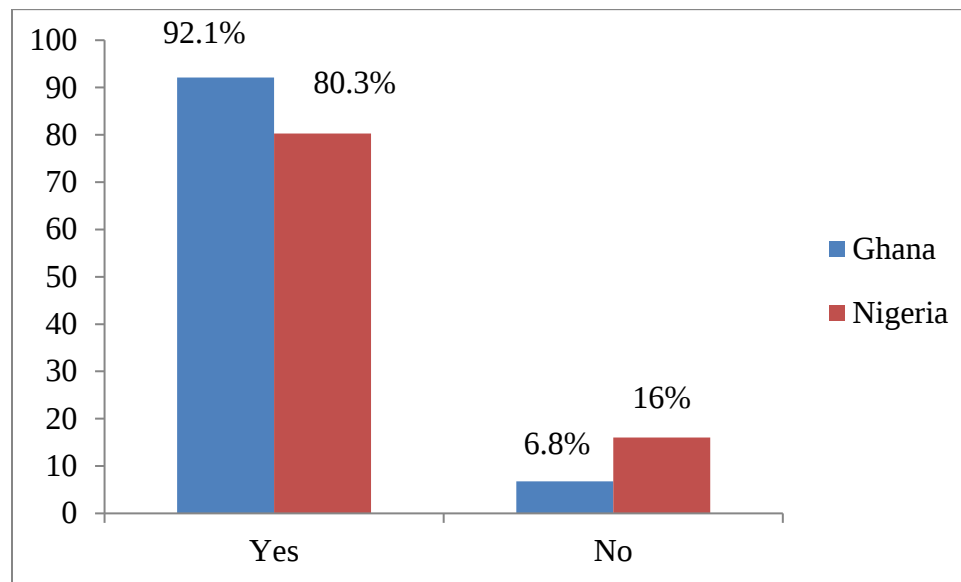
Table 3: FACTORS INFLUENCING DECISION TO ADOPT AKILIMO TOOLS (NIGERIA)

Determinants of AKILIMO Adoption: A Comparative Study of Cassava Farmers in Nigeria and Ghana.

What factors influence your decision to adopt AKILIMO Tools?	Agreed	Disagreed	Undecided	Mean
Trust and reliability of the tools	206 (90.7)	6 (2.6)	15 (6.6)	4.33
Cost of usage	192 (83.8)	14 (6.1)	23 (10.0)	4.17
Training and support for using	211 (91.3)	9 (3.8)	11 (4.6)	4.44
Social network	199 (88.4)	8 (3.6)	18 (8.0)	4.38
8Educational status	208 (87.4)	8 (3.4)	13 (5.5)	4.34
Internet network	203 (87.9)	13 (5.6)	15 (6.5)	4.31
Cultural norms	190 (83.0)	13 (5.7)	26 (11.4)	4.13
Attitude and belief	203 (88.6)	8 (3.5)	18 (7.9)	4.36

Source: Field Survey, 2025

Figure 3: Increasing rate of adoption of AKILIMO Tools among farmers



Source: Field Survey, 2025.

TABLE 4: SPEED OF ADOPTION OF AKILIMO TOOLS (GHANA)

Adoption of AKILIMO Tools	Within First week	Within First month	a	After a month	Year after training	2-3 years	Not adopt at all
Did you adopt AKILI MO Tools within the first week, month, or year of becoming aware of it?	22 (11.6)	26 (13.7)		135 (71.1)	4 (2.1)	0 (0.0)	2 (1.1)
Did you adopt AKILI MO Tools as soon as it became available to you, or did you wait for some time before adopting it?	20 (10.5)	19 (10.0)		143 (75.3)	2 (1.1)	0 (0.0)	3 (1.6)

Adoption of AKILIMO Tools	Within First week	First month	Within First month	a	After a month	a	Year after training	after	2 -3 years	Not adopt at all
Speed of Adoption of AKILI MO Tools	125 (52.5)		8 (4.6)		52 (21.8)		29 (12.2)		1 (3.4)	13 (5.5)

Determinants of AKILIMO Adoption: A Comparative Study of Cassava Farmers in Nigeria and Ghana.

Field Survey: 2025

Chi-square Showing the Adoption Category

Variables	χ^2	P	Df	D
Country	23.895	0.00	1	S
Sex	0.307	0.00	1	S
Marital status	9.897	0.00	4	S
Educational Level	16.562	0.00	5	S

D=Decision, S= Significant, NS= Not Significant), Significant at $p \leq 0.05$